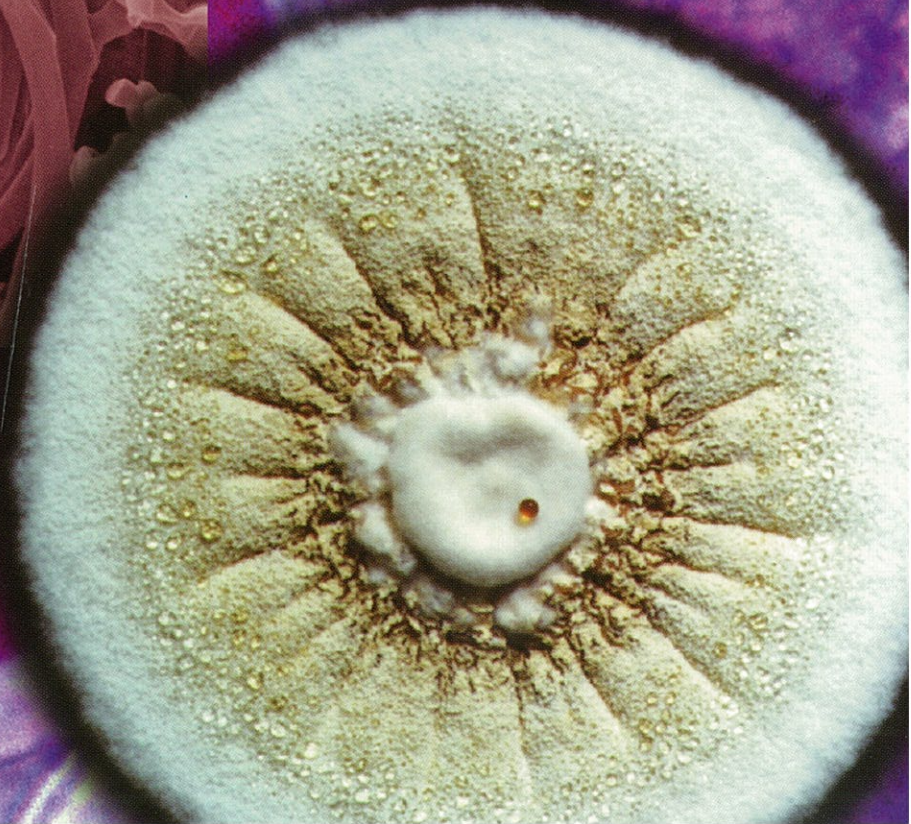
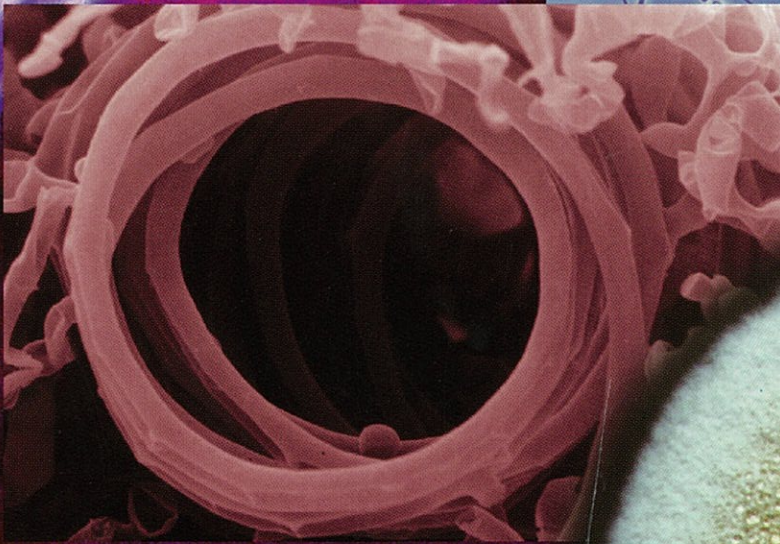
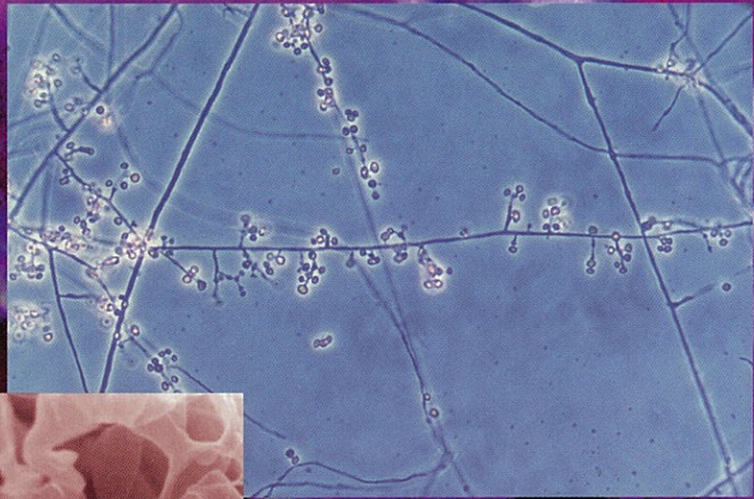


UAMH

University of Alberta
Microfungus Collection & Herbarium



UAMH Catalogue

EXPLANATION OF CATALOGUE RECORDS

Only UAMH accessions having living cultures are listed in the catalogue. The list of species is divided into two parts: FUNGI and MISCELLANEOUS MICROORGANISMS. Species are treated alphabetically and strains belonging to the species are listed in ascending numerical order.

Scientific Names

The species name is followed by the authority. In some instances the name may be followed by other names that are applied to the species (synonyms, other morphs) in brackets.

Synonyms

Only synonyms in current use are listed. When an entry states “see” the user is directed to look for information under the other name.

Morphs or Other States

Although only one name can be applied to a species, some fungi are known to be pleomorphic and to produce different states or morphs, each of which may be named. A morph may be the sexual or meiotic state of the fungus (known as teleomorph) or it may be the asexual or mitotic state (known as anamorph). Strains may be listed in the Catalogue under either teleomorph or anamorph name. Strains are usually listed under the teleomorph if the sexual state can be demonstrated in culture. In some instances, strains may be listed under both morph names. In such cases, a second entry will be followed by “see.”

e.g. *Arthroderma quadrifidum* Dawson & Gentles (morph *Trichophyton terrestre*)

Arthroderma quadrifidum see *Trichophyton terrestre*

Strain Data

For each strain, available data are listed as:

- UAMH accession number
- (T)¹ Ex-type culture (derived from type specimen), followed by the species name to which it applies, if different.

- Substrate, location, name of isolator (isolator's number), date of isolation (format d/m/y).
- /Sender² and number.
- [Cross reference numbers³], accession numbers attached to the same strain by other collections or individuals or in nucleotide databases. See **List of Abbreviations** in Appendix.
- Sexual compatibility listed as + or-,⁴ and UAMH number of compatible mating strain(s) and references⁵ if available.
- Compounds⁶ produced, and (references) if available.
- Strain properties or applications⁷ with comments⁸ and (references).⁹ Each entry separated by //.

Examples

Phoma etheridgei Hutchison & Hiratsuka

7003 (T)¹ ex black gall on stem of *Populus tremuloides* (aspen poplar) nr Whitecourt, Alta. P. Crane (BG-1-16d) Jul 1989 /L. Hutchison² NOF 1610 [=DAOM 216539³] Phomalone⁶ & other natural products (Ayer & Jiminez, Can. J. Chem. 72: 2326-2332, 1994; Ayer, Can. J. Chem. 73:465-470, 1995). Biocontrol:⁷ antifungal compounds antagonistic to *Phellinus tremulae* & *Ophiostoma crassivaginata*⁸ (Hutchison et al., Can. J. Bot. 74: 1424-1431, 1994⁹) // pigment:⁷ brown⁸ // cycloheximide: sensitive

Ajellomyces crescens Sigler (**morph.** *Emmonsia crescens*)

7365 (T)¹ lung common brushtail possum (*Trichosurus vulpecula*) New Zealand A. Woodgyer 1992 /A. Woodgyer² MY 92.307 [=GenBank AF038335³] +⁴ mating type 349 mates with UAMH 129, 1140; Sigler, JMVM 34:303-314, 1996.⁵ Culture conditions:⁷ adiaspores on PYE @ 37C after 7 da⁸ // pigment: brown // cycloheximide: resistant // human/animal pathogen:⁷ adiaspores observed during survey for bovine tuberculosis⁸ (Johnstone et al, New Zealand Veterinary Journal 41:175-178, 1993⁹) // systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996)

Emmonsia crescens see *Ajellomyces crescens*

Emmonsia parva v. *crescens* see *Emmonsia crescens*

Fungi

Absidia coerulea Bainier

- 8114 soil, oak-birch (*Quercus velutina*-*Betula lenta*) forest Hempstead Lake State Park, Long Island, NY, USA S.E. Gochenaur (HLF-74-96) 1974 /S. Davies FC-347 [=ATCC 38187]. Biodeteriogen/biodegradation: ecological survey 1974 - 1977 (*Mycologia* 70: 975-994, 1978).
- 8115 This strain has been cited in a US or other patent & should not be used to infringe patent claims. Ltd. (301-9C) Kyowa Ferm. Ind. Co. /S. Davies FC-361 [=ATCC 20137].
- 8116 M. Stefanini (D-101) /S. Davies FC-362 [=ATCC 14076]. Fibrinase (*Proc. Soc. Exp. Biol. Med.* 99: 504, 1958).

Absidia corymbifera (Cohn) Saccardo & Trotter

- 146 V. Jr. Cutter 130.
- 230 otomyocosis Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
- 465 ear canal swab Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 468 skin ex leg Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
- 600 aborted calf foetus skin & stomach contents Prov. Vet. Lab. U of A G. Wherham (739) Mar 1958 /G. Wherham (739).
- 1791 ear canal, chronic otitis, child 1 yr Edmonton, Alta. J.W. Carmichael 30 Sep 1963 /J.W. Carmichael.
- 1869 ear canal Edmonton, Alta. J.W. Carmichael 25 Nov 1963 /J.W. Carmichael.
- 2171 ear swab, male 27 yr Edmonton, Alta. J.W. Carmichael 10 Oct 1964 /J.W. Carmichael.
- 2311 leg wound swab, male 37 yr Edmonton, Alta. J.W. Carmichael 25 Jan 1965 /J.W. Carmichael.
- 2339 equine hair sample Prov. Vet. Lab. (65-554) J.W. Carmichael /J.W. Carmichael.
- 2623 mycotic bovine abortion Edmonton, Alta. Jul 1966 /J.W. Carmichael [=NRRL A-14713] +.
- 2624 dried Beaujolais wine yeast Fermentation Labs. New Malden, Surrey J.W. Carmichael May 1966 /W.R. Loftus Ltd..
- 4337 dust & grain Alberta L. Sigler Oct 1980 /L. Sigler.
- 6873 frass ex healthy *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 126) Aug 1990 /D. Inglis (HD 126). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 7050 frass ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 69) Aug 1990 /D. Inglis (HD 69). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 7610 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 71) 13 Dec 1993 /S.P. Abbott (OHS 71). Thermotolerant: growth @ 37C.
- 9070 rt. sinus tissue ex female 15 yr, oncology patient with sinusitis Vancouver, BC BC Prov. Lab (F1378) 1997 /R. Rennie MY 4889. Thermotolerant: grows well @ 42C // culture conditions: antifungal susceptibility testing (in vitro sensitivity to amphoteracin B, itraconazole, ketoconazole, fluconazole, miconazole).
- 10324 lung of heart transplant patient, male 7 yr University of Alberta Hospitals, Edmonton, Alta. C. Sand 15-Apr-03 /R. Rennie MY 2304. Thermotolerant: grows @ 45C (fide submitting laboratory).

Absidia cylindrospora Hagem

- 1 Panama /V. Jr. Cutter 500.

Absidia glauca Ellis & Hesseltine

- 7028 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 228) Aug 1990 /D.

Inglis (HD 228). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

- 7611 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 65) 2 Dec 1993 /S.P. Abbott (OHS 65).

Absidia griseola Naganishi & Hirahara

- 7594 S.-I. Udagawa SUM 3033. Thermotolerant: growth @ 37C.

Absidia griseola* var. *iguchii Naganishi & Hirahara

- 8117 Soy sauce koji. This strain has been cited in a US or other patent & should not be used to infringe patent claims. Japan H. Naganishi /S. Davies FC-363 [=ATCC 20431]. Alpha galactosidase (US Pat. 3,957,578).

***Absidia* sp.**

- 331 skin ex neck Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 337 Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 391 Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 392 skin ex neck Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 459 leg incision swab Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 1005 weasel lung Fort Vermillion, Alta. J.W. Carmichael Aug 1959 /J.W. Carmichael.
- 1071 soil Sask. River Bank J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
- 1822 leaf mould Edmonton, Alta. J.W. Carmichael 23 Oct 1963 /J.W. Carmichael.
- 1825 leaf mould E. Murphy Park, Edmonton, Alta. J.W. Carmichael 23 Oct 1963 /J.W. Carmichael.

Absidia spinosa Lendner

- 7029 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 223) Aug 1990 /D. Inglis (HD 223). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

Absidia sporophora-variabilis Subrahmanyam

- 8118 bat droppings India A. Subrahmanyam /S. Davies FC-364 [=ATCC 36019]. Thermotolerant: optimum growth range 24-48C (fide ATCC).

Acarosporium sympodiale Bubak & Vleugel

- 10964 ex gametophytes of *Polytrichum juniperinum* 7 km E of Saskatchewan Crossing, along eastern banks of Thompson Creek, Alta. M. L. Davey /R.S. Currah Pj7-G. Biodiversity: from boreal bryophyte species (Davey ML, Diversity, systematics and ecology of bryophilous fungi, University of Alberta Ph.D. thesis, 2009) // culture conditions: sporulated on oat in frig after 1 yr (fide UAMH 2010); non sporulating on deposit; sporulated on wet autoclaved straw in frig in dark after 6 mo (fide M. Davey); produced sporodochia on CER, PDA and OAT in 8 wk @ 18C but conidia are produced after 1 yr (fide UAMH 2011).

Acephala applanata Gruenig & Sieber

- 10848 ex fine root, *Picea abies* Säntis, Switzerland (C) K. Ahlich 06-Sep-88 /C. Gruenig K92 079 [=GenBank DQ013025 B-tubulin =GenBank DQ013081 pPF-018 =GenBank DQ013127 pPF-076 =GenBank DQ013039 EF1 alpha]. Biodiversity: Dark septate endophyte form taxon Type 1 (fide C. Gruenig) // molecular systematics: ITS sequence identical to AY078150 *Acephala applanata* (fide C. Gruenig).

- 10849 ex fine root, *Picea abies* Böldmeren, Switzerland C.R. Grünig 10-Sep-03 /C. Gruenig 38 2 [=GenBank DQ274835 B-tubulin =GenBank DQ274569 EF1-alpha =GenBank DQ274760 pPF-076 =GenBank DQ274685 pPF-018]. Biodiversity: Dark septate endophyte form taxon Type 1 (fide C. Gruenig).
- 11712 ex roots of *Picea abies* (Norway spruce) Böldmerenwald, Switzerland /T. Sieber T1_38_2 [=GenBank DQ274835 btub =GenBank DQ274569 EF1 =GenBank DQ274685 pPF-018 =GenBank DQ274760 pPF-076]. Mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011) // molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Quelo V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- 11713 ex roots of *Picea abies* (Norway spruce) Böldmerenwald, Switzerland /T. Sieber T1_52_2 [=GenBank DQ274839 btub =GenBank DQ274573 EF1 =GenBank DQ274790 pPF-018 =GenBank DQ274764 pPF-076]. Mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011) // molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Quelo V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- 11714 ex roots of *Picea abies* (Norway spruce) Böldmerenwald, Switzerland /T. Sieber T1_55_1 [=GenBank DQ274840 btub =GenBank DQ274574 EF1 =GenBank DQ274690 pPF-018 =GenBank DQ274765 pPF-076]. Mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011) // molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Quelo V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- 11715 ex roots of *Picea abies* (Norway spruce) Böldmerenwald, Switzerland /T. Sieber T1_58_1 [=GenBank DQ274841 btub =GenBank DQ274575 EF-1 =GenBank DQ274691 pPF-018 =GenBank DQ274766 pPF-076 =GenBank FJ418275 =GenBank FJ418307 =GenBank FJ418348 =GenBank FJ418442 =GenBank FJ418499 =GenBank FJ418242 =GenBank FJ418535 =GenBank FJ418369 =GenBank FJ418408]. Mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011) // molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Quelo V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008; Tellenbach C, Grunig CR, Sieber TN, Applied and Environmental Microbiology 76:5764-5772, 2010); suitability of qPCR to estimate the biomass of root endophytes (Tellenbach C, Grunig CR, Sieber TN, Applied and Environmental Microbiology 76:5764-5772, 2010); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- 11716 ex roots of *Picea abies* (Norway spruce) Böldmerenwald, Switzerland /T. Sieber T1_78_1 [=GenBank DQ274844 btub =GenBank DQ274578 EF1 =GenBank DQ274694 pPF-018 =GenBank DQ274769 pPF-076]. Mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011) // molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- Acephala sp. 1***
- 6816 ex roots *Cassiope mertensiana* in subalpine dwarf shrub heath Outpost Lake, Jasper National Park, Alta. G) G. Stoyke (G10Ab 26 Jul 1988 /G) G. Stoyke (G10Ab [=GenBank AF081432 =Genbank EF485233 =GenBank EF485189 =GenBank EU434823 ITS =GenBank EU434857 SSU]. Mycorrhizae: RFLP analysis (Stoyke & Currah, Can. J. Bot. 69:347-352, 1991; Stoyke et al., Can. J. Bot. 70:2009-2016, 1992) // culture conditions: laccase +, tyrosinase - (Currah & Tsuneda, Trans. Mycol. Soc. Japan 34:345-356, 1993) // molecular systematics: diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); dark septate endophyte (DSE) (Grunig CR, Quelo V, Duo A, Sieber TN, Mycological Research 113:207-221, 2009; Grünig CR, Quelo V, Sieber TN, Holdenrieder O, Botany 86:1355-1369, 2008).
- Achaetomium cristalliferum* see *Chaetomium strumarium***
- Achaetomium globosum* Rai & Tewari**
- 7759 ex cumini India /ATCC 46467 [=NHL 2892].
- 8058 (T *Achaetomium globosum*) ex rhizosphere of *Tamarindus indica* India C.W. Hesseltine /CBS 332.67. Culture conditions: recommended incubation temp. = 30 C // pigment: brown.
- Achaetomium luteum* Nag Raj & Tewari**
- 8059 (T) rhizosphere of *Cucurbita Lucknow*, India K.G. Mukerji 1964 /CBS 618.68 [=ATCC 18524 =IMI 141563]. Culture conditions: recommended incubation temp. = 30 C // pigment: yellow-brown.
- Achaetomium purpurascens* Udagawa & Sugiyama**
- 8057 (T) ex soil Nepal S. Udagawa /CBS 287.83 [=NHL 2896]. Pigment: rose-brown // culture conditions: recommended incubation temp. = 30 C.
- Achaetomium strumarium* see *Chaetomium strumarium***
- Achaetomium thermophilum* M. Basu**
- 8762 (T *Achaetomium thermophilum*) leaf litter Bhatni, Uttar Pradesh, India M. Basu Dec 1977 /J.C. Krug TRTC 48887 [=IMI 292262 =IMI 373135].
- Acidomyces acidophilus* (Sigler & J.W. Carmich.) Selbmann, de Hoog & De Leo (syn. *Scytalidium acidophilum*)**
- 3460 (T *Scytalidium acidophilum*) soil (at pH 1.4-3.5) adjacent to sulphur pile Innisfail, Alta. F. Cooke 1971 /F. Cooke A2 [=ATCC 26772 =CBS 270.74 =DAOM 145649 =IMI 183518]. Low pH: opt. pH 1 // culture conditions: growth equivalent at 25C & 30C, restricted at 22C and 35C (fide UAMH 2013) // mesophilic: grows better at 25-30C than at 22C or 35C // systematics/taxonomy: dothidealean extremotolerant fungi (Selbmann L, de Hoog GS, Zucconi L, Isola D, van den Ende AHG et al, Stud Mycol 61:1-20, 2008); description (Sigler L, Carmichael JW, Canad J Microbiol 20:267-268, 1973).
- 3489 solution at pH 0.2-0.7 & 7 copper sulphate N.J. New

- Brunswick 1943 / Chase [=ATCC 24569 =CBS 421.73 =IMI 173066ii]. Low pH: opt. pH 1 // mesophilic: grows better at 25-30C than at 22C or 35C // systematics/taxonomy: description (Sigler L, Carmichael JW, Canad J Microbiol 20:267-268, 1973).
- 3492 soil (at pH 1.4-3.5) adjacent to sulphur pile Innisfail, Alberta F. Cooke Jun 1972 /F. Cooke B. Low pH: opt. pH 1 // systematics/taxonomy: description (Sigler L, Carmichael JW, Canad J Microbiol 20:267-268, 1973).
- 3493 soil (at pH 1.4-3.5) adjacent to sulphur pile Innisfail, Alta. F. Cooke Jun 1972 /F. Cooke C. Low pH: opt. pH 1 // systematics/taxonomy: description (Sigler L, Carmichael JW, Canad J Microbiol 20:267-268, 1973).
- 3494 soil (at pH 1.4-3.5) adjacent to sulphur pile Innisfail, Alta. F. Cooke Jun 1972 /F. Cooke E [=ATCC 26773 =CBS 271.74 =IMI 183519]. Low pH: opt. pH 1 // systematics/taxonomy: description (Sigler L, Carmichael JW, Canad J Microbiol 20:267-268, 1973).
- 3535 acid uranium mine drainage water K.C. Iverson 1972 /F. Cooke U of A, ex Iverson CDA, Ottawa [=ATCC 26774 =CBS 272.74 =IMI 183521]. Single-cell protein from whey & pupmill waste sulphite liquor under acidic conditions; acidophilic xylanase (Al Balaa et al, Biosci Biotechnol Biochem 70:269-272, 2006). Low pH: opt. pH 1 // mesophilic: grows better at 25-30C than at 22C or 35C // systematics/taxonomy: description (Sigler L, Carmichael JW, Canad J Microbiol 20:267-268, 1973).
- 6318 ex bacterial leaching in pyritic ore Germany U. Helle /CBS 899.87 [=GenBank AJ244237 ITS]. Molecular systematics: relationship with *Scytalidium acidophilum* (Selbmann L, de Hoog GS, Zucconi L, Isola D, van den Ende AHG et al, Stud Mycol 61:1-20, 2008).

***Acidomyces* sp.**

- 3721 surface geothermal soil, pH 1.9 temp.>40C Norris Geyser Basin, Yellowstone Park, WY Tansey Jul 1971 /M.R. Tansey 527-1h. Thermotolerant: grows better at 35C than at 30C, 25C and 22C (fide UAMH 2013) // biodiversity: geothermal soil.
- 3722 surface geothermal soil, pH 3.1 splash zone of geyser, Sylvan Springs, Yellowstone Park, WY Tansey Jul 1971 /M.R. Tansey 533-7d. Thermotolerant: grows better @ 35C than @ 30C and 25C (fide UAMH 2013) // biodiversity: geothermal soil.
- 3735 geothermal soil core, pH 5.1, @ 15cm. temp. 51.9C Solfatara Plateau, Yellowstone Park, WY Tansey Jul 1971 /M.R. Tansey 140-8. Biodiversity: geothermal soil.
- 3736 surface geothermal soil, pH 1.9, temp. >40C Norris Geyser Basin, Yellowstone Park, WY Tansey Jul 1971 /M.R. Tansey 527-1. Thermotolerant: grows better at 35C than at 30C, 25C and 22C // biodiversity: geothermal soil.
- 3737 spontaneously heating coal waste, pH 2.19 temp 69C Blackfoot Mine #5, Winslow, Indiana Tansey 24 Feb 1971 /M.R. Tansey T71-20. Thermophilic // biodiversity: geothermal soil.

***Acladium castellanii* Pinoy**

- 832 (T *Acladium castellanii*) man A. Castellani /CBS 100.26 [=ATCC 11600 =ATCC 760 =UAMH 1844 =MUCL 15755 =GenBank AM492786]. Molecular systematics: relatedness with *Pseudallescheria boydii* not confirmed (Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008) // culture conditions: produced anamorph only; similar to *Petriella* anamorphs.

Acremonium alabamense* see *Thielavia terrestris***Acremonium* an. *Emericellopsis minima* see *Emericellopsis minima******Acremonium* an. *Emericellopsis* sp. see *Emericellopsis* sp.*****Acremonium* an. *Emericellopsis sphaerospora* see *Emericellopsis sphaerospora******Acremonium* an. *Emericellopsis terricola* see *Emericellopsis terricola******Acremonium* an. *Hapsidospora irregularis* see *Hapsidospora irregularis******Acremonium* an. *Hydropisphaera peziza* see *Hydropisphaera peziza******Acremonium* an. *Leucosphaera arxii* see *Leucosphaera arxii******Acremonium atrogriseum* (Panasenko) W. Gams**

- 9735 sputum ex male 33 Y Pincher Creek, AB 2000 /R. Rennie MY 449/00 [=CBS 113397]. Molecular systematics: conspecific with *A. atrogriseum* (fide R.C. Summerbell).
- 9876 bronch wash, male 39 Y Austin, TX Aug 2000 /Texas Dept. of Health BY 2201 [=CBS 113398]. Mesophilic: NG @ 37C // molecular systematics: conspecific with *A. atrogriseum* (fide R.C. Summerbell).

***Acremonium bacillisporum* (Onions & Barron) Gams**

- 386 air contaminant Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael [=IMI 149514].
- 1564 G.F. Orr Msc. I.
- 2735 soil India /H.C. Gugnani S-549.
- 4313 contaminant from scrapings Ontario /J. Kane F 2654.
- 4970 J. Kane FR 385-84.
- 5852 hyphae in *Panagrellus* Beltsville, MD S. Fricke Meyer 24 Mar 1987 /S. Fricke-Meyer.
- 6406 pericardium fluid (pericarditis), male 50 yr New York 1989 /M. Kemna M162-89.
- 7949 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 227) 30 Jan 1994 /S.P. Abbott (OHS 227). Pigment: brown.
- 8310 groin, male 13 yr Alberta Provincial Laboratory for Southern Alberta Oct 1995 /R. Rennie MY 3753. Pigment: brown.
- 8653 ex fine needle aspirate taken from paravertebral lump, female 84 yr New Zealand 1996 /A. Woodgyer 9610382.
- 9100 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 11-29C T. Lumley (EI-02-S5B 29 Nov 1996 /R.S. Currah EI-02-S5B, 11-29C. Benomyl: sensitive // cycloheximide: resistant // crystals.
- 9866 indoor air ex RCS strip Edmonton, AB L. Sigler (3-2-B) Aug 2000 /L. Sigler (3-2-B).
- 10712 ex gall bladder tissue, male 80 yr, with empyema of the gall bladder Vancouver General Hospital, Vancouver, B.C. /R. Rennie MY 4220. Mesophilic: grows better @ 25C than at 30C (fide UAH); NG @ 35C.

***Acremonium berkeleyanum* (P. Karst.) W. Gams (syn.**

- Acremonium butryi*; morph *Cosmospora vilior*)
- 1424 ex *Betula* sp. Gwydyr Forest, Llanrwst, Wales C. Booth May 1958 /DAOM 87875 [=IMI 73377a]. Cellulolytic // systematics/taxonomy: description of *Nectria viridescens* (Booth, C., Mycol. Pap. 73:89, 1959) // pigment: brown.
- 9642 Washed from head of beetle (*Gnathotrichus retusus*) Andrews Experimental Forest, Oregon S. Carpenter (SC 0080) 7 Nov 1986 /J. Reid UM 656 [=GenBank AF148908 =GenBank AF148909]. Molecular systematics: relationships among

- Ceratocystis & Ophiostoma species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000).
- 9643 Scots pine (*Pinus sylvestris*) As, Akershus, Norway J. Reid (74-90) May 1974 /J. Reid UM 657.
- 10181 aspen root with wound; root sectioned and surface sterilized Cynthia/Lodgepole, Alta J. Pankuch 2001 /P. Blenis BL 80-16-C(1)-1a.
- 11342 swab ex fur of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 11 C.3.
- Acremonium butryi* see *Acremonium berkeleyanum*
- Acremonium cereale*** (Karsten) Gams (syn. *Gliomastix guttuliformis*, *Gliomastix cerealis*)
- 1500 (T *Gliomastix guttuliformis*) sand dunes Bamburgh, Northumberland, U.K. J.C. Brown Mar 1955 /IMI 61279 [=MUCL 9443 =CBS 207.65]. Pigment: brown // mesophilic: NG @ 30C.
- 11448 swab ex fur of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 60 C.1. Biodiversity: mycobiota of bat caves // molecular systematics: Blast match ITS 97% similarity to *Acremonium cerealis* (fide UAMH 2011).
- 11478 swab ex skin of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 2-Feb-2010 /K.J. Vanderwolf Bat 31 C.4. Mesophilic: NG @ 30C // biodiversity: mycobiota of bat caves // pigment: brown // cellulolytic // molecular systematics: Blast match 100% ITS similarity with *Acremonium cereale* (fide UAMH 2012).
- Acremonium curvulum*** W. Gams
- 9938 one-year decomposing moss (*Sphagnum fuscum*) in bog dominated by black spruce (*Picea mariana*), moss (*Sphagnum fuscum*) & heather (*Ericaceae*) nr Perryvale, AB (54D28'N, 113D16'W) M.N. Thormann 13 Sep 1998 /R.S. Currah MNT 5 [=CBS 102853]. Cycloheximide: resistant // biodeterioration/biodegradation: cell walls of *Sphagnum fuscum* (Tsuneda, Thormann & Currah, Can. J. Bot. 79:93-100, 2001); in vitro decomposition, degrades cellulose but not lignin, utilizes starch (Thormann, Currah & Bayley, Can. J. Microbiol. 48:204-211, 2002); enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001) // mesophilic: NG @ 37C // cellulolytic.
- Acremonium exuviarum*** Sigler, Zuccaro, Summerbell & Pare
- 9995 (T *Acremonium exuviarum*) shed dorsal/right flank skin ex Solomon Island skink (*Corucia zebrata*), female Steinhart Aquarium, San Francisco CA J. Pare /J. Pare UW014A-B [=CBS 113360 =GenBank AY882947 =GenBank AY882946]. Molecular systematics: phylogenetic affinity to *Emericellopsis* (Sigler L, Zuccaro A, Summerbell RC, Mitchell J, Pare J, Stud. Mycol. 50:409-413, 2004) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- Acremonium fuci*** Summerbell, Zuccaro & W. Gams
- 5950 *Fucus distichus* English Bay, Vancouver B.C. R.C. Summerbell 2 Jan 1987 /R.C. Summerbell F 18.
- 6506 decaying *Fucus distichus* thalli littoral, Vancouver, B.C. R.C. Summerbell 2 Jan 1989 /R.C. Summerbell RCS AF3 [=CBS 113887].
- 6507 decaying *Fucus distichus* thalli littoral, Vancouver, B.C. R.C. Summerbell 2 Jan 1987 /R.C. Summerbell RCS AF7 [=CBS 113888].
- 6508 decaying *Fucus distichus* thalli littoral, Vancouver, B.C. R.C. Summerbell 2 Jan 1987 /R.C. Summerbell RCS-AF8 [=CBS 113889].
- 6509 decaying *Fucus distichus* thalli littoral, Vancouver, B.C. R.C. Summerbell 2 Jan 1987 /R.C. Summerbell RCS AF21.
- Acremonium fusidioides*** (Nicot) Gams
- 8284 indoor air of swimming pool ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M65) 29-Aug-1995 /S.P. Abbott (SA-M65).
- 8409 G. St-Germain MY 7179. Pigment: brown.
- 8640 inside of femur, male 61 yr Alberta Provincial Lab for Southern Alberta 6 Jun 1996 /R. Rennie MY 2992. Pigment: brown.
- 9274 nail, female 68 yr Ontario S.M. Swiggum 7-Aug-1996 /R.C. Summerbell FR 2430. Cellulolytic.
- 10332 bronchial washing ex lung transplant patient /M.G. Rinaldi UTHSC 01-1375. Culture conditions: produces copious mucoid exudate on PDA cello.
- Acremonium hyalinulum*** (Sacc.) W. Gams
- 7926 ex bronchial wash, male 76 yr Edmonton, Alta. C. Sand 13 Feb 1995 /R. Rennie MY 0552. Cellulolytic: weak.
- 9875 bronch wash, male 43 yr Texas Oct 2000 /Texas Dept. of Health BY 2799. Mesophilic: NG @ 37C.
- Acremonium kiliense*** Grutz
- 7360 skin scraping ex toes of Lt foot Toronto, Ont. 22 Feb 1993 /R.C. Summerbell FR 659. Pigment: brown.
- 8301 humidifier water sample Calgary, Alta S.P. Abbott (SA-M10) 24-Aug-1994 /S.P. Abbott (SA-M10). Molecular systematics: Blast match 100% ITS similarity with AJ621775 *Acremonium kiliense* CBS 122.29T (fide UAMH 2012).
- 8374 toenail, male 77 yr Saskatchewan H. Congly 1995 /H. Congly 3333M-95.
- 10908 corneal scrapings, right eye, healthy female 38 yr with mycotic keratitis; contact lens user Edmonton, Alta. S. Kulkarni April 2008 /R. Rennie MY 3054. Human/animal pathogen: mycotic keratitis, grown from R & L contact lenses & corneal scraping // molecular systematics: Blast match 100% ITS similarity to Genbank AJ621775 *Acremonium kiliense* (CBS 122.29 =ATCC 34716 T) (fide UAMH) // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species as *A. strictum* (*A. Cywinska*).
- Acremonium minutisporum*** (Sukap. & Thirum.) Gams
- 5017 WFPL 73A.
- 5018 wood core ex spruce pole Guysborough, Nova Scotia E. Doyle (coll.) Jun 1984 /WFPL 91B.
- Acremonium murorum* see *Gliomastix murorum*
- Acremonium ochraceum*** (Onions & Barron) Gams (syn. *Paecilomyces ochraceus*)
- 2777 gopher hair Cardston Alta. D. Remington May 1967 /D. Remington.
- 2809 gopher hair Edmonton, Alta. D. Remington Jul 1967 /D. Remington.
- 7908 ex skin, male 50 yr Alberta Prov. Lab. for Southern Alberta 1995 /R. Rennie MY 0455.
- 8971 indoor air from supply fan section of building ex RCS strip Calgary, Alta S.P. Abbott (SA-M171) 29 Jan 1997 /S.P. Abbott (SA-M171). Pigment: lt brown.
- 10662 ex abscess in the neck, male 15 yr Etobicoke, ON /R. Rennie MY 1067 [=OMH FR 1819]. Cycloheximide: sensitive (no growth MYC) // mesophilic: grows @ 30 C but not @ 35 C.
- Acremonium persicinum*** (Nicot) Gams (syn. *Paecilomyces persicinus*)
- 359 stool Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Pigment: tan // mesophilic: NG @ 35C.

- 2741 internal organs small mammal India /H.C. Gugnani R250.
 2761 gopher hair Cardston Alta. D. Remington May 1967 /D. Remington.
 2778 gopher hair Cardston Alta. D. Remington May 1967 /D. Remington.
 5271 contaminant ex Hebeloma crustuliniforme M196 UAMH A. Flis 4 Sep 1985 /A. Flis [=CBS 460.88].
 7942 ex sputum, female 32 yr Grande Prairie, AB Queen Elizabeth II Hospital 16 Mar 1995 /R. Rennie MY 0960.
 8772 lung biopsy, female 65 yr Quebec G. St-Germain 1996 /G. St-Germain MY 8040. Pigment: brown.
 9350 sputum ex patient with pneumothorax /M.G. Rinaldi UTHSC 98-1488. Pigment: dark brown.

Acremonium polychromum see *Gliomastix polychroma*

Acremonium recifei (Leao & Lobo) Gams

- 2980 (T Cephalosporium recifei) mycetoma Brazil /CBS 137.35. Thermotolerant: grows @ 35 C.
 3756 furnace filter Edmonton, Alta. A. Sekhon Dec 1974 /A.S. Sekhon. Mesophilic: NG @ 35C.
 4087 mycetoma India G. Koshi /CDC B-2503 [=ATCC 36328 =CDC B-2503]. Human/animal pathogen: white grain mycetoma in India (Koshi, Padhye, Ajello & Chandler, Am. J. Trop. Hyg. 28:692-696, 1979) // thermotolerant: grows @ 35 C.
 10141 abscess aspirate, left thigh, male 49 yr, DE+ Toronto, ON 2001 /S. Mohan 93270751 [=OMH FR-01448]. Thermotolerant: grows @ 35 C.

Acremonium sclerotigenum (F. & R. Moreau ex Valenta) Gams

- 1755 wet leather submerged 8 weeks Alomitos Bay, Calif. Anastasiou 24 Dec 1960 /C.J. Anastasiou C 27 (A5). Culture conditions: produces sclerotia.
 6018 ex soil of Chlorophyton comosum in hospital Toronto R.C. Summerbell 15 Sep 1986 /R.C. Summerbell W 2028. Biodiversity: potted plants in hospitals (Summerbell et al, Mycopathologia 106:13-22, 1989).
 10253 blood culture (isol. 6x) ex hematopoietic stem cell transplant patient with acute myelogenous leukemia Seattle, WA T.J. Novicki /T.J. Novicki MS-01 [=UWFP836 =GenBank AY138482 =GenBank AY138844]. Human/animal pathogen: disseminated infection in a nonmyeloablative hematopoietic stem cell transplant recipient (Novicki, LaFe, Bui et al., J. Clin. Microbiol. 41:2623-2628, 2003) // molecular systematics: Reidentified as *Acremonium sclerotigenum* (fide R.C. Summerbell).

Acremonium sp.

- 36 tent fabric QM Lab, New Georgia /Farlow Herb 520 [=QM149e].
 55 stock culture contaminant Edmonton, Alta. J.W. Carmichael Dec 1954 /J.W. Carmichael.
 180 spiny variant ex UAMH 55 J.W. Carmichael Dec 1954 /J.W. Carmichael.
 195 spiny variant ex UAMH 229 Edmonton, Alta. J.W. Carmichael Dec 1954 /J.W. Carmichael.
 246 skin ex scalp Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
 319 stock culture contaminant Edmonton, Alta. J.W. Carmichael 6 Dec 1954 /J.W. Carmichael.
 320 contaminant Edmonton, Alta. J.W. Carmichael 27 Nov 1954 /J.W. Carmichael.
 323 skin ex toes Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 367 water Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 420 yellow poplar stump West Virginia 1953 /H.L. Barnett 918.

- 443 rodent Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
 463 skin ex toes Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 466 sputum Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 471 19 Dec 1955 /J.W. Carmichael.
 527 soil ex pig pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 682 DAOM 59209.
 765 soil baited with hairs Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 782 skin Edmonton, Alta. J.W. Carmichael 2 Feb 1960 /J.W. Carmichael.
 1045 coyote dung Kern County Orr /G.F. Orr 0-2039.
 1137 soil freshly cultivated Edmonton, Alta. J.W. Carmichael 13 Sep 1961 /J.W. Carmichael.
 2031 sputum male 84 yrs Edmonton, Alta. J.W. Carmichael 22 May 1964 /J.W. Carmichael.
 2649 neck abscess, female Edmonton, Alta. J.W. Carmichael Jul 1966 /J.W. Carmichael.
 4677 litter under old Picea Devonian Bot. Garden, Alta. J.W. Carmichael 17 Sep 1982 /J.W. Carmichael.
 6825 contact lens Kitchener, Ont. 1989 /R.C. Summerbell OMH 933. Human/animal pathogen: invaded contact lens and present in contact lens fluid.
 7021 gut contents ex Megachile rotundata (alfalfa leafcutting bee) larvae, post-defecation Lethbridge, Alta. D. Inglis (MR 879) Aug 1990 /D. Inglis (MR 879).
 7492 deer dung Monterrey Bay, CA J. Scott 26 Feb 1991 /D. Malloch JS 152.
 7925 ex Rt palm, male Pensacola, FL /M.G. Rinaldi UTHSC 94-1649 [=CBS 113396]. Cycloheximide: resistant // benomyl: sensitive.
 9363 New Zealand D. Parr 1998 /D. Parr MR 8124.
 10078 submerged cat tail stalk (*Typha latifolia*) Alberta M. Schulz 2001 /R.S. Currah. Biodeteriogen/biodegradation: decomposition of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).
 10326 bronchial aspirate, male 55 yr Vancouver, B.C. 2003 /R. Rennie MY 3114 [=BC CDC A3MR236]. Mesophilic: NG @ 35C.

Acremonium sp. I

- 1436 Richardson's ground squirrel Alberta J.W. Carmichael 28 Sep 1962 /J.W. Carmichael.

Acremonium strictum Gams

- 5075 contaminant ex air Edmonton, Alta. J.P. Tewari /L. Browne.
 5525 dead spider mites on cucumber Sherwood Park, Alta. D. Budd 28 Oct 1986 /M. Steiner AEC 25.
 6121 ex *Aedes sierrensis* egg Oregon /G. Carroll.
 8106 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fariview, Alta. S.P. Abbott (OHS 238) 31 Jan 1994 /S.P. Abbott (OHS 238). Benomyl: resistant @ 2 ppm.
 9972 peritonitis, patient on CAPD, isolated 4 X Greece /E. Bibashi. Human/animal pathogen: peritonitis in patient on CAPD (Bibashi, E., E. Kololina, L. Sigler et al. Peritoneal Dialysis International (submitted)).

Acremonium terricola (Miller & al.) Gams (syn. *Fusidium terricola*, *Paecilomyces terricola*)

- 201 NRRL.
 811 IMUR 333-IBB:093.
 1358 (T *Fusidium terricola*) soil Georgia USA J.H. Miller (2842) 1956 /DAOM 64322.
 5085 carbonated beverage Puerto Rico /C. Betancourt 2.
 9943 bronchial wash, male 83 yr Texoma, TX 2000 /Texas Dept. of Health BY 3970.

- 10126 cuticle, coffee berry borer (*Hypothenemus hampei*) Finca La Alianza, Chiapas, Mexico J. Perez 16 Mar 2001 /F. Vega AL-CU R34-21.
- Acrodontium crateriforme*** (van Beyma) de Hoog
 4017 a biological product A.A. Padhye /CDC 77-020526.
 4846 wood Devonian Bot. Garden, Alta. J.W. Carmichael Sep 1983 /J.W. Carmichael.
 6579 lab air Earth Sciences Building, U. of Toronto, Ontario C. McGhee 2 Nov 1989 /G. Thorn McGhee 5. Pigment: brown.
 11494 swab ex fur of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 14 C.7 CC1. Pigment: red-brown CER.
 11602 swab ex fur of living male bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 73 C.1 fur S [=Untereiner WUC R73]. Biodiversity: mycobiota of bat caves.
 11603 swab ex skin of living bat White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 91 C.2 skin ox [=Untereiner WUC R91]. Biodiversity: mycobiota of bat caves // pigment: tan on PDA.
 11619 swab ex skin of living male *Myotis septentrionalis* Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 24 C.2 CC2 skin ox [=Untereiner WUC R24]. Biodiversity: mycobiota of bat caves.
- Acrodontium intermissum*** de Hoog & Rao
 4116 wood chips & bark off logging truck Westlock area, Alberta L. Sigler 30 Mar 1978 /L. Sigler.
 4241 pine beetle galleries ex bark lodgepole pine Prince George, B.C. L. Sigler 2 Aug 1979 /A. Funk.
 4826 'purple dust' from lodgepole pine Lamont Creek nr Princeton, B.C. L. Sigler Jul 1983 /H.S. Whitney.
 6755 creosote-treated southern pine pole Binghamton, NY /C.J.K. Wang P-220 [=ATCC 66741].
 9867 wood from house Edmonton, AB L. Sigler 16 Aug 2000 /L. Sigler.
- Acrodontium salmoneum*** de Hoog
 5959 hospital air (common in aerobiota for short period) Toronto 29 Jul 1987 /R.C. Summerbell 11B2. Pigment: grey // cellulolytic.
 7318 bronchial washing, female Washington, DC Sibley Memorial Hospital /M.G. Rinaldi UTHSC 92-1799. Pigment: brown // cellulolytic.
 10497 nail clippings, immunocompromised female 50 yr Saint John Regional Hospital, St. John NB 4-8-04 /R. Rennie MY 5543. Pigment: tan on PDA // culture conditions: sporulates on oatmeal salts agar // cellulolytic.
 10598 sputum, male 50 yr; calcofluor negative Lethbridge Regional Hospital, Lethbridge, Alta. 6-Sep-05 /R. Rennie MY 6149. Mesophilic: grows @ 25C not at 30 C.
 11664 environmental isolate Edmonton, Alta. 22-Aug-2012 /J. McDonald 12-2552B. Pigment: yellow on PDA.
- Acrodontium simplex*** (Mangenot) de Hoog
 680 (*T. Beauveria simplex*) decaying trunk *Fraxinus excelsior* France ex F. Mangenot (1084) /DAOM 45435 [=CBS 127.53].
 1438 contaminant /DAOM 39162.
 4845 wood Devonian Bot. Garden, Alta. J.W. Carmichael Sep 1983 /J.W. Carmichael.
- Acrogenospora* sp.**
 7284 ex roots young epiphytic orchid *Catasetum maculatum* La Selva, Heredia Prov., Costa Rica K. Richardson 1 Nov 1991 /R.S. Currah K446e. Mycorrhizae: root endophyte epiphytic orchid *Catasetum maculatum* (Richardson & Currah, Selbyana 16:49-73, 1995).
- Acrophialophora fusispora*** (Saksena) Samson (syn. *Acrophialophora nainiana*, *Acrophialophora levis*)
 2889 soil Ontario /G.C. Bhatt [=Barron OAC 10156 =UTHSC R-2940]. Thermophilic // systematics/taxonomy: review of clinical isolates (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000).
 4425 heart & brain tissue of dog Stillwater, Oklahoma J.A. Jackson /CDC B-3538 [=CDC 81-057308 =UTHSC R-2941]. Systematics/taxonomy: review of clinical isolates (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000) // human/animal pathogen: neurotropic (Al-Mohsen et al., *ibid*) // thermophilic.
 6731 soil Zaire T. Matsushima Mar 1990 /T. Matsushima OS-178 [=UTHSC R-2942]. Systematics/taxonomy: review of clinical isolates (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000) // thermophilic.
 6967 bronchial wash; DE-; other fungi isolated Edmonton, Alta. R. McWhirter 12 Apr 1991 /P. Kibsey MY 1246 [=UTHSC R-2943]. Pigment: amber // systematics/taxonomy: review of clinical isolates (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000) // thermophilic.
 7792 ex corneal ulcer, female South India /CDC B-5574 [=UTHSC R-2944]. Thermophilic // cellulolytic // systematics/taxonomy: review of clinical isolates (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000).
 8781 BAL ex patient with lung nodules, immunocompetent female 50 yr, with chronic bronchitis California Stanford University Hospital 1996 /M.G. Rinaldi UTHSC 96-2378 [=UTHSC 96-2378]. Thermophilic: grows well at 41C // pigment: yellow // human/animal pathogen: pulmonary nodules (Sutton, D.A. et al., ISHAM Abstr. P363, 1997) // systematics/taxonomy: review of clinical isolates (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000).
 9508 brain abscess, female 12 yr with acute lymphoblastic leukemia, histopathology + for fungal elements Saudi Arabia I.Z. Al-Mohsen /M.G. Rinaldi UTHSC 98-2508 [=UTHSC 98-2508]. Systematics/taxonomy: review of clinical isolates // human/animal pathogen: neurotropic (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000) // thermophilic: grows @ 42C.
 9684 disseminated infection involving brain in mixed-breed dog Oklahoma Animal Disease Diagnostic Laboratory, Stillwater, OK R.D. Welsh 1999 /M.G. Rinaldi R-3122 [=UTMB 3307 =UTHSC R-3122]. Human/animal pathogen: infection involving brain, heart, kidney, spleen (Welsh & Ely, J. Clin. Microbiol. 37:2102-2103, 1999) // systematics/taxonomy: case isolate reidentified as *A. fusispora* (Al-Mohsen, Sutton, Sigler, et al., J. Clin. Microbiol. 38:4569-4576, 2000).
 9895 from 3 sputum specimens collected within 24 hr, female 75 yr with bronchiectasis Quebec G. St-Germain Oct 2000 /G. St-Germain MY 55286. Thermotolerant: grows @ 37C & 42C.
 10149 keratouveitis (left upper eyelid), female 76 yr, histopathology + for septate hyphae Charleston, NC Feb-00 /M.G. Rinaldi UTHSC 00-436. Human/animal pathogen: mass on left upper eyelid following keratitis & wearing of contact lenses (as *Scedosporium prolificans*) (Arthur, Steed, Apple et al, J. Clin. Microbiol. 39:4579-4582, 2001); isolate redetermined as *Acrophialophora fusispora* (Sigler L, Sutton DA, J. Clin. Microbiol. (Letter) 40:3544-3545, 2002) // culture conditions: no dark conidiophores on any medium // thermophilic.
 10226 bronchial wash right middle lobe ex female with bronchiectasis & hemoptysis; DE + septate hyphae Victoria General Hospital, Victoria, BC E. Zilkie 09-02 /P. Kibsey 74806. Cycloheximide: resistant // thermophilic // human/animal pathogen.
 10257 sputum, male 34 yr, with cystic fibrosis BC 2003 /R. Rennie MY1061. Thermophilic: grows @ 45C (fide submitting laboratory).
 10482 bronchial wash, female 91 yr Chilliwack General Hospital, Chilliwack BC 8-9-04 /R. Rennie MY 5661. Thermophilic.

- 10616 fluid ex bronchial wash, male 75 yr; DE CAFL neg Royal Alexandra Hospital, Edmonton, Alta. 5 Jan 2006 /R. Rennie MY 78. Thermophilic: grows @ 42C but not @ 56C (fide UAH).
- 10617 ex sputum, female 39 yr St. Mary's Hospital, Kitchener, ON 17 Oct 2005 /R. Rennie MY 1068 [=OMH SF 11268]. Thermophilic: grows @ 42 C.
- 10734 ex sputum, female 55 yr Vancouver General Hospital, B.C. /R. Rennie MY 5496. Thermotolerant: grows better @ 35C than @ 30C.
- 10771 (T *Paecilomyces fusicoloris*) ex forest soil Patharia forest, Sagar, India S. B. Saksena 1953 /CBS 380.55 [=ATCC 22556 =IMI 057442 =LSHB Pa64]. Thermophilic: grows better @ 35C than @ 30C.
- 10772 (T *Masoniella indica* (Isotype)) ex soil Andhra Pradesh, Hyderabad, India (I/C) P. R. Rao /CBS 149.64 [=CBS H-7323 (herbarium)]. Thermophilic: grows better @ 35C than @ 30C.
- 10773 (T *Acrophialophora levis*) composted domestic waste Germany K. H. Domsch (MK 632) /CBS 484.70 [=ATCC 22557]. Thermophilic: grows better @ 35C than @ 30C.
- 10774 (T *Acrophialophora nainiana* (Isotype)) ex farm soil Allahabad, India (I) J. C. Edward (C) G. Smith /CBS 100.60 [=ATCC 22555 =IMI 076567 =LSHB BB399 =CBS H-6678 isotype =CBS H-6679 isotype]. Thermophilic: grows better @ 35C than @ 30C.
- 11640 induced sputum, female 76 yr Calgary Lab Services, Calgary, Alta. 28-Dec-2011 /J. Fuller MY 951.

Acrophialophora levis see *Acrophialophora fusicoloris*

Acrophialophora nainiana see *Acrophialophora fusicoloris*

Acrospeira mirabilis Berk. & Br.

- 4914 chestnut Edmonton, Alta. L. Linarez 23 Jan 1984 /L. Linarez.

Acrostalagmus luteoalbus (Link) Zare, W. Gams & Schroers (syn. *Verticillium tenerum*)

- 232 contaminant Farlow Herbarium, Cambridge, MA Alta. Edmonton 1953 /Alta. Edmonton. Systematics/taxonomy: relationship of *Verticillium tenerum* (Zare R, Gams W, Schroers HJ, Mycological Research 108:576-582, 2004).
- 397 from beard area Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Systematics/taxonomy: relationship of *Verticillium tenerum* (Zare R, Gams W, Schroers HJ, Mycological Research 108:576-582, 2004).
- 580 skin, both feet Edmonton, Alta. J.W. Carmichael 1957 /A.N. Brown. Systematics/taxonomy: relationship of *Verticillium tenerum* (Zare R, Gams W, Schroers HJ, Mycological Research 108:576-582, 2004).
- 5032 L. Browne [=IMI 189322]. Pigment: yellow-red // systematics/taxonomy: relationship of *Verticillium tenerum* (Zare R, Gams W, Schroers HJ, Mycological Research 108:576-582, 2004).
- 9381 slightly decayed wood (stage 1 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. S4J, 1-21B) T. Lumley (EI-04 21 Jan 1997 /R.S. Currah TCL 053. Systematics/taxonomy: relationship of *Verticillium tenerum* (Zare R, Gams W, Schroers HJ, Mycological Research 108:576-582, 2004).

Acrotheca aquaspersa see *Rhinochloidiella aquaspersa*

Acrotheca cerophila see *Ramichloridium cerophilum*

Actinomyces elegans (Eidam) Benjamin & Hesseltine

- 7608 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Camp Creek, Alta. S.P. Abbott (OHS 68) 10 Dec 1994 /S.P. Abbott (OHS 68).

- 7612 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 248) 11 Mar 1994 /S.P. Abbott (OHS 248). Benomyl: tolerant @ 2 ppm.

- 9194 sugarcane borer Argentina /ATCC 6476 [=ATCC 6476]. Application: production of steroids by conversion (J. Am. Chem. Soc. 80: 3382-3389, 1958).

- 11617 ex necrotic skin lesion, male 58 yr with refractory aplastic anemia; histopathology + for hyphae and angioinvasion Pathology/ Microbiology, Johns Hopkins Hospital, Baltimore, MD Dr. J. M. Gerber M. Camp 06-Jun-2011 /S. Zhang F00086.1 [=GenBank JQ002627 ITS =GenBank JQ002628 LSU]. Molecular systematics: Blast match 100% ITS & D1D2 similarity to *Actinomyces elegans* (Mahmud A et al) // human/animal pathogen: Blast match 100% ITS & D1D2 similarity to *Actinomyces elegans* (fide Mahmud et al.); invasive mucormycosis in a neutropenic patient (Mahmud A, Lee R, Munfus-McCray D, Kwiatkowski N, Subramanian A, Neofytos D, Carroll K, Zhang SX, J Clin Microbiol 50:1092-1095, 2012).

Actinomyces elegans var. *kuwaitiensis* Khan, Ahmad, Mokaddas, Chandu, Cano & Guarro

- 10999 tissue from right hip from male 30 yr who died following combat trauma from improvised explosive device in Iraq; histopathology & culture showed *Actinomyces* and *Candida* Brooke Army Medical Center, San Antonio, TX 2007 /D.A. Sutton UTHSC 07-831 [=GenBank FJ176396 ITS =GenBank FJ896016 D2D2]. Human/animal pathogen: fatal infection following combat trauma (Tully CC, Romanelli AM, Sutton DA, Wickes BL, Hospenthal DR, J Clin Microbiol 47:3394-3399, 2009).

Aegerita candida see *Bulbillomyces farinosus*

Agaricus albolutescens Zeller

- 6190 *Picea engelmannii* & *Populus* woods Bow Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988 /C) S.P. Abbott.

Agaricus brunnescens (Peck) Malloch

- 8024 cultivated edible mushroom; source unknown /S. Davies FC-407. Edible: mushroom // culture conditions: no clamps.

Aithaloderma sp. see *Ciferrioxypium chaetomorphum*

Ajellomyces capsulatus (Kwon-Chung) McGinnis & Katz (syn. *Emmonsia capsulata*; morph *Histoplasma capsulatum*)

- 143 Rochester, Minnesota M.D. ex L.A. Weed /Mayo Clinic.
- 1098 sputum Los Angeles Co. Hosp. /G.F. Orr UCLAB-M-40. Human/animal pathogen.
- 3536 soil Arkansas K.J. Kwon-Chung (T-4-2) 1972 /CDC B-1392 [=GenBank AF038354 (ITS) =ATCC 22636 =CBS 137.72 =IFM 41319 =GenBank AB176496 (partial LSU) =H139 (Kasuga)] + mating type 3537 but did not mate with 3537 in experiment conducted in 2004. Molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998); phylogeny of *Ajellomyces capsulatus* (Kasuga T, White TJ, Koenig G, et al, Molecular Ecology 12:3383-3401, 2003; Kasuga T, Taylor JW, White TJ, J. Clin. Microbiol. 37:653-663, 1999; Tamura M, Kasuga T, Watanabe K et al, Jpn. J. Med. Mycol. 43:11-19, 2002; Komori T, Sano A, Yarita K, et al, Jpn. J. Med. Mycol. 46:291-295, 2005) // application: QC & teaching strain (Summerbell, Clinical Microbiology Procedures Handbook 2002).
- 3537 soil Arkansas K.J. Kwon-Chung (T-3-1) 1972 /CDC B-1393 [=AFM 41320 =H138 (Kasuga) =GenBank AB176497 (partial LSU) =ATCC 22635 =CBS 136.72] - mating type 3536

- but did not mate with 3537 in experiment conducted in 2004. Systematics/taxonomy: mating studies (Kwon-Chung, *Mycologia* 65:109-121, 1973; Kwon-Chung, Science 177:368-369, 1972; Kwon-Chung, KJ, Weeks RJ, Larsh HW, Amer. J. Epid. 99:44-49, 1974) // molecular systematics: phylogeny of *Ajellomyces capsulatus* (Kasuga T, Taylor JW, White TJ, J. Clin. Microbiol. 37:653-663, 1999; Kasuga T, White TJ, Koenig G, et al, *Molecular Ecology* 12:3383-3401, 2003; Komori T, Sano A, Yarita K, et al, *Jpn. J. Med. Mycol.* 46:291-295, 2005).
- 4931 bone marrow disseminated histoplasmosis Royal Alexandra Hosp., Edmonton Feb 1984 /S. Hnatko. Human/animal pathogen: disseminated infection involving small bowel (Taylor et al., *Can. Med. Assoc. J.* 133:763-765, 1985).
- 5079 left pulmonary artery node, female 13 yr; TB pos. Royal Alexandra Hospital, Edmonton Apr 1985 /S. Hnatko RAH 4129. Human/animal pathogen.
- 7141 ex bone marrow ex patient with AIDS; DE + Edmonton, Alta. C. Sand 12 Mar 1992 /P. Kibsey MY 1064 [=GenBank AF038353 (ITS)]. Human/animal pathogen // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998); rapid identification using ITS1 & ITS2 region sequences (Pryce, Palladino, Kay & Coombs, *Med. Mycol.* 41:369-381, 2003).
- 8128 ex fluid from bronchial wash of Lt upper lobe, male 79 yr Edmonton, Alta. C. Sand 14 Jul 1995 /R. Rennie MY 2375.
- 8478 mixed *Histoplasma capsulatum* & *Blastomyces dermatitidis* ex bronchial wash, female 53 yr with coin lesion in lower left lung lobe, hemoptysis & >3 mo history of cough Moncton, New Brunswick 1994 /R.C. Summerbell FR 1228. Serology: mixed infection confirmed by DNA-rRNA hybridization test using Accuprobe HC kit (Summerbell et al., *Abstr. 95 Gen Mtg. ASM, F-115 p. 106, 1995*); positive *Histoplasma capsulatum* exoantigen test (Summerbell et al., *Abstr. 95 Gen Mtg. ASM, F-115 p. 106, 1995*).
- 10379 biopsy tissue ex rt middle lobe lung, female 25 yr; grounds worker on golf course in Devon AB Edmonton, Alta. C. Sand 11-11-03 /R. Rennie MY 6603. Human/animal pathogen: Molecular probe + for *Histoplasma capsulatum* (RLU 469187); Culture positive; immunodiffusion + for *Histoplasma capsulatum* (Anderson H, Honish L, Taylor G et al, *EID* 12:163-165, 2006; Anderson H, Taylor G, Fanning EA et al, *Canada Communicable Disease Report* 31:255-257, 2005); Histoplasmosis confirmed but no history of recent travel outside Alberta // culture conditions: no conversion to yeast stage on BHIA after 11 wk @ 35C // molecular systematics: Blast match 99-100% ITS similarity with *Ajellomyces capsulatus* (fide UAMH 2006); 99% ITS similarity with AF038354 UAMH 3536 MT.
- 10690 isolated twice from bronchial wash ex right lower lobe lung, female 73 yr originally from Africa Hamilton, Ont. 25-5-05 /Ursula Bunn FR 0302 [=OMH FR 301 =OMH FR 730]. Culture conditions: no conversion to yeast stage on BHIA after 11 wk @ 35C // human/animal pathogen: disseminated histoplasmosis // molecular systematics: confirmed by morphology and DNA probe (fide OMH); 100% similar to UAMH 3536 by partial LSU sequence comparison (fide UAMH).
- Ajellomyces capsulatus* see ***Histoplasma capsulatum* var. duboisii**
- Ajellomyces crescens*** Sigler (morph *Emmonsia crescens*)
- 126 lung ex deer mouse Lethbridge, AB E.S. Dowding (Strain 10) (JWC thesis strain 6) Jul 1946 [=CBS 191.55 =ATCC 10784 =GenBank AF038319] + mates with UAMH 129, 349, 1140; Sigler, *JMVM* 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, *J. Med. Vet. Mycol.* 34:303-314, 1996); descriptions & relationships (Carmichael, *Mycologia* 43:605-624, 1951) // molecular systematics: phylogeny of dimorphic Onygenales (Gueho et al., *Mycoses* 40:69-81, 1997); molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Alberta.
- 127 lung ex deer mouse Peace River, AB E.S. Dowding (strain 190) (JWC thesis strain 8) Aug 1946 [=CBS 475.77 =ATCC 10785 =GenBank AF038344 (ITS)] + mates with UAMH 129, 349; Sigler, *JMVM* 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, *J. Med. Vet. Mycol.* 34:303-314, 1996); descriptions & relationships (Carmichael, *Mycologia* 43:605-624, 1951) // molecular systematics: phylogeny of dimorphic Onygenales (Gueho et al., *Mycoses* 40:69-81, 1997); molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Alberta.
- 128 lung ex deer mouse Red Deer, AB E.S. Dowding (F29) (JWC thesis strain 9) Nov 1946 [=GenBank AF038345 (ITS) =CBS 139855] + mates with UAMH 129, 349; Sigler, *JMVM* 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, *J. Med. Vet. Mycol.* 34:303-314, 1996); descriptions & relationships (Carmichael, *Mycologia* 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Alberta.
- 129 lung ex deer mouse *Peromyscus maniculatus borealis*(?) Athabasca, AB E.S. Dowding (strain 184) (JWC thesis strain 4) Feb 1947 [=GenBank AF038343 (ITS) =CBS 139856] - mates with UAMH 126, 127, 128, 140, 1067, 4076, 4077, 7268, 7365; Sigler, *JMVM* 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, *J. Med. Vet. Mycol.* 34:303-314, 1996); descriptions & relationships (Carmichael, *Mycologia* 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Alberta.
- 132 lung ex deer mouse *Peromyscus maniculatus nebrascensis*(?) Lethbridge, AB E.S. Dowding 19 (JWC thesis strain 5) [=GenBank AF038351 (ITS) =CBS 139857]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, *J. Med. Vet. Mycol.* 34:303-314, 1996); descriptions & relationships (Carmichael, *Mycologia* 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Alberta.
- 133 lung ex deer mouse Edmonton, Alta. E.S. Dowding (strain 50-59) (JWC thesis strain 10) 1950 [=CBS 139858]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, *J. Med. Vet. Mycol.* 34:303-314, 1996); descriptions & relationships (Carmichael, *Mycologia* 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Alberta.
- 135 deer mouse *Peromyscus Lemke*, Idaho /W.L. Jellison 27097A [=CBS 139859]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, *J. Med. Vet. Mycol.* 34:303-314, 1996); descriptions & relationships

- (Carmichael, Mycologia 43:605-624, 1951) // human/animal pathogen: naturally infected animal from western Montana (Jellison WL, *Adiaspiromycosis*, Mountain Press 1969).
- 136 ex skunk Lake Co., Montana /W.L. Jellison 27128 [=GenBank AF038341 =CBS 139860]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996); descriptions & relationships (Carmichael, Mycologia 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from western Montana (Jellison WL, *Adiaspiromycosis*, Mountain Press 1969).
- 137 ex muskrat Lake Co., Montana /W.L. Jellison 27242 [=GenBank AF038342 (ITS)]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996); descriptions & relationships (Carmichael, Mycologia 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from western Montana (Jellison WL, *Adiaspiromycosis*, Mountain Press 1969).
- 140 ex deer mouse *Peromyscus maniculatus* Alberta E.S. Keeping (32) 1947 [=GenBank AF038350 (ITS) =CBS 139862] + mates with UAMH 129, 349; Sigler, JMVM 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 349 (T mating type *Ajellomyces crescens*) lungs ex mole *Talpa europaea* Exeter, Devon, Eng. P. Austwick (V.711) May 1954 /P. Austwick V.711 [=GenBank AF038336 (ITS) =CBS 100376] - mating type 7365 mates with UAMH 126, 127, 128, 140, 1067, 4076, 4077, 7268; Sigler, JMVM 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 393 lungs ex vole *Clethrionomys* sp. Korea W.L. Jellison 1953 /W.L. Jellison 2405 [=GenBank AF038339 (ITS) =CBS 139863]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 394 lungs ex vole *Clethrionomys* sp. Korea W.L. Jellison 1953 /W.L. Jellison 2412 [=GenBank AF038340 =CBS 139864]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 395 lungs ex *Apodemus* sp. Korea W.L. Jellison 1953 /W.L. Jellison 2409 [=GenBank AF038338 =CBS 139865]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 1067 lung ex wild field mouse Edmonton, Alta. L35A) J.W. Carmichael (Rodent Survey 1961 /L35A) J.W. Carmichael (Rodent Survey [=GenBank AF038346 (ITS) =GenBank U29390 =CBS 139866] + mates with UAMH 129, 349; Sigler, JMVM 34:303-314, 1996. Molecular systematics: phylogeny of onygenalean fungi (Bowman & Taylor, The Fungal Holomorph, (Reynolds & Taylor, eds.), CAB International, 1993; Bowman et al., Mol. Phylogenetics Evolution 6:89-96, 1996); molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // mesophilic: NG @ 35C // culture conditions: produces adiaspores @ 35C.
- 1140 lung ex wild field deer mouse Bittern Lake, Alta. J.W. (L45A) Carmichael 27 Jun 1961 /J.W. (L45A) Carmichael [=GenBank AF038347 (ITS) =CBS 139867] - mates with UAMH 126, 7365; Sigler, JMVM 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 3008 (T *Emmonsia crescens*) lungs ex rodent *Arvicola terrestris* Norway Emmons & Jellison /ATCC 13704 [=CBS 177.60 =ATCC 13704 =GenBank AF071864 =GenBank AF038334 (ITS) =GenBank Bioproject PRJNA178252]. Human/animal pathogen: pulmonary, in rodent (Cano & Taylor, *Sabouraudia* 12:54-63, 1974) // systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: phylogeny of dimorphic Onygenales (Gueho et al., *Mycoses* 40:69-81, 1997); molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 4076 ex greenhouse soil suspension dilution plate U of A, Edmonton J. Weijer Sep 1976 /J. Weijer V6 [=GenBank AF038348 (ITS) =CBS 139868] + mates with UAMH 129, 349; Sigler, JMVM 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 4077 white mold on moldy straw bales, mushroom house Airdrie, Alta. J. Weijer 1975 /J. Weijer 2 [=GenBank AF038349 (ITS) =CBS 139869] + mates with UAMH 129, 349; Sigler, JMVM 34:303-314, 1996. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 7268 lung common brushtail possum (*Trichosurus vulpecula*), DE+, adiaspores present New Zealand A. Woodgyer /A. Woodgyer 92.314 [=GenBank AF038337 (ITS) =CBS 139870] + mates with UAMH 129, 349; Sigler, JMVM 34:303-314, 1996. Culture conditions: adiaspores on BHI @ 37C after 7 da // pigment: brown // human/animal pathogen: adiaspores observed during survey for bovine tuberculosis (Johnstone et al, *New Zealand Veterinary Journal* 41:175-178, 1993) // systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 7365 (T mating type *Ajellomyces crescens*) lung common brushtail possum (*Trichosurus vulpecula*) New Zealand A. Woodgyer 1992 /A. Woodgyer MY 92.307 [=GenBank AF038335 (ITS) =CBS 100377] + mating type 349 mates with UAMH 129, 1140; Sigler, JMVM 34:303-314, 1996. Culture conditions: adiaspores on PYE @ 37C after 7 da // pigment: brown // cycloheximide: resistant // human/animal pathogen: adiaspores observed during survey for bovine tuberculosis (Johnstone et al, *New Zealand Veterinary Journal* 41:175-178, 1993) // systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic

variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).

Ajellomyces dermatitidis McDonough & Lewis (morph

Blastomyces dermatitidis)

- 724 CDC B-0327 [=IP 72 =CDC B-0327].
- 3538 (T *Ajellomyces dermatitidis*) human /CDC B-0784 [=ATCC 18187 =CBS 673.68 =GenBank AF038355 (ITS) =GenBank AY176704] + mating type 3539. Human/animal pathogen // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 3539 (T *Ajellomyces dermatitidis*) human /CDC B-0788 [=ATCC 18188 =CBS 674.68] - mating type 3538. Human/animal pathogen.
- 3604 E.S. McDonough 1968 /G.N. Little 49 A [=GenBank AF038356 (ITS)]. Molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // application: QC & teaching strain (Summerbell, Clinical Microbiology Procedures Handbook 2002).
- 3605 E.S. McDonough 1968 /G.N. Little 49 B.
- 4042 isolated from knee fluid, skin lesion and urine of male patient Regina, Sask. 1976 /A.S. Sekhon PLM 547. Human/animal pathogen // molecular systematics: confirmed as *Blastomyces dermatitidis* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 5383 pneumonia, lung, male 34 yrs Saskatchewan H. Congly Apr 1986 /H. Congly 899M. Human/animal pathogen.
- 5438 lung Alaskan malamute with history of travel to Ottawa area; histopathology + numerous thick walled yeast cells UAMH L. Sigler Sep 1986 /G. Marien [=GenBank AF038358 (ITS)]. Human/animal pathogen: canine pulmonary infection (Sekhon et al, Mycoses 31:454-458, 1988) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 5584 aspirated clot from lymph node ex Shih Tzu dog Edmonton, Alta. Nov 1986 /C. Jenkins - HMG mating type. Molecular systematics: confirmed as *Blastomyces dermatitidis* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 5633 ex canine lung tissue Sask. H. Congly /H. Congly 2701M.
- 5634 bronchial brushings ex 36 yr. male Regina, Sask. H. Congly /H. Congly 2702M - HMG mating type. Molecular systematics: confirmed as *Blastomyces dermatitidis* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 5635 sputum ex 76 yr male Regina, Sask. H. Congly /H. Congly 2703M - HMG mating type. Molecular systematics: confirmed as *Blastomyces dermatitidis* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 5975 lesion lung, male Saskatchewan H. Congly 1987 /H. Congly 2415M.
- 6351 brain abscess man Toronto, Ont. 3 Jun 1988 /R.C. Summerbell FRS 134-9.
- 7800 respiratory specimen, female 28 yr with 18 mo. history of cough & infiltrate Calgary, Alta. 1994 /R. Rennie MY 4510 - HMG mating type. Molecular systematics: confirmed as *Blastomyces dermatitidis* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 9829 rt buttock aspirate, female 38 yr Regina, SK /H. Congly MY 950.
- 10245 African strain, African patient, lung biopsy South Africa /A. Di Salvo CDC B1566 [=CDC B1566 =GenBank EF592163 ITS] + alpha Box mating type. Serology: African *Blastomyces*, serotype K (Sudman & Kaplan, Appl Microbiology 27:496-499, 1974) // culture conditions: large yeast cells on BHA after 7 da 35C // molecular systematics: determined as cryptic species *Blastomyces gilchristii* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 10246 African strain, African patient Rawanda E.S. McDonough (#24) (isol by Vandepitte) 15-Jun-1973 /A. Di Salvo 3003 [=CDC B3006 = McDonough 24 =GenBank EF592159 ITS] - HMG mating type. Serology: African *Blastomyces*, serotype K (Kaufman, Standard, Weeks & Padhye, J. Clin. Microbiol. 18:110-114, 1983) // molecular systematics: confirmed as *Blastomyces dermatitidis* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 10251 African strain, ex sputum Africa patient Rhodesia /A. Di Salvo CDC B1562 [=CDC B-1562 =GenBank EF592160 ITS] + alpha box mating type. Serology: African *Blastomyces*, serotype K (Sudman & Kaplan, Appl Microbiology 27:496-499, 1974) // culture conditions: large yeast cells in original mount // molecular systematics: determined as cryptic species *Blastomyces gilchristii* by population genetic studies (Brown EM, McTaggart LR, Zhang SZ, Low DE, Stevens DA, Richardson SE, PLOSone 8:1-14, 2013 e59237).
- 10592 lung biopsy, male 43 yr, with nodule in lung; KOH-calcofluor + for fungal elements Regina Qu'Appelle Health Region, Regina, Sask. 7-Mar-05 /R. Rennie MY 1809 [=GenBank EF592161 ITS]. Human/animal pathogen: Blasto probe +.
- 10594 ex bronchoalveolar lavage, right lower lung, female 36 yr with pneumonia Calgary region, Alta. 18-Aug-05 /R. Rennie MY 5976 [=GenBank EF592162 ITS].
- 10823 tissue from spinal lesion, ex female child 15 yr with vertebral infection Toronto, ON U. Bunn /Ursula Bunn FR 349. Molecular systematics: 100% ITS similarity with partial sequence to *Ajellomyces dermatitidis*; confirmed by DNA probe (fide OMH).

Albatrellus peckianus (Cooke) Niemela

- 9427 sporocarp on roadside by aspens in grass Barrier Lake, Kananaskis, Alta. R.M. Danielson (RMD 3735) 27-Aug-1989 /R.M. Danielson RMD 3735.

Aliquandostipite khaoyaiensis Inderbitzin

- 10371 (T *Aliquandostipite khaoyaiensis*) on decaying branch on ground in tropical rain forest Khao Yai National Park, Thailand (C) A.M. Abdel-Wahab; (I) P. Inderbitzin (KY3.4) Jul-98 /M.L. Berbee P28.1 [=UBC F13875 holotype =KY3.4 =GenBank AF201453 =GenBank AF201728 =CBS 118232]. Culture conditions: ascospores obtained in original culture after flooding the mycelium with distilled water; slow growing; non sporulating on deposit; no ascomata produced // molecular systematics: *Aliquandostipitaceae* fam. nov. (Inderbitzin, Landvik, Abdel-Wahab & Berbee, Am. J. Bot. 88:52-61, 2001).

Alpova diplophloeus (Zeller & C.W. Dodge) Trappe

- 6193 Linn County, OR /L. Hutchison 6 [=Molina 8017]. Mycorrhizae // pigment: brown.

Alternaria alternata (Fr.) Keissler (syn. *Alternaria tenuis*)

- 1769 bean seed Ottawa, Ont. 28 Jan 1950 /C.J. Anastasiou [=DAOM 49255]. Culture conditions: sporulates on tap water agar in window.
- 1793 H.L. Barnett.
- 1802 leaves of dogwood Edmonton, Alta. J.W. Carmichael 9 Oct 1963 /J.W. Carmichael. Culture conditions: sporulates on tap water agar in window.

- 1810 dogwood leaf in moist chamber Edmonton, Alta. J.W. Carmichael 9 Oct 1963 /J.W. Carmichael.
- 2773 rabbit hairs Cardston, Alta. D. Remington May 1967 /D. Remington. Biodeteriogen/biodegradation: diagenic alteration of spar calcite (Jones & Pemberton, Can. J. Earth Sci. 24:903-914, 1987).
- 2794 soil flower bed Edmonton, Alta. D. Remington Jun 1967 /D. Remington.
- 5602 Costa Rica /L. Browne B.
- 5638 airborne contaminant, degenerate Edmonton, Alta. /L. Browne A.
- 6279 canola oil during processing Edmonton, Alta. A. Flis Sep 1988 /G. Ogren.
- 6357 seeds of *Bromus inermis* Peace River, Alta. L. Sigler (B) 7 Feb 1989 /G. Mazurenko.
- 6385 air contaminant Edmonton, Alta. S. Brezden Nov 1988 /W.A. Ayer 2. Culture conditions: sporulates on tap water agar in window // application: stimulates basidiocarp formation in *Mycena citricolor* 6384 on 0.5% PDA in co-culture (fide W.A. Ayer).
- 6918 ex *Cirsium arvense* (Canadian thistle) Vegreville, Alta. R. Varma 1988 /R. Varma WD88-29-III. Pigment: black.
- 6919 ex *Solanum sarrachoides* (hairy nightshade) Vegreville, Alta. R. Varma 1988 /R. Varma WD88-52-VIII. Pigment: black.
- 6920 ex *Solanum sarrachoides* (hairy nightshade) Vegreville, Alta. R. Varma 1988 /R. Varma WD88-60-V. Pigment: black.
- 6980 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, pre-defecation Lethbridge, Alta. D. Inglis (MR 957) Aug 1990 /D. Inglis (MR 957). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 8646 ex eye scrapings, male 62 yr. Toronto, Ont. 28 Sep 1995 /R.C. Summerbell FR 2854.
- 9509 skin wound, histopathology +, male 24 yr with leukemia; treated with itraconazole Quebec G. St-Germain 1999 /G. St-Germain LSPQ 52890. Human/animal pathogen: cutaneous infection in immunosuppressed individual.
- 10047 apical leaves below inflorescence of *Yucca brevifolia* Morongo Valley, Riverside Co., CA (I) G. Zhang (C) A. & R. Bandoni Apr 2001 /M.L. Berbee gz 13022-1 [=GenBank AF392981ITS]. Culture conditions: black light recommended; sporulates on tap water agar in window // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 10048 apical leaves below inflorescence of *Yucca brevifolia* Morongo Valley, Riverside Co., CA G. Zhang Apr 2001 /M.L. Berbee gz 13022-1-3 [=GenBank AF392982]. Culture conditions: black light recommended.
- 10243 subcutaneous nodule on hand, male, gardener; histopathology + for globose structures & hyphae Gaspesia, eastern part of Quebec 2002 /R. Pelletier HDQ 856. Mesophilic; grows @ 30 C but scarcely @ 35 C (fide submitting laboratory) // human/animal pathogen: subcutaneous nodule // molecular systematics: Blast match 100% ITS similarity to several *Alternaria alternata* sequences but other gene region needed to confirm.
- 11333 ex right 1st web space of rt hand, male 58 yr farmer with history of treatment-refractory chronic lymphocytic leukemia; histopathology & Gram stain + for numerous hyphae; treated effectively with posaconazole Massachusetts General Hospital, Boston, MA Evan Mojica 31-Aug-2009 /D.A. Sutton UTHSC 09-2403. Human/animal pathogen: progressive subcutaneous infection in hand of patient with hand of a patient with chronic lymphocytic leukemia (Kpodzo DS, Calderwood MS, Ruchelsman DE, Abramson JS, Piris A, Winograd JM, Kotton CN. *Med Mycol*, 2011 Feb 7. Epub.).
- Alternaria brassicae* (Berkeley) Sacc.**
4936 ex blackspot lesion leaves, *Brassica campestris* Leduc, Alta. J.P. Tewari 10 Jul 1982 /J.P. Tewari. Phytotoxin destruxin B & related cyclodepsipeptides, homodestruxin B & desmethyldestruxin B, drimane-type sesquiterpenoids (Ayer & Pena-Rodriguez, *J. Nat. Prod.* 50:408-417, 1987; Ayer & Pena-Rodriguez, *J. Nat. Prod.* 50:400-407, 1987). Culture conditions: sparse conidial production on TWA; sporulates well on RBV8 agar (fide UAMH 2012) // application: molecular interactions of the phytotoxins destruxin B and sirodesmin PL with crucifers and cereals (Pedras MS, Khallaf I, *Phytochemistry* 77:129-139, 2012).
- 7476 ex *Brassica campestris* (fodder turnip) Innisfail, Alta. /J.P. Tewari CA-2. Plant pathogen: phytoalexin elicitation in leaves of *Capsella bursa-pastoris* (shepherd's purse) (Jiminez et al., *Phytoprotection* 78:99-103, 1997); proteome-level changes in two *Brassica napus* lines in response to *Alternaria brassicae* (Sharma N, Rahman MH, Strelkov S, Thiagarajah M, Bansal VK 1, Kav NNV, *Plant Science* 172:95-110, 2007); inhibitory effect of cytokinin on fungal growth and symptoms (Sharma N, Rahman MH, Liang Y, Kav NNV, *Canad J Plant Pathol* 32: 306 - 314, 2010) // culture conditions: sporulates well on RBV8 agar (fide UAMH 2012).
- 7477 ex leaf of *Brassica juncea* (mustard) Patna, Bihar, India /J.P. Tewari RA-cc.
- 7478 ex *Brassica campestris* v. yellow sarson (fodder turnip) Patna, Bihar, India /J.P. Tewari RA-D.
- 10049 cabbage Acadia Park, Univ. British Columbia, Vancouver, B.C. G. Zhang Mar 2001 /M.L. Berbee gz 01-3-1 [=GenBank AY042094 (MAT1) =GenBank AF392983 (ITS)]. Culture conditions: black light recommended; sporulates on tap water agar in window.
- 10050 cabbage from grocery store Vancouver, B.C. G. Zhang Mar 2001 /M.L. Berbee gz 01-6-6 [=GenBank AF392984 (ITS) =GenBank AY042091 (MAT2)]. Culture conditions: black light recommended; scant sporulation on tap water agar; degenerate, not sporulating when received.
- Alternaria brassicicola* (Schw.) Wiltshire**
7474 single-spore isolate ex seeds of *Brassica oleracea* ssp. capitata 'Houston Evergreen' (cabbage) British Columbia G. Petrie & C. Jasalavich May 1991 /J.P. Tewari ABC2. *Brassicicene* C (Mackinnon SL, Keifer P, Ayer W A, *Phytochemistry* 51: 215, 1999). Plant pathogen: black spot disease on cultivated *Brassica* species.
- 10051 cabbage in climatological station, Univ. British Columbia Vancouver, BC G. Zhang Mar 2001 /M.L. Berbee gz 01-2-1 [=GenBank AF392985 (ITS) =GenBank AY042093 (MAT1)]. Culture conditions: black light recommended // plant pathogen: black spot disease on cultivated *Brassica* species.
- 10052 cabbage from climatological station, Univ. British Columbia Vancouver, BC G. Zhang May 2001 /M.L. Berbee gz 01-8-6 [=GenBank AF392986 (ITS) =GenBank AY042092 (MAT2)]. Culture conditions: black light recommended // plant pathogen: black spot disease on cultivated *Brassica* species.
- Alternaria cinerariae* Horie & Enjoji**
5406 F. Beran /J. Vederas [=ATCC 11784]. Oleic acid (Arai K et al., *J. Am. Chem. Soc.* 111: 3391-3399, 1989); dehydrocurvularin (Arai K et al., *J. Am. Chem. Soc.* 112: 3212-3213, 1990; Arai K et al., *J. Am. Chem. Soc.* 114: 1531-1533, 1992; Liu, Y.; Li, Z. & Vederas, *Tetrahedron*, 54, 15937-15958, 1998). Molecular systematics: Blast match 100% ITS similarity to AY372682 *Alternaria zinniae* strain AZ33 but this strain is not the type (fide UAMH 2012); Identification as *Alternaria zinniae* suggested by ITS sequence data and morphology of mostly solitary conidia tapering into long beak..
- Alternaria dianthicola* Neergaard**
8192 subcutaneous nodules of the chest wall, male tobacco farmer with recurrent infection, treated with amphotericin B &

ketoconazole over 12 years, first reported in 1983 Michigan /R.C. Summerbell FR 261. Human/animal pathogen: cutaneous alternariosis (Mitchell et al., J. Am. Acad. Dermatol. 8:673-676, 1983).

Alternaria infectoria E.G. Simmons (morph *Lewia infectoria*)

- 6996 provisions for Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 624) Aug 1990 /D. Inglis (MR 624). Biodiversity: alfalfa leaf cutting bee microflora.
- 11629 ex skin biopsy, hand Nantes University Hospital, France F. Morio 14-Feb-2009 /F. Morio 70012838 [=GenBank JQ082443 ITS]. Human/animal pathogen: *Alternaria phaeocephomycosis* confirmed by PCR (Robert T. Talarmin JP, Leterrier M, Cassagnau E, et al, Medical Mycology 50:594-600, 2012) // culture conditions: degenerate non sporulating at deposit; some conidia produced.
- 11630 ex skin biopsy, right leg Nantes University Hospital, France F. Morio 2-Jun-2010 /F. Morio 70052399 [=GenBank JQ082445 ITS]. Human/animal pathogen: *Alternaria phaeocephomycosis* confirmed by PCR (Robert T. Talarmin JP, Leterrier M, Cassagnau E, et al, Medical Mycology 50:594-600, 2012) // culture conditions: degenerate non sporulating at deposit.

Alternaria longipes (Ellis & Everh.) Mason

- 8554 cutaneous biopsy from lesions of the left forearm, immunosuppressed male 60 yr, PAS stained histopathology of biopsy material + for fungal elements Reus, Tarragona, Spain J. Guarro 1994 /J. Guarro FMR 4985 [=CBS 655.96]. Human/animal pathogen: cutaneous phaeocephomycosis in an immunosuppressed patient (Gene et al., J. Clin. Microbiol. 33:2774-2776, 1995) // culture conditions: degenerate non sporulating at deposit.

Alternaria raphani Groves & Skolko

- 1761 Tamarix aphylla Salton Sea, Calif. C.J. Anastasiou 24 Jan 1961 /C.J. Anastasiou 546. Culture conditions: degenerate.
- 7475 single-spore isolate ex seeds of Brassica rapa ssp. oleifera (turnip) Medstead, Sask. G. Petrie & C. Jasalavich Apr 1991 /J.P. Tewari AR6 [=IMI 11040]. Culture conditions: degenerate.
- 8521 sample of new drywall being used in school construction Red Deer, AB Apr 1996 /K. Eriksson. Mesophilic: NG @ 37C // culture conditions: degenerate.

***Alternaria* sp.**

- 262 skin ex palm Lt hand Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
- 469 skin right hand Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
- 10877 shin, male 73 yr; histopathology positive for hyphal elements Edmonton, Alta. 5-Oct-2007 /R. Rennie MY 8219. Human/animal pathogen: subcutaneous infection confirmed by direct microscopy and repeat isolation.
- 11103 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVIHR13A. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // molecular systematics: Blast match 100% ITS similarity to several *Alternaria alternata* and *A. brassicae* sequences but other gene region needed to confirm.

Alternaria tenuis see ***Alternaria alternata***

Alternaria tenuissima (Kunze ex Pers.) Wilts.

- 5246 nasal lesion; DE positive for hyphae Uruguay /I. Conti 1937 [=Conti 85270]. Culture conditions: degenerate.

Alysidiopsis foliicola Castaneda Ruiz & Arnold

- 5998 fallen leaves of *Calophyllum antillanum* Guisa, Granma, Cuba R. Castaneda 16 Jun 1987 /R. Castaneda C87/191.

Amanita brunnescens Atkinson

- 5942 scattered under *Tsuga canadensis* & *Quercus* sp. Mount Toby Forest Reserve, nr Amherst, MA R. Thorn 12 Aug 1986 /L. Hutchison LH-15-86 [=TRTC LH-15-86]. Mycorrhizae.

Amanita muscaria (L. ex Fr.) Hooker

- 5504 mixed woods Seba Beach, Alta. C. Selwood 27 Jul 1986 /C. Selwood. Mycorrhizae.
- 5637 solitary to scattered under *Pinus strobus*, *Quercus rubra*, *Tsuga canadensis* & *Tilia americana* Willowdale, York Co., Ont. L. Hutchison 23 Sep 1986 /L. Hutchison LH-108-84 [=TRTC LH-108-84 (herbarium specimen)]. Mycorrhizae.

Amanita muscaria* var. *formosa (Fr.) Bertillon

- 5796 gregarious under *Pinus banksiana* & *Populus tremuloides* Burt Lake Burt Twp., Timiskaming Dist., Ont. L.J. Hutchison 22 Aug 1986 /L. Hutchison LH-47-86 [=TRTC LH-47-86]. Mycorrhizae.
- 5822 scattered to gregarious under *Pinus banksiana* Burt Lake Burt Twp., Timiskaming Dist., Ont. L. Hutchison /L. Hutchison LH-18-86 [=TRTC LH-18-86]. Mycorrhizae.

Amaurascopsis perforatus Guarro, Gene & de Vroey (morph *Chrysosporium* an. *Amaurascopsis perforatus*)

- 7107 (T *Amaurascopsis perforatus*) soil in chicken yard by spray technique Kuriange, Burundi, Africa (C) P. Dockx Jun 1968 /J. Guarro FMR 3882 [=RV 24813 =GenBank AJ390377 (ITS)]. Pigment: brown/purple.

Amaurascopsis reticulatus (Kuehn & Goos) Guarro & Gene (syn. *Amauroascus reticulatus*)

- 3560 (T *Pseudoarachniotus reticulatus*) rhizosphere *Musa sapientum* H.H. Kuehn /CBS 392.61 [=ATCC 14045 =IMI 84358].
- 3870 soil Honduras /G.F. Orr O-3505 [=ATCC 14045].
- 3871 ex specimen IMI 14645 *Gymnoascus reesii* G.F. Orr /G.F. Orr O-3545 [=NRRL A-18284].

***Amaurascopsis* sp.**

- 7713 Japan /S.-I. Udagawa SIU 6059. Cycloheximide: slightly sensitive.

Amauroascus albicans (Apinis) von Arx (syn. *Arachnotheca albicans*)

- 3102 (T *Arachniotus albicans*) alluvial pasture soil Attenborough, Notts., Engl. A. Apinis (BDUN 264) Apr 1950 /IMI 100875 [=ATCC 22478 =CBS 151.65 =NRRL 5141 =UAMH 3402 =GenBank KF477239 ITS]. Culture conditions: ascomata not produced on OAT @ 25C (fide UAMH 2011); produced ascomata when received // molecular systematics: excluded from *Nannizziopsis* clade (Sigler et al 2013); phylogeny of *Nannizziopsis* and related onygenalean fungi (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 3403 soil Germany Bohme (C1138) /G.F. Orr O-3220 [=IMI 155646 =C 1138 =NRL 3722].
- 3764 soil central California /G.F. Orr O-776.
- 3765 soil central California /G.F. Orr O-778.
- 3800 clay soil Dugway, Utah /G.F. Orr O-3223 [=NRRL 3719 =ATCC 18896 =IMI 155645 =QM 9287 =GenBank AJ271432 ITS =DPG 112].
- 3801 soil Hawaii /G.F. Orr O-3060 [=NRRL A-16928].

Amauroascus aureus (Eidam) von Arx (morph *Chrysosporium* an. *Amauroascus aureus*)

- 1667 Japan /G.F. Orr.

- 3157 (T neotype *Arachniotus aureus*) decayed wood ex tree stump cavity (*Cryptomeria japonica*) Mt. Yudono, Yamagata Pref., Japan K. Tubaki Aug 1959 /R.K. Benjamin RSA 1532 [=ATCC 18654 =CBS 593.71 =NRRL 12,184 =Orr O-2512 =GenBank AY271431 based on CBS 593.71 =GenBank AY176705]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002).
- 3405 soil Missouri, USA Brandsberg (MO 32) /G.F. Orr O-3518 [=ATCC 18260 =IMI 151274 =NRRL 3665 =GenBank AJ271433 based on IMI 151274].
- 7290 soil Japan R. Currah 1992 /R.S. Currah.
- 7714 Malaysia /S.-I. Udagawa SIU 6093.
- 7805 G. St-Germain MY 5755. Cycloheximide: resistant.
- 8905 right thumbnail, male 67 yr, DE+ Etobicoke, Ont. /R.C. Summerbell F 10052. Pigment: brown.

Amauroascus burundensis Vidal, Cano & Guarro (morph *Malbranchea an. Amauroascus burundensis*)

- 8382 (T) soil Kuriange, Bubanza, Burundi R. Vidal (RV 24812) Apr 1968 /J. Guarro FMR 3805 [=IMI 364811]. Pigment: brown.

Amauroascus echinulatus see *Mallochia echinulata*

Amauroascus kuehnii von Arx

- 3 (T *Amauroascus kuehnii*) dust containing bat dung Georgia Emmons /C.W. Emmons GS361a [=CBS 539.72 =GenBank AB015766 =GenBank AB040691 =GenBank AJ271417 based on CBS 539.72]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, *Mycoscience* 40:251-258, 1999; Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001); comparison with *Auxarthron* species (Sole, Cano, Stchigel & Guarro, *Stud. Mycol.* 47:103-110, 2002).
- 1907 lizard dung SW Palo Verde, Calif. G.F. Orr 1959 /G.F. Orr O-610.
- 1982 soil S. California G.F. Orr 1960 /G.F. Orr O-613.
- 1983 soil S. California G.F. Orr 1960 /G.F. Orr O-609.
- 2296 sputum Missouri State San. /H.W. Larsh 1623-B-1 [=GenBank AJ271421 (ITS)]. Molecular systematics: comparison with *Auxarthron* species (Sole, Cano, Stchigel & Guarro, *Stud. Mycol.* 47:103-110, 2002).
- 3113 pack rat dung Baja, Calif. B. Hanamin (D1139) 1 Mar 1963 /R.K. Benjamin RSA 1243.
- 3114 dung ex small animal Winslow, Navajo Co., Ariz. R.K. Benjamin (D639/3) 2 Sep 1960 /R.K. Benjamin RSA 1252.
- 3115 dung ex small animal Winslow, Navajo Co., Ariz. R.K. Benjamin (D639/4) 2 Sep 1960 /R.K. Benjamin RSA 1253 [=GenBank AJ271422 (ITS)]. Molecular systematics: comparison with *Auxarthron* species (Sole, Cano, Stchigel & Guarro, *Stud. Mycol.* 47:103-110, 2002).
- 3119 lizard dung Montezuma, Chihuahua, Mexico R.K. Benjamin (D1287/5-B) 4 Jul 1964 /R.K. Benjamin RSA 1429.
- 3121 lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/7-B) 3 Jul 1969 /R.K. Benjamin RSA 1438.
- 3122 lizard dung Moctezuma, Chihuahua, Mex. R.K. Benjamin Jul 1964 /R.K. Benjamin RSA 1439.
- 3131 Montezuma, Chihuahua, Mexico R.K. Benjamin 4 Jul 1964 /R.K. Benjamin RSA 1475.
- 3145 lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/1-E) 3 Jul 1964 /R.K. Benjamin RSA 1490.
- 3176 soil Ohio P.V. Kurup 11 Nov 1968 /P.V. Kurup SL-SL-14.
- 3799 G.F. Orr O-3316.

Amauroascus mutatus (Quelet) Rammeloo (syn.

Amauroascus verrucosus)

- 3563 old mat Holland J. Daoms 1968 /CBS 227.69 [=ATCC 18744 =O-1124 =DSM 3483 =FMR 6447 =IFO 32600 =JCM 23143 =NBRC 32600 =GenBank AJ271565 ITS]. Cellulolytic // culture conditions: produces ascospores on CER @ 25C.

- 3576 soil Oklahoma G.F. Orr /CBS 181.70 [=ATCC 22395 =GenBank AB075321 28S =GenBank AJ271567 ITS =IFO 32601 =NBRC 32601 =MUCL 39707 =NRRL A-18285 =O-3161]. Molecular systematics: phylogeny of onygenalean fungi (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013).

- 11033 ex soil from swift fox enclosure Edmonton Zoo, Edmonton, Alta. J. Bottrill 2008 /R.S. Currah. Culture conditions: grows best @ 25C, restricted at 30C but no growth @ 37C (fide Currah); produces ascospores on CER @ 25C.

Amauroascus niger Schroeter (syn. *Arachniotus niger*)

- 3544 (T *Amauroascus niger*) badger dung & soil central Calif. G.F. Orr (Orr 315) /CBS 114.61 [=ATCC 22339 =NRRL A-10697 =QM 8501 =GenBank AY176706 =IFO 32599 =GenBank AJ133434 ITS =O-315 =GenBank AY176706 28S =FMR 6449 =GenBank AB075322 28S =GenBank AJ1563 ITS]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002; Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013).

Amauroascus pseudoreticulatus Currah

- 2000 soil S. California G.F. Orr 1957 /G.F. Orr O-3744.
- 3117 (T *Amauroascus pseudoreticulatus*) lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/3-B) 3 Jul 1964 /R.K. Benjamin RSA 1426 [=GenBank AJ426452 (ITS) =GenBank AY271420 (ITS1)]. Molecular systematics: comparison with *Auxarthron* species (Sole, Cano, Stchigel & Guarro, *Stud. Mycol.* 47:103-110, 2002).
- 3144 lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/1-E) 3 Jul 1964 /R.K. Benjamin RSA 1489.
- 3149 lizard dung Chihuahua, Mexico R.K. Benjamin (D1288/10-A) 4 Jul 1969 /R.K. Benjamin RSA 1502.
- 3426 dog dung Texas, USA Alexopoulos 1966 /G.F. Orr O-3190 [=UAMH 3569 =Orr O-3318].
- 3566 soil England Warcup /G.F. Orr O-3219.
- 3569 dog dung Texas Alexopoulos /G.F. Orr O-3318 [=UAMH 3426 =Orr O-3190 =GenBank AY271423 (ITS)]. Molecular systematics: comparison with *Auxarthron* species (Sole, Cano, Stchigel & Guarro, *Stud. Mycol.* 47:103-110, 2002).
- 3590 air sampler plate Dugway, Utah G.F. Orr /G.F. Orr O-2504 [=NRRL 3709].

Amauroascus purpureus Ito & Nakagiri

- 8294 (T *Amauroascus purpureus*) cultivated soil Ikeda, Osaka, Japan T. Ito (H2-4-15-11) May 1990 /T. Ito IFO 32622 [=GenBank AY176707]. Mesophilic: NG @ 37C // molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002).

Amauroascus reticulatus see *Amauroscopsis reticulatus*

Amauroascus tropicalis Cano, Guarro & Castaneda (morph *Malbranchea an. Amauroascus tropicalis*)

- 8383 forest soil La Yagruma, San Antonio de los Banos, Cuba J. Cano Mar 1992 /J. Guarro FMR 5044.

Amauroascus verrucosus see *Amauroascus mutatus*

Amauroascus volatilis-patellus (Orr & Kuehn) Currah (syn. *Arachniotus volatilis-patellus*)

- 2295 sputum ex patient Missouri State San. /H.W. Larsh 1502 B-1.
- 3123 lizard dung Moctezuma, Chihuahua, Mex. J. Henrickson (C) /R.K. Benjamin RSA 1440.
- 3406 (T *Arachniotus volatilis-patellus*) soil Utah /G.F. Orr O-3159 [=GenBank AJ133435 (ITS)].

Amblyosporium botrytis Fresenius

- 1113 coyote dung Tapia park, Malibu Mtns., Calif. /G.F. Orr O-626.
 10131 urea-amended soil Alberta A. Suzuki 2001 /A. Suzuki 040UA.
 Urease. Culture conditions: urea broth + // pigment: reddish brown // biodeteriogen/biodegradation: ammonia fungus (fide A. Suzuki) // biodiversity: ammonia fungus.

Amblyosporium spongiosum (Pers.) Hughes

- 2579 CBS.
 2580 CBS 107.08 [=ATCC 16976].
 3030 dung Rhode Island R.D. Goos 1966 /R.K. Benjamin 1723 [=ATCC 16780].
 3188 Lactarius sp. Haslemere, Surrey E. Mason 1945 /IMI 1691 [=ATCC 1140 =CBS 548.69].

Ambrosiella sp. 1

- 10632 gallery of *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 2PG3P-A1 [=GenBank EU984247 SSU =GenBank DQ268618 B-tubulin =GenBank DQ268582 (ITS-partial LSU)]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: phylogeny of filamentous ambrosia fungi associated with bark beetles (Massoumi Alamouti S, Tsui CKM, Breuil C, Mycol Res 113:822-835, 2009); relationship with *Ophiostoma* inferred (Massoumi Alamouti S et al 2009).
 10633 ex *Ips perturbatus* (northern spruce engraver) Cracker Creek, Yukon S. Alamouti /C. Breuil 3YT7P-A1 [=GenBank EU984248 SSU =GenBank DQ268583 SSU =GenBank DQ268619 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: phylogeny of filamentous ambrosia fungi associated with bark beetles (Massoumi Alamouti S, Tsui CKM, Breuil C, Mycol Res 113:822-835, 2009); relationship with *Ophiostoma* inferred (Massoumi Alamouti S et al 2009).

Ambrosiella sp. 2

- 10634 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 3PG4P-A2 [=GenBank DQ268584 LSU =GenBank EU984249 SSU =GenBank DQ268584 SSU =GenBank DQ268620 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: phylogeny of filamentous ambrosia fungi associated with bark beetles (Massoumi Alamouti S, Tsui CKM, Breuil C, Mycol Res 113:822-835, 2009); relationship with *Ophiostoma* inferred (Massoumi Alamouti S et al 2009).
 10635 gallery of *Ips perturbatus* (northern spruce engraver) Whitehorse, Yukon S. Alamouti /C. Breuil 2YT2P-A2 [=GenBank DQ268585 LSU =GenBank EU984250 SSU =GenBank DQ268585 SSU =GenBank DQ268621 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: phylogeny of filamentous ambrosia fungi associated with bark beetles (Massoumi Alamouti S, Tsui CKM, Breuil C, Mycol Res 113:822-835, 2009); relationship with *Ophiostoma* inferred (Massoumi Alamouti S et al 2009).

Ambrosiella xylebori Brader ex von Arx & Hennebert

- 9402 (*T. Ambrosiella xylebori*) gallery of *Xyleborus compactus* in *Coffea canephora* Ivory Coast L. Brader /CBS 110.61. Benomyl: sensitive (NG 2 ppm) // culture conditions: non sporulating on deposit; no conidia obtained // molecular systematics: relationship with *Microascales* inferred (Massoumi Alamouti S et al 2009); phylogeny of filamentous ambrosia fungi associated with bark beetles (Massoumi Alamouti S, Tsui CKM, Breuil C, Mycol Res 113:822-835, 2009).

Amorphotheca resiniae Parbery (morph *Hormoconis resiniae*)

- 3335 podsollic soil Bega, NSW Australia D.G. Parbery 1967 /D.G. Parbery W 1.1 [=IMI 129861] + mating type 3336.
 3336 alluvial soil Vict., Aust. D.G. Parbery 1967 /D.G. Parbery V2 [=IMI 129862] - mating type 3335.
 4503 jet fuel J.J. Cooney (UD-43) /K. Collinson [=ATCC 22712]. Biodeteriogen/biodegradation: utilizes hydrocarbons (Appl. Microbiol. 13:823-824, 1965).
 4504 jet fuel J.E. Sheridan (52-73) /K. Collinson [=ATCC 32945]. Biodeteriogen/biodegradation: utilizes hydrocarbons (Int. Biodet. Bull. 10:105-108, 1974).
 4505 aircraft jet fuel T. (MQAD22) Rubidge /K. Collinson [=ATCC 34066]. Biodeteriogen/biodegradation: jet fuel biodeteriogen (Int. Biodet. Bull. 10:53-55, 1974).
 4710 litter under old *Pinus* Devonian Bot. Garden, Alta. L. Sigler Nov 1982 /L. Sigler.
 8711 sputum, male 36 yr Alberta Nov 1996 /R. Rennie MY 5384. Pigment: brown.
 9474 environmental soap Edmonton, Alta. Dynacare Kasper Medical Laboratories 13 Feb 1999 /R. Rennie MY 944.
 10062 toenail, male 62 yr Quebec 2001 /G. St-Germain MY 56434. Thermotolerant: grows @ 37 C.

Amphinema byssoides (Persoon: Fries) Eriksson

- 7345 J. Boidin /CBS 397.50. Pigment: brown // mycorrhizae.
 9073 sporocarp on soil & rocks by spruce seedlings Kananaskis, Alta. R.M. Danielson (RMD 3327) Oct 1986 /R.M. Danielson RMD 3327. Mycorrhizae.
 9074 sporocarp resupinate on rotten spruce in undisturbed feather moss bog, on wood & over mycorrhizal roots Ft. McMurray, Alta. R.M. Danielson (RMD 3140) 10 Sep 1981 /R.M. Danielson RMD 3140 [=DAOM 183507 =CCFC 4224]. Mycorrhizae.
 9075 sporocarp resupinate on limb in larch-spruce bog, fruiting on stick, litter & roots Ft. McMurray, Alta. R.M. Danielson (RMD 3141) 10 Sep 1981 /R.M. Danielson RMD 3141. Mycorrhizae.
 9076 sporocarp resupinate on poplar branch in wet spruce & feather moss Bragg Creek, Alta. R.M. Danielson (RMD 3115) 13 Sep 1981 /R.M. Danielson RMD 3115. Mycorrhizae.
 9077 resupinate on poplar limb in spruce-feather moss stand Bragg Creek, Alta. S. Visser 13 Sep 1981 /R.M. Danielson RMD 3117. Mycorrhizae: poorly salt tolerant (Kernaghan, Hambling, Fung & Khasa, Restoration Ecology 10:43-51, 2002).
 9078 sporocarp resupinate on spruce(?) limb in spruce-feather moss Bragg Creek, Alta. S. Visser 13 Sep 1981 /R.M. Danielson RMD 3118 [=DAOM 183505 =CCFC 4222]. Mycorrhizae.
 9079 sporocarp resupinate on poplar bark in spruce stand by parking lot Brown Lowery Park, Alta. S. Visser 20 Sep 1981 /R.M. Danielson RMD 3143 [=DAOM 189786 =CCFC 4801]. Mycorrhizae.
 9080 sporocarp resupinate on poplar bark in spruce stand by parking lot Brown Lowery Park, Alta. S. Visser 20 Sep 1981 /R.M. Danielson RMD 3144 [=DAOM 183506 =CCFC 4223]. Mycorrhizae.
 9081 sporocarp resupinate on poplar bark in mixed poplar-spruce stand, on outer bark surface Brown Lowery Park, Alta. R.M.

- Danielson (RMD 3146) 20 Sep 1981 /R.M. Danielson RMD 3146 [=DAOM 189788 =CCFC 4803]. Mycorrhizae.
- 9082 sporocarp resupinate on spruce litter covering twigs, canes & leaves Brown Lowery Park, Alta. R.M. Danielson (RMD 3147) 20 Sep 1981 /R.M. Danielson RMD 3147 [=DAOM 189787 =CCFC 4802]. Mycorrhizae.
- 9577 ectomycorrhizae of 2 yr old white spruce seedlings (*Picea glauca*) Bonneyville Nursery, Bonneyville, Alta. G. Kernaghan 26 Feb 1999 /G. Kernaghan. Pigment: brown // mycorrhizae: white spruce (*Picea glauca*); identification of root associated fungi from containerized *Picea glauca* seedlings (Kernaghan, Sigler & Khasa, *Microbial Ecology* 45:128-136, 2003) // molecular systematics: matched by RFLP to reference sporocarp; rDNA sequence analysis (Kernaghan, Sigler & Khasa, *Microbial Ecology* 45:128-136, 2003).
- Amphisphaeria incrustans* see *Dendryphiopsis an.*
Microthelia incrustans
- Amylostereum chailletii* (Pers.:Fr.) Boidin (syn. *Stereum chailletii*)
8171 *Pinus contorta* (lodgepole pine) Alberta M.K. Nobles 18 Sep 1955 /S. Davies FC-174 [=NOF 263].
Biodeteriogen/biodegradation: white rot // pigment: brown.
- Anixiopsis biplanata* Gueho & de Vroey
5340 (T mating type *Anixiopsis biplanata*) /E. Gueho RV 37551 [=CBS 119.85 =IP 1561-84] + mating type 5341. Pigment: tan // systematics/taxonomy: species placed in synonymy with *Aphanoascus durus* (Cano J, Guarro J, *Mycol Res* 94: 355-377, 1990).
5341 (T mating type *Anixiopsis biplanata*) /E. Gueho RV 37552 [=CBS 120.85 =IP 1562-84] - mating type 5340. Pigment: yellow // systematics/taxonomy: species placed in synonymy with *Aphanoascus durus* (Cano J, Guarro J, *Mycol Res* 94: 355-377, 1990).
- Anixiopsis reticulispora* see *Aphanoascus fulvescens*
- Annellosporium nemorosum* M.L. Davey
11227 ex soil in burrow of captive swift fox (*Vulpes velox*) in zoo Valley Zoo, Edmonton, Alta. M.L. Davey May-2008 /M.L. Davey SF-1 [=GenBank HM114295 =GenBank HM114296]. Systematics/taxonomy: description (Davey ML, *Karstenia* 50:1-10, 2010).
- Anopodium ampullaceum* N. Lundq.
6880 mouse dung Reserve Nationale de Fannes, Magdalen Is., P.Q. D. Malloch 13 Jun 1990 /R. Khan JS 122.
- Anthopsis deltoidea* Filipello-Marchisio et al.
4887 synovial suction of swollen olecranon bursa on elbow of male golfer, 79 yr, with arthritis & on steroids Holy Cross Hospital, Fort Lauderdale, Florida, USA Sep-1983 /K.J. Kwong-Chung R-25. Human/animal pathogen: subcutaneous infection of the olecranon bursa (Kwon-Chung KJ, Droller DD, *J Clin Microbiol* 20: 221-223, 1984).
- Anthostomella pacifica* Udagawa, Uchiyama, & Kamiya
8348 (T *Anthostomella pacifica*) forest soil near Tao, Prov. Nord, New Caledonia S. Uchiyama & S. Kamiya 12-Jun-1993 /S.-I. Udagawa BF 44319.
- Antrodia albidia* (Fr.) Donk
7327 polypore & 4 monospore cultures from sporophore St. Michaels, MD H. McKay 15 Apr 1957 /DAOM 52343 [=USDA 103468]. Pigment: brown.
- Antrodia serialis* (Fr.) Donk (syn. *Trametes serialis*)
7328 old white pine log Cantley, PQ J. Ginns (G1381) 10 Jun 1969 /DAOM 137862.
7445 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (CF-90-1c-17a) 28 Sep 1990 /L. Hutchison NOF 1500.
8163 Alberta L.L. Kennedy /S. Davies FC-054. Biodeteriogen/biodegradation: brown rot.
8164 *Picea glauca* (white spruce) Alberta M.K. Nobles 03 Jun 1955 /S. Davies FC-153 [=NOF 128]. Biodeteriogen/biodegradation: brown rot // pigment: brown.
- Antrodia xantha* (Fr.) Ryv. (syn. *Poria xantha*)
8188 *Picea glauca* (white spruce) Alberta M.K. Nobles 24 Aug 1955 /S. Davies FC-148 [=NOF 219]. Biodeteriogen/biodegradation: brown rot.
- Antromycopsis macrocarpa* see *Pleurotus cystidiosus*
- Antromycopsis sajor-caju* see *Lentinus sajor-caju*
- Aphanoascella galapagosensis* D.A. Sutton, Y. Marin, E.H. Thompson et Guarro (morph *Malbranchea an.* *Aphanoascella galapagosensis*)
11703 (T *Aphanoascella galapagosensis*) scrapings from white lesions on carapace of wild caught captive Volcan Darwin Tortoise (*Chelonoidis nigra* microphytes), ca. 50 yr old Texas Veterinary Medical Diagnostic Laboratory, College Station, TX 2011 /D.A. Sutton UTHSC 11-1518 [=GenBank JQ864082 D1D2 =GenBank JQ864081 ITS =CBS 132345]. Human/animal pathogen: keratitis affecting carapaces (shells) of dry land tortoises in captivity (Sutton DA, Marin Y, Thompson EH, Wickes BL, Fu J, Garcia D et al, *Med Mycol* 51:113-120, 2013) // systematics/taxonomy: description of *Aphanoascella galapagosensis* (Onygenaceae) (Sutton DA et al 2013).
- Aphanoascus aciculatus* Pivkin & Khudyakova (morph *Malbranchea an.* *Aphanoascus aciculatus*)
10248 sea bottom deposits Sea of Japan, Trinity Bay; depth of 17 m Russia Vladivostok 27-10-96 /M.V. Pivkin KMM 4688. Pigment: yellow // culture conditions: no ascospores on rice grains or other media // thermotolerant.
- Aphanoascus canadensis* Currah (morph *Malbranchea an.* *Aphanoascus canadensis*)
4574 (T *Aphanoascus canadensis*) carnivore dung Lesser Slave Lake, Alta. L. Sigler May 1982 /R.S. Currah 81-7 [=GenBank AJ439435 (ITS)].
- Aphanoascus clathratus* Cano & Guarro (morph *Chrysosporium an.* *Aphanoascus clathratus*)
6177 soil Spain /J. Guarro FMR 2001.
6284 soil Zuid-Flevoland, Holland 1980 /J. Guarro FMR 2000 [=CBS 663.86].
- Aphanoascus durus* (Zukal) Cano & Guarro (syn. *Keratinophyton durum*)
836 soil Edmonton, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
856 (T *Keratinophyton durum*) soil chicken yard Edmonton, Alta. J.W. Carmichael 14 Jun 1960 /J.W. Carmichael [=RV 60913].
3671 hedgehog Ivory Coast /M.P. English [=RV 60914].
8040 ex hair-baited soil, municipal landfill site Sosnowiec, Poland K. Ulfig 27 Apr 1993 /K. Ulfig IEIA 464B.
8068 ex hair-baited soil, municipal landfill site Sosnowiec, Poland K. Ulfig 10 Nov 1993 /K. Ulfig IEIA 677A.
10061 BAL, female 34 yr Quebec 2001 /G. St-Germain MY 56312.

- Cycloheximide: slightly sensitive.
- 10727 ex decomposing keratinous skate (*Raja*) egg casing in moist chamber New Brunswick (C) D. Malloch (I) M. Saleh /J. Scott MSSEC-008. Culture conditions: no ascospores produced // molecular systematics: BLAST match 98% ITS similarity with *Aphanoascus durus* (fide M. Saleh).
- Aphanoascus foetidus*** (Apinis & B. Clark) Cano & Guarro (morph *Chrysosporium foetidus*)
6437 (T *Neoxenophila foetida*) coat of rats *Myomyces daltoni* B. Clark /CBS 453.75 [=CBS 453.75 =GenBank AB015779 =GenBank AB040693]. Odor: pungent // molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, *Mycoscience* 40:251-258, 1999; Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001; Cano J, Sagués M, Barrio E, Vidal P et al, *Stud Mycol* 47: 153-164, 2002).
- Aphanoascus fulvescens*** (Cooke) Apinis (syn. *Anixiopsis reticulisporea*, *Aphanoascus reticulisporeus*; morph *Chrysosporium an. Aphanoascus fulvescens*)
582 ringworm ex cat Edmonton, Alta. J.W. Carmichael 1957 /J.W. Carmichael.
1895 hair apparently healthy wild rodents, *Clethrionomys glareolus* Czechoslovakia /J. & Otcenasek, M. Dvorak 5 mates with 4823. Odor: strong pungent odor on cer.
1896 cow /J. & Otcenasek, M. Dvorak 6.
2408 soil, hair baited Ol Moloc, Tanganyika Y. Al-Doory Dec 1964 /Y. Al-Doory SF 3.
2596 birds nest /M. Otcenasek 139H.
3218 cow hair & dung Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
3219 cow hair & dung Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
3338 *Tinea corporis* /J.W. Rippon 87-70 (4-17) [=ATCC 18996].
3518 soil Sudan A. Padhye 1972 /L. Ajello 28b.
3520 soil Sudan /L. Ajello 25a.
4113 (T *Anixiopsis reticulisporea*) soil New Zealand J.B. Routien 1967 /IMI 129854 [=GenBank AY176730 LSU =FMR 2244 =IFO 32372 =NBRC 32372 =ATCC 14862 =CBS 392.67]. Produces keratinase (Routien, *Mycologia* 59:475-481, 1967). Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002).
4114 soil Bath, Somerset, England P.M. Stockdale 1958 /IMI 74750.
4449 hair-filled dung Devonian Bot. Garden, Alta. R. Currah (81-21) 3 Jun 1981 /R. Currah (81-21).
4603 Great Horned Owl pellet Devonian Bot. Garden, Alta. R. Currah (82-9) Jun 1982 /R. Currah (82-9).
4808 coyote dung Devonian Bot. Garden, Alta. R. Currah (81-9) Jul 1983 /R. Currah (81-9).
4823 ex UAMH 4804 coyote dung in damp chamber (mixed with *Onocladium flavum*) Devonian Bot. Garden, Alta. R. Currah Jul 1983 /R.S. Currah 81-9 mates with UAMH 1895. Odor: pungent skunklike on CER.
5057 *tinea pedum*, human Poland Ulfig /K. Ulfig 20. Thermotolerant: grows @ 37C, NG @ 42C // pigment: yellow/pink.
5117 toe cleft, DE negative Wellington, New Zealand A. Woodgyer 1985 /A. Woodgyer 850341 [=GenBank AF038357 (ITS)]. Molecular systematics: comparison with members of the genus *Ajellomyces* (Peterson & Sigler, *J. Clin. Microbiol.* 36:2918-2925, 1998).
5191 collie dog's hair Edmonton, Alta. D. Fedyko Sep 1985 /D. Fedyko.
5244 with *Onygena* ex feather stuffing old sleeping bag Kongsvold, Norway R. Currah Sep 1985 /R. Currah.
5587 coyote dung Devonian Bot. Garden, Alta. R. Currah (RC100-85) 1985 /R. Currah (RC100-85).
- 5653 ex dung Devonian Bot. Garden, Alta. R. Currah (D-41) Sep 1986 /R. Currah (D-41).
5912 nail Toronto, Ont. /J. Kane K147.
6413 J. Kane FR 2749.
6542 garden soil Lanjaron, Granada, Spain J. Guarro Aug 1986 /J. Guarro FMR 2290 [=IMI 336466 =IFO 32373 =NBRC 32373 =GenBank AJ439441].
6852 dust Italian research base, Antarctic coast R. Mercantini 1987 /R. Mercantini 10/125/A.
9942 shed back/side skin ex Inland bearded dragon (*Pogona vitticeps*), 1.5yr Virginia Zoological Park, Norfolk VA UAMH (UW041B-B) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. *Herpetol. Med. Surg.* 13:10-15, 2003).
11590 soil from construction development area Moorpark, California S.P. Abbott 29-Jan-2010 /S.P. Abbott SA1500. Molecular systematics: ITS 99-100% similarity with *Aphanoascus fulvescens* (fide UAMH).
- Aphanoascus hispanicus*** Cano & Guarro (morph *Chrysosporium an. Aphanoascus hispanicus*)
6179 (T *Aphanoascus hispanicus*) arable soil Alhaurin de la Torre, Malaga, Spain Apr 1987 /J. Guarro FMR 2263.
6545 beach sand Alcoceber, Castellon, Spain J. Guarro Aug 1986 /J. Guarro FMR 2264.
- Aphanoascus keratinophilus*** Punsola & Cano (morph *Chrysosporium keratinophilum*)
4228 horse N. Japan K. Takatori /K. Takatori 420-20.
6141 (T *Aphanoascus keratinophilus*) garden soil San Mateo, Castellon Spain J. Cano Aug 1985 /J. Guarro FMR 2149 [=IMI 319010]. Keratinophilic: human hair (Cano et al., *Mycoses* 34:145-152, 1991).
6410 soil Tolox, Malaga, Spain J. Cano Aug 1985 /J. Guarro FMR 2164.
- Aphanoascus keratinophilus* see ***Chrysosporium keratinophilum***
- Aphanoascus mephitalis*** (Malloch & Cain) Cano & Guarro (morph *Malbranchea an. Aphanoascus mephitalis*)
3849 (T *Xynophila mephitalis*) carnivore dung Thunder Bay district, W. of White R. Cain 8 Sep 1964 /DAOM 146006 [=ATCC 22144 =CBS 783.70 =IMI 154084 =TRTC 42886 =GenBank AY176725]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002; Cano J, Sagués M, Barrio E, Vidal P et al, *Stud Mycol* 47: 153-164, 2002).
- Aphanoascus multiporus*** Cano & Guarro (morph *Malbranchea an. Aphanoascus multiporus*)
6178 (T *Aphanoascus multiporus*) soil Cervera del Maestre, Castellon, Spain Aug 1985 /J. Guarro FMR 2146 [=IMI 328660].
6558 soil Campherroso, Almeria, Spain J. Guarro Mar 1988 /J. Guarro FMR 2948. Keratinophilic: human hair (Cano et al., *Mycoses* 34:145-152, 1991).
- Aphanoascus orissae*** (B. Sur & G.R. Ghosh) Cano & Guarro (syn. *Uncinocarpus orissi*, *Pseudoarachniotus orissi*, *Gymnoascus arxii*; morph *Chrysosporium zonatum*)
2041 soil Italy Varsavsky isolate /G.F. Orr EV I-22 +. Systematics/taxonomy: revision of *Uncinocarpus* (Sigler et al., *Can. J. Bot.* 76:1624-1636, 1998) // thermotolerant: opt. 37C.
2538 soil Florida 1965 /G.F. Orr 118 +. Systematics/taxonomy: revision of *Uncinocarpus* (Sigler et al., *Can. J. Bot.* 76:1624-1636, 1998) // thermotolerant: opt. 37C.
3676 CDC 64998 +. Systematics/taxonomy: revision of

- Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 3728 rabbit dung Dugway, Utah Aug 1974 /G.F. Orr O-1287 -. Thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 4044 during survey of soil inhabiting keratinophilic fungi /S.C. Agrawal 23 +. Thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 4426 soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-1 +. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 4427 soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-3 +. Thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 4428 soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-15 -. Thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 4435 soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-7 -. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 4436 soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-21 +. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 4446 soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-5 +. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 5080 soil by keratin bait India /S.K. Agnihotri 3 +. Thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 6499 poultry comb lesion India G. Ghosh /G. Ghosh S-11 +. Pigment: brown // thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 6500 sand Chilku Lake, Orissa, India G. Ghosh /G. Ghosh CLK 212 -. Pigment: brown; revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 6611 (T *Gymnoascus arxii*) soil Pensicola, Castellon, Spain J. Cano Apr 1987 /J. Guarro FMR 2105 [=GenBank AJ315843 ITS =IMI 326523 =UAMH 9133 =CBS 466.88 =GenBank AB075357 LSU] +. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 6617 (T *Chrysosporium zonatum*) horse dung Kuwait Feb 1986 /CBS 437.88 [=GenBank AJ390393 ITS CBS 340.89] -. Pigment: brown; revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998); phylogeny of Nannizziopsis and related onygenalean fungi (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 6635 single ascospore isolate B (+), UAMH 4427 X 6500 UAMH L. Sigler (B) 2 Nov 1990 + mates with UAMH 9920, 9067. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 6636 single ascospore isolate G (-), UAMH 4427 X 6500 UAMH L. Sigler (G) 2 Nov 1990 -. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 6950 (T *Pseudoarachniotus orissi*) soil, cattle resting place Victoria Goshala, Cuttack, India R. Ghosh (GS 130) /A. Varma ITCC 3177 -. Pigment: brown // thermotolerant: opt. 37C; revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 8936 sputum & bone, male 15 yr with chronic granulomatous disease (CGD) Greece E. Bibashi 1997 /E. Bibashi -. Cycloheximide: resistant // thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // human/animal pathogen: osteomyelitis and pulmonary infection in patient with CGD (Sigler et al., ASM Abstracts F-91, 1998; Roilides et al., J. Clin. Microbiol. 37:18-25, 1999).
- 9067 bronchial lavage ex female with pulmonary cavity Metropolitan Fuchu Hospital, Chiba, Japan /K. Nishimura IFM 47509 - mates with 6635. Thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // human/animal pathogen: pulmonary colonization resembling T.B. (Sigler et al., ASM Abstracts F-91, 1998) // pigment: brown.
- 9068 bronchial lavage ex male with pulmonary cavity Saga Medical University Hospital, Kyushu, Japan /K. Nishimura IFM 47510 + mates with 8936. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant // human/animal pathogen: pulmonary colonization resembling T.B. (Sigler et al., ASM Abstracts F-91, 1998) // pigment: brown.
- 9097 single ascospore isolate F(+), UAMH 4427 X 6500 UAMH L. Sigler (F) 2 Nov 1990 + mates with UAMH 9920. Thermotolerant: opt. 37C // systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998).
- 9098 single ascospore isolate E(-), UAMH 4427 X 6500 UAMH L. Sigler (E) 2 Nov 1990 - mates with UAMH 9921. Systematics/taxonomy: revision of Uncinocarpus (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // thermotolerant: opt. 37C.
- 9920 shed dorsal/ventral skin ex fer-de-lance viper (Bothrops asper), male 3 yr John Ball Zoological Garden, Grand Rapids MI UAMH (UW026B-A) 05 Dec 2000 - mates with 9921, 9097, 6635. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 9921 shed mid back/lower jaw skin ex garden tree boa (*Corallus enydris*), female Steinhart Aquarium, San Francisco CA J. Pare Nov 2000 /J. Pare UW013A-A + mates with 9920, 9098. Biodiversity: reptile cutaneous mycobiota survey (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Aphanoascus reticulisporus see *Aphanoascus fulvescens*

Aphanoascus saturnoideus Cano & Guarro (morph

Chrysosporium an. *Aphanoascus saturnoideus*)

5356 E. Gueho RV 35677.

6165 (T *Aphanoascus saturnoideus*) soil Don Benito, Badajoz, Spain Dec 1984 /J. Guarro FMR 2002 [=CBS 628.88 =IMI 318416].

7710 Japan /S.-I. Udagawa BF 46857. Cycloheximide: resistant.

Aphanoascus sp.

3028 skin scraping UCLA, Calif. /R.S. Pore [=O-2556].

3562 soil Sudan /L. Ajello 59.

5651 ex dung Kongsvold, Norway R. Currah (D-3) Nov 1985 /R. Currah (D-3).

5652 ex dung Grimdsahl, Norway R. Currah (D-6) Nov 1985 /R. Currah (D-6).

5914 contaminant ex fingernails Toronto, Ont. 1987 /J. Kane 11339.

8647 human nails, male Sainte-Anne-de-Bellevue, Que. G. St. Germain /R.C. Summerbell FR 2669. Cycloheximide: resistant // mesophilic: NG @ 37C // benomyl: sensitive.

Aphanoascus terreus (Randhawa & Sandhu) Apinis (syn.*Keratinophyton terreum*; morph *Chrysosporium an.**Aphanoascus terreus*)

- 2409 soil by hair bait Mackinnon Road, Kenya Y. Al-Doory Dec 1964 /Y. Al-Doory SF 4.
- 2557 Fork-tailed kite (*Milvus migrans*) Mitchell R. Mission, Queensland Apr 1965 /R.G. Rees H427.
- 2561 domestic fowl Charleville, Queensland, Australia May 1965 /R.G. Rees F.114.
- 2748 soil Mozambique /C. Magalhaes 1062/86 [=RV 60915].
- 4616 soil Spain /J. Guarro FFBA 360 [=RV 60916].
- 5342 Kenya /E. Gueho RV 32876. Pigment: tan/red.
- 6544 beach sand Faro Torrox, Malaga, Spain J. Guarro Aug 1986 /J. Guarro FMR 2245.

Aphanoascus terreus see ***Chrysosporium indicum******Aphanoascus verrucosus*** Cano & Punsola (morph*Chrysosporium an. Aphanoascus verrucosus*)

- 6140 (T *Aphanoascus verrucosus*) arable soil Cadiar, Granada, Spain J. Cano Aug 1985 /J. Guarro FMR 2122 [=CBS 648.88 =IMI 319009].
- 6407 soil Liria, Valencia, Spain Aug 1985 /J. Guarro FMR 2124.

Aphanocladium album (Preuss) Gams

- 1091 skin lesion Dermatology Clinic, Miami F.J. Roth /F.J. Roth 1046.
- 1092 skin lesion Dermatology Clinic, Miami F.J. Roth /F.J. Roth 1050.
- 1909 skin lesion (arm) Los Angeles Waldeck 1960 /G.F. Orr O-3643.
- 2004 soil central Calif. G.F. Orr 1959 /G.F. Orr A 10,108.
- 4067 air spora of a cork factory Portugal J. Lacey 1972 /IMI 165301.
- 4090 contaminant ex bovine hair & skin Edmonton, Alta. B. Murray /B. Murray 69 (2).
- 5515 contaminant on *Cystoderma* sp. UAMH Oct 1986 /B. Murray. Pigment: brown.
- 5521 deep sputum, male 67 yr New York State 1985 /M. Kemna M1409-85.
- 7432 toenail, female 39 yr Edmonton, Alta. C. Sand 23 Aug 1993 /R. Rennie MY 3479A. Odor: peppermint.
- 8035 bronchial wash, female Burlington, MA Lahey Clinic 8 Apr 1995 /M.G. Rinaldi UTHSC 95-743. Pigment: dark lavender.
- 8283 indoor air ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M64) 30-Aug-1995 /S.P. Abbott (SA-M64). Pigment: dark grey.
- 9865 indoor air ex RCS strip Edmonton, AB L. Sigler (3-1-N) Aug 2000 /L. Sigler (3-1-N).
- 9918 shed dorsum skin ex Goin's kingsnake (*Lampropeltis getula goini*), male 10 yr Six Flags Marine World, Vallejo CA J. Pare 11 Nov 2000 /J. Pare UW030A-B. Pigment: rose // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 11414 swab ex fur of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Markhamville Mine, New Brunswick K.J. Vanderwolf 9-Feb-2010 /K.J. Vanderwolf Bat 41 C.8 . Biodiversity: mycobiota of bat caves.

Apinisia graminicola La Touche (morph *Chrysosporium an.**Apinisia graminicola*)

- 4315 (T *Apinisia graminicola*) decomposing grass cuttings Leeds La Touche Oct 1964 /IMI 126422 [=CBS 721.68 =GenBank AB015781 =GenBank AB040695 =GenBank AY176709]. Systematics/taxonomy: revision of *Uncinocarpus* (Sigler et al., Can. J. Bot. 76:1624-1636, 1998) // molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa,

Mycoscience 42:413-421, 2001; Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).

Apinisia queenslandica see ***Uncinocarpus queenslandicum******Apinisia racovitzae*** see ***Kuehniella racovitzae******Apiorhynchostoma curreyi*** (Rabenh.) E. Müll.

- 11088 mass ascospore isolate ex ascocarp on rotting wood of *Pinus sylvestris* Ahus, Gropahalets NR, Scania, Sweden (C) S.-A. Hanson (2007-278) 25-Jul-2007 /W. Untereiner WUC 668 [=GenBank JX460984 ITS =GenBank JX460989 LSU]. Molecular systematics: systematics of *Apiorhynchostoma*, *Endoxyla* and *Pseudovalsaria* in the *Boliales* (Untereiner WA, Bogale W, Carter A, Platt HW, Hanson S-A, T Laessoe, Stepánek V, Reblova M, Mycologia 105:564-588, 2013).

Apiosordaria verruculosa (Jensen) v. Arx & Gams

- 2639 soil cedar swamp Puslinch, Ontario G.C. Bhatt Sep 1964 /G.L. Barron 10356 [=UAMH 2911].
- 2911 organic soil under *Thuja occidentalis* (white cedar) Puslinch, Ont. G. Bhatt Sep 1964 /G.C. Bhatt GCB 1721 [=UAMH 2639].

Apiospora montagnei Saccardo (morph *Arthrimum an.**Apiospora montagnei*)

- 234 contaminant ex skin scraping, face Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
- 439 skin from legs Edmonton, Alta. J.W. Carmichael Aug 1955 /J.W. Carmichael.
- 446 rodent survey Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 545 soil ex sheep yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 713 plate contaminant Edmonton, Alta. J.W. Carmichael Mar 1960 /J.W. Carmichael.
- 1010 hair ex red squirrel Barrhead, Alta. J.W. Carmichael Aug 1960 /J.W. Carmichael.
- 1212 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
- 1518 marsh soil Morgan-Jones /G. Morgan-Jones 159.
- 1520 chlorinated water cooling tower Edmonton, Alta. J.W. Carmichael Dec 1962 /J.W. Carmichael.
- 2803 gopher hair Cardston, Alta. D. Remington 27 Jul 1967 /D. Remington.
- 7085 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 597) Aug 1990 /D. Inglis (MR 597). Pigment: brown // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7489 mouse dung Reserve Nationale de Faunes de la Pointe de l'Est Magdalen Iles, PQ J. Scott 17 Dec 1990 /D. Malloch JS 140. Apiosporamide, antifungal compound active against a coprophilous fungus (Alfatafta et al., J. Nat. Prod. 57:1696-1702, 1994; Gloer, Chpt 16, The Mycota IV, p 261, 1997); dihydroisocoumarin cis-(3R,4R)-4-hydroxymellein (Alfatafta et al., *ibid*).
- 7723 indoor air ex RSC strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Winfield, Alta. S.P. Abbott (OHS 429) 21 Apr 1994 /S.P. Abbott (OHS 429).

Apophysomyces variabilis E. Alvarez, Stchigel, Cano, D.A. Sutton & Guarro

- 11571 ex lateral back tissue in a US Marine burn patient, burns sustained in Japan 2011 /D.A. Sutton UTHSC 11-1354 [=UTHSC R-4746 =GenBank JN980700 ITS =GenBank JN980699 D1/D2]. Human/animal pathogen: invasive

infection in a burn patient (Dela Cruz WP, Calvano TP, Griffith ME, White CE, Kim SH, Sutton DA, Thompson EH, Fu J, Wickes BL, et al, J Clin Microbiol 50:2814-2817, 2012).

Arachnietus citrinis see *Gymnascella citrina*

Arachnietus confluens see *Gymnascella confluens*

Arachnietus dankaliensis see *Gymnascella dankaliensis*

Arachnietus desertorum see *Gymnascella confluens*

Arachnietus devroeyi see *Gymnascella devroeyi*

Arachnietus flavoluteus see *Gymnascella dankaliensis*

Arachnietus hyalinusporus see *Gymnascella hyalinuspora*

Arachnietus littoralis see *Gymnascella littoralis*

Arachnietus marginosporus see *Gymnascella marginospora*

Arachnietus niger see *Amauroascus niger*

Arachnietus punctatus see *Gymnascella punctata*

Arachnietus ruber (van Tieghem) Schroeter

- 3074 alluvial pasture soil Attenborough, Notts., Engl. A. Apinis 1950 /IMI 100913 [=BDUN 265 =CBS 351.66].
3543 (T Neotype *Arachnietus ruber*) soil Britain G.F. Orr 1961 /CBS 194.64 [=IMI 92796 =GenBank AY177296 (SSU)].
3840 soil East Germany Gams? (C-514) /G.F. Orr O-3306 [=QM 9333].
4763 Michel Reservoir, S. Alta. R. Currah Apr 1983 /.

Arachnietus trochleosporus see *Kraurogymnocarpa trochleospora*

Arachnietus verruculosus see *Gymnascella aurantiaca*

Arachnietus volatilis-patellus see *Amauroascus volatilis-patellus*

Arachnomyces glareosus Gibas, Sigler & Currah (morph *Onychocola glareosa*)

- 7799 (T mating type strain) ex L thumb nail, male 30 yr, DE + BC CDC 9 Jun 1994 /R. Rennie MY 4420 [=CBS 116129 =GenBank AY624316 =GenBank FJ358341 18S =GenBank FJ358273 28S] + mating type UAMH 8067. Pigment: grey-brown // molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
7948 ex toenail, female 79 yr, DE- Dunedin, New Zealand /A. Woodgyer 94.609 + mates with 8067. Pigment: brown // molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
8067 (T mating type strain) skin scraping, female 52 yr, DE no fungal elements Alberta Provincial Laboratory for Southern Alberta /R. Rennie MY 1889 [=CBS 116128] - mating type 7799. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
8204 CSF, male HIV+ with anemia & pneumonia St. Louis, MO St. John's Mercy Medical Centre (5753) 1995 /M.G. Rinaldi

UTHSC 95-1077 - mates with 7799. Cycloheximide: resistant // pigment: brown // molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).

- 8651 toenail clippings, DE+; T. rubrum also isolated Parkville, Victoria, Australia 1995 /A. Woodgyer 9531968 - mates with 7799. Cycloheximide: resistant // pigment: brown // molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
8777 soil around trees near La Marchand Mansion Edmonton, Alta. W. Zuk 26 Sep 1996 /W. Zuk + mates with 8067. Pigment: dark brown // molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
8838 indoor air of bathroom ex RCS strip Vancouver, BC S.P. Abbott (SA-M163) 9-Dec-1996 /S.P. Abbott (SA-M163) - mates with 7799. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
9025 skin, left hand, male 46 yr Ontario 1997 /R.C. Summerbell FR 659 + mates with 8067. Pigment: dark grey // molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
9713 toenail, female, DE- Lethbridge, Alta. 1999 /R. Rennie MY 6800 - mates with 7799. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
9896 soil Edmonton, AB C. Gibbs Nov 2000 /C. Gibbs + mates with 8067. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
10222 single ascospore isolate ex cross 7799 x 8067 UAMH C. Gibas (1) 16-7-02 /C. Gibas (1) - mates with 7799. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
10223 single ascospore isolate ex cross 7799 x 8067 UAMH C. Gibas (3) 16-7-02 /C. Gibas (3) - mates with 7799. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
10224 single ascospore isolate ex cross 7799 x 8067 UAMH C. Gibas (5) 16-7-02 /C. Gibas (5) + mates with 8067. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).
10225 single ascospore isolate ex cross 7799 x 8067 UAMH C. Gibas (6) 16-7-02 /C. Gibas (6) + mates with 8067. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).

Arachnomyces gracilis Udagawa & Uchiyama (morph *Onychocola gracilis*)

- 9756 (T *Arachnomyces gracilis*) soil in old termitarium between Masak and Mbarara, Uganda S. Uchiyama (CBM) 9 Feb 1996 /S. Uchiyama F063299 [=SUM 3046 =GenBank AF525307 (SSU) =GenBank AY123779]. Cellulolytic: fide Udagawa & Uchiyama // mesophilic: NG @ 37C fide Udagawa & Uchiyama // cycloheximide: resistant // pigment: brown // molecular systematics: phylogeny of *Arachnomyces* using SSU rDNA sequences (Gibas, Sigler, Summerbell & Currah, Stud. Mycol. 47:131-139, 2002) // systematics/taxonomy: description (Udagawa & Uchiyama, Mycoscience 40:277-290, 1999).

Arachnomyces kanei Gibas, Sigler & Summerbell (morph *Onychocola kanei*)

- 5908 (T *Onychocola kanei*) nail; DE heavily positive for irregular filaments Toronto, Ont. /J. Kane BB 78 [=CBS 124639 =GenBank AF525308 (SSU) =GenBank AY123780] - mating type 9023. Pigment: yellow // human/animal pathogen: onychomycosis? (Gibas, Sigler, Summerbell et al., Med.

- Mycol. 40:573-580, 2002) // molecular systematics: phylogeny of *Arachnomyces* using SSU rDNA sequences (Gibas, Sigler, Summerbell & Currah, Stud. Mycol. 47:131-139, 2002); ITS sequence comparison (Gibas, Sigler, Summerbell et al., Med. Mycol. 40:573-580, 2002).
- 9022 left great toenail, male 78 yr; same patient as UAMH 9024; DE- in followup specimen Ontario 05-Mar-1997 /R.C. Summerbell F 2002 - mates with 9023. Pigment: brown/yellow // human/animal pathogen: onychomycosis (Gibas, Sigler, Summerbell et al., Med. Mycol. 40:573-580, 2002).
- 9023 (T mating type *Arachnomyces kanei*) swab of left 4th toenail, male 74 yr, DE- for filaments but cultures yielded confluent growth Ontario 16-Sep-1996 /R.C. Summerbell F 10025 [=GenBank AY123781 (ITS)] + mating type 5908. Pigment: brown/yellow // human/animal pathogen: onychomycosis? (Gibas, Sigler, Summerbell et al., Med. Mycol. 40:573-580, 2002) // molecular systematics: ITS sequence comparison (Gibas, Sigler, Summerbell et al., Med. Mycol. 40:573-580, 2002).
- 9024 swab of left great toenail, male 78 yr; DE+ for irregular filaments, same patient as UAMH 9022 Ontario 23-Sep-1996 /R.C. Summerbell F 10296 [=GenBank AY123782 (ITS)] - mates with 9023. Pigment: brown/yellow // human/animal pathogen: onychomycosis (Gibas, Sigler, Summerbell et al., Med. Mycol. 40:573-580, 2002) // molecular systematics: ITS1 sequence analysis (Gibas, Sigler, Summerbell et al., Med. Mycol. 40:573-580, 2002).
- 9850 nail clippings, male 43 yr; DE not done Quebec 2000 /G. St-Germain MY 54649 - mates with 9023. Pigment: yellow on PDA // cycloheximide: resistant // thermotolerant: slow growth @ 37C.
- Arachnomyces minimus* Malloch & Cain**
- 7113 (T *Arachnomyces minimus*) decayed wood Dorset, Ont. D. Malloch Sep 1968 /ATCC 18857 [=CBS 324.70 =TRTC 45425 =GenBank AY123783 =GenBank AF525311 (SSU)]. Cephalosporins (Agr. Biol. Chem. 38:1761-1762, 1974). Pigment: grey // molecular systematics: phylogeny of *Arachnomyces* using SSU rDNA sequences (Gibas, Sigler, Summerbell & Currah, Stud. Mycol. 47:131-139, 2002).
- 7114 This material is cited in a U.S. and/or other Patent and may not be used to infringe the patent claims. Japan Takeda Chem. Industries (K-154) /ATCC 20420 [=IFO 9917]. Deacetoxycephalosporin C (US Patent 3,979,260 dated Sept. 7, 1976). Pigment: grey // culture conditions: degenerate.
- Arachnomyces nitidus* Masee & Salmon**
- 10536 twigs Israel T. Ito (ISR 2-4) & T. Yokoyama 1987 /A. Nakagiri NBRC 32048 [=IFO 32048]. Biodiversity: fungi from litter samples in Israel (Ito T, Yokoyama T, IFO Res. Commun. 13:17-34, 1987).
- Arachnomyces nodosetosus* see *Onychocola canadensis***
- Arachnomyces peruvianus* (Cain) Malloch & Cain (syn. *Xanthothecium peruvianum*)**
- 1937 soil Tokyo 1961 /S.-I. Udagawa NHL 2295. Pigment: yellow on PDA.
- 2635 peat soil, cedar wood (*Thuja plicata*) Guelph, Ont. G. Barron Apr 1964 /G.L. Barron 10361 [=CBS 563.66 =IMI 113733 =ATCC 16680]. Pigment: green-brown.
- 2907 organic soil, cedar forest Puslinch, Ont. G. Bhatt Jul 1964 /G.C. Bhatt GCB 1708 [=TRTC 45661]. Thermotolerant: grows @ 35 C.
- 10517 (T *Anixiopsis peruviana*) ex cyst of *Globodera rostochiensis* (Potato cyst nematode) Huancayo, Sierra Central Peruana, Peru P.A. van der Laan (P8) /CBS 112.54 [=TRTC 32263 holotype]. Pigment: green // thermotolerant: grows @ 35 C.
- 10518 ex cyst of *Globodera rostochiensis* (Potato cyst nematode) Huancayo, Sierra Central Peruana, Peru P.A. van der Laan (P9) /CBS 113.54. Pigment: brown.
- 10519 ex agricultural soil Wageningen, Netherlands J.W. Veenbaas-Rijks (120147) 1973 /CBS 713.73. Pigment: brown // thermotolerant: grows @ 35 C.
- 10520 ex root of *Triticum aestivum* Lienden, Netherlands C.L. de Graaff 1974 /CBS 324.74. Pigment: brown.
- Arachnomyces* sp. see *Onychocola* sp.**
- Arachnotheca albicans* see *Amauroascus albicans***
- Arachnotheca glomerata* (Muller & Pacha-Aue) v. Arx**
- 3551 (T *Arachnotheca glomerata*) soil Central Africa /CBS 348.71 [=ATCC 22733 =GenBank KF477241 ITS]. Culture conditions: ascomata produced on OAT after 1 month (fide UAMH 2011) // mesophilic: NG @ 35C // molecular systematics: excluded from *Nannizziopsis* clade (Sigler L et al 2013); phylogeny of *Nannizziopsis* and related onygenalean fungi (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- Arcuadendron ovatum* Sigler & Carmichael**
- 2737 (T *Arcuadendron ovatum*) soil India /H.C. Gugnani S-252 [=IMI 211190 =CBS 122.77 =ATCC 34519]. Thermotolerant // pigment: brown.
- 2746 ulcer ex monkey India /H.C. Gugnani M5259.
- 3925 NRRL 6090.
- 5725 soil Sonoran Desert, Portal, Ariz. D. Wicklow /D. Wicklow. Pigment: purple // thermotolerant: grows @ 37C.
- 5913 bronchial washing Toronto, Ont. /J. Kane K217.
- Arcuadendron* sp.**
- 4151 cooling tower timber packing material (*Pinus roxburghii*) treated with chrome arsenic preservative Manali, India K. Natarajan 2 Mar 1977 /K. Natarajan.
- Arcuadendron triangulare* Sigler & Carmichael**
- 3433 (T *Arcuadendron triangulare*) hair of *Clethrionomys glareolus* Hercegovina, Yugoslavia Hubalek 16 Sep 1970 /G.F. Orr O-3351 [=ATCC 34520 =CBS 123.77 =IMI 211191 =NCMH 351].
- 8941 skin, male 16 yr Quebec G. St-Germain /G. St-Germain LSPQ 448. Pigment: brown // cycloheximide: resistant.
- Areolospora bosensis* (Das) Hawksworth (syn. *Sordaria bosensis*, *Areolospora terrophila*)**
- 6861 ex field soil P.C.S.I.R. Labs Experimental Farm, Sind Prov., Karachi Dist., Pakistan R.S. Khan 9 Sep 1987 /R. Khan TRTC 51324.
- 6924 soil Bidar, Karnataka State, India R. Khan 18 Dec 1989 /R. Khan TRTC 51323.
- Areolospora terrophila* see *Areolospora bosensis***
- Armillaria bulbosa* see *Armillariella bulbosa***
- Armillaria mellea* see *Armillariella mellea***
- Armillaria ponderosa* see *Tricholoma magnivelare***
- Armillaria sinapina* Bérubé & Dessur**
- 9792 rhizomes of living water sedge (*Carex aquatilis*) in fen dominated by sedge (*Carex aquatilis*, *C. utriculata*), water horsetail (*Equisetum fluviatile*) & willow (*Salix* spp.) nr Perryvale, AB (54D28'N, 113D14'W) M.N. Thormann 14 Oct

- 1997 /R.S. Currah MNT 65 "i" [=NoF 2380]. Molecular systematics: RFLP patterns and ecology of *Armillaria* isolates from fen (Thormann, Myrholm & Mallett, Can. J. Bot. 79:643-647, 2001); molecular banding pattern "i" // biodeteriogen/biodegradation: colonization and decomposition of herbaceous *Carex aquatilis* (Thormann, Myrholm & Mallett, Can. J. Bot. 79:643-647, 2001).
- 10132 decomposing sedge leaves (*Carex aquatilis*) in fen with water sedge (*Carex aquatilis*), wool fruited sedge (*C. lasiocarpa*) and willow (*Salix* spp.) nr Perryvale, AB (54D28'N, 113D18'W) M.N. Thormann 20 Oct 1997 /R.S. Currah MNT 65 "b" [=NOF 2376]. Molecular systematics: RFLP patterns and ecology of *Armillaria* isolates from fen (Thormann, Myrholm & Mallett, Can. J. Bot. 79:643-647, 2001); molecular banding pattern "b" // culture conditions: NG on PDA cello // biodeteriogen/biodegradation: colonization and decomposition of herbaceous *Carex aquatilis* (Thormann, Myrholm & Mallett, Can. J. Bot. 79:643-647, 2001).
- Armillaria* sp.**
10807 ex roots Florida terrestrial orchid *Eulophia alta* Highlands Co., FL S.L. Stewart & T.R. Johnson 16-Aug-05 /S.L. Stewart FL-Ealt-396. Pigment: yellow // mycorrhizae: symbiotic seed germination of *Eulophia alta* (Johnson TR, Stewart SL, Dutra D, Kane ME, Richardson L, Plant Cell Tiss Organ Cult Plant Cell Tiss Organ Cult 90:313-323, 2007); orchid endophyte *Eulophia alta* // culture conditions: clamps.
- Armillariella bulbosa*** (Barla) Romagn. (syn. *Armillaria bulbosa*)
5642 A. Anderson 11. Pigment: brown.
- Armillariella mellea*** (Vahl.:Fries) Karsten (syn. *Armillaria mellea*)
7962 *Populus tremuloides* Ontario E. Atwell /S. Davies FC-094. Edible: mushroom.
- Arthriniium an. Apiospora montagnei*** see ***Apiospora montagnei***
- Arthriniium phaeospermum*** (Corda) M.B. Ellis
7463 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (CF-90-1c-11a) 28 Sep 1990 /L. Hutchison NOF 1543. Pigment: pink // odor: medicinal.
7756 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M18) 29 Sep 1994 /S.P. Abbott (SA-M18). Pigment: pink.
- Arthriniium* sp.**
5088 carbonated beverage Puerto Rico /C. Betancourt 7.
- Arthriniium sphaerospermum*** Fuckel
11594 swab ex skin of living female bat (*Myotis septentrionalis*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 95 C.1 skin ox [=Untereiner WUC A95]. Biodiversity: mycobiota of bat caves.
- Arthrotrrys amerospora*** Schenck, Kendrick & Pramer
5737 soil of potted *Ficus elastica* Toronto, Ont. R.C. Summerbell 15 Apr 1986 /R.C. Summerbell W 1320.
- Arthrotrrys brochopaga*** (Drechsler) Schenck, Kendrick & Pramer (syn. *Dactylaria brochopaga*)
3373 decaying plant detritus USDA C. Drechsler /J. Sumner [=ATCC 14451 =CBS 218.61 =DSM 3287 =MUCL 9448]. Nematode-trapping: by constricting rings.
- Arthrotrrys oligospora*** Fres.
628 garden soil Edmonton, Alta. J.W. Carmichael Feb 1959 /J.W. Carmichael.
1353 *Betula* sp. Ontario 1958 /DAOM 60377 [=IMI 96726 =CBS 600.80].
- Arthrotrrys* sp.**
1462 soil of turkey run Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
3227 dead bird on bare ground, clipped feathers in damp chamber Claremont, Calif. J.W. Carmichael 4 Feb 1969 /J.W. Carmichael.
- Arthrotrrys superba*** Corda
1158 soil & quills, porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
4506 bark of *Abies lasiocarpa* infested with *Dryocoetes confusus* Smithers, B.C. L. Sigler 1 Feb 1982 /H.S. Whitney.
4703 litter under old *Picea* Devonian Bot. Garden, Alta. L. Sigler 5 Nov 1982 /L. Sigler.
4722 litter under old *Picea* Devonian Bot. Garden, Alta. J.W. Carmichael Nov 1982 /J.W. Carmichael.
10288 from the base of *Typha latifolia* plant in a small permanent pond Site 1, Elk Island National Park, Alta. M. Schulz (MS-27) 27-9-01 /R.S. Currah MS-27.
- Arthrocristula hyphenata*** Sigler, Dunn & Carmichael (morph *Humicola an. Arthrocristula hyphenata*)
4399 (*T. Arthrocristula hyphenata*) sclerotia *Sclerotinia minor* buried in soil Beltsville, MD M.T. Dunn 16 Oct 1980 /M.T. Dunn MTD 3098 [=ATCC 48569 =CBS 583.82 =DAOM 184711 =IMI 272976].
4520 soil Kandy, Sri Lanka 1974 /T. Matsushima MFC 5836.
4699 ex sclerotia *Sclerotium rolfsii* College Park, MD M.T. Dunn 17 Sep 1982 /M.T. Dunn MTD 3181.
- Arthroderma benhamiae*** Ajello & Cheng (morph *Trichophyton erinacei*)
2822 (*T. Arthroderma benhamiae*) monascospore isol. ex cross TM-20 (ex human) x TM-17 (ex dog) Ajello & Cheng /CDC X-797 [=ATCC 16781] + mating type 2823. Serology.
2823 (*T. Arthroderma benhamiae*) monascospore isol. ex cross TM-20 x TM-17 Ajello & Cheng /CDC X-798 [=ATCC 16782] - mating type 2822. Serology: electrophoresis (*Mycopathologia* 58:97-100, 1976).
2834 chicken yard soil Poona, India A. Padhye Dec 1966 /A. Padhye + mating type 2823 Sabouraudia 7:178-181, 1969.
2835 chicken yard soil Poona, India A. Padhye Dec 1966 /A. Padhye + mating type 2823 Sabouraudia 7:178-181, 1969.
2836 chicken yard soil Poona, India A. Padhye Dec 1966 /A. Padhye + mating type 2823 Sabouraudia 7:178-181, 1969.
2837 chicken yard soil Poona, India A. Padhye Dec 1966 /A. Padhye + mating type 2823 Sabouraudia 7:178-181, 1969.
2838 chicken yard soil Poona, India A. Padhye Dec 1966 /A. Padhye + mating type 2823 Sabouraudia 7:178-181, 1969.
2839 chicken feathers Poona, India A. Padhye Nov 1966 /A. Padhye - mating type 2822 Sabouraudia 7:178-181, 1969.
3742 monascospore isol. ex RV23302 (ATCC 16781A) x RV23303 (ATCC 16782a) Belgium Takashio 1972 /R. Vanbreuseghem RV26680 - mating type 3743 Takashio, Sabouraudia 10:122-127, 1972.
3743 monascospore isol. ex RV23302 (ATCC 16781A) x RV23303 (ATCC 16782a) Belgium Takashio 1972 /R. Vanbreuseghem RV26678 + mating type 3742 Takashio, Sabouraudia 10:122-127, 1972.
7339 skin, DE + for fungal elements Banff, Alta 1992 /R. Rennie MY 4010 [=NOMH 965 =FR 400 =OMH 1195 =BB 1389 =GenBank AF170467]. Cycloheximide: slightly sensitive // culture conditions: atypical vitamin requiring isolate; requires

inositol & thiamine (stimulated on Trichophyton agar 3) // molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).

- 10389 velvety form; provenance unknown /W. Untereiner WUC 394 [=OMH 566803 =GenBank AY176742]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).

Arthroderma benhamiae see *Trichophyton mentagrophytes*

Arthroderma borellii (Moraes, Padhye & Ajello) Padhye, Weitzman, McGinnis & Ajello (syn. *Nannizzia borellii*; morph *Microsporium amazonicum*)

- 3399 (T *Microsporium amazonicum*) hair of *Oryzomys* rats D. Borelli (6710) /ATCC 18393.
3505 L. de Montemayor 229.
3680 Brazil Moraes /A. Padhye M22.546.
3751 (T) monascospore isol. ex ATCC 28354 x 28352 /CDC Y-81 [=ATCC 28356] + mating type 3752. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., Mycoses 41:229-233, 1998).
3752 (T *Nannizzia borellii*) monascospore isol. ex ATCC 28354 x 28352 /CDC Y-82 [=ATCC 28357] - mating type 3751. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., Mycoses 41:229-233, 1998).

Arthroderma cajetani (Ajello) Ajello, Weitzman, McGinnis & Padhye (syn. *Nannizzia cajetani*; morph *Microsporium cookei*)

- 551 soil ex sheep yard Edmonton, Alta. J.W. Carmichael Jul 1956 /J.W. Carmichael.
552 soil ex sheep yard Edmonton, Alta. J.W. Carmichael Jul 1956 /J.W. Carmichael.
553 soil ex sheep yard Edmonton, Alta. J.W. Carmichael Jul 1956 /J.W. Carmichael.
561 soil ex sheep yard Edmonton, Alta. J.W. Carmichael Oct 1956 /J.W. Carmichael.
630 soil Edmonton, Alta. J.W. Carmichael Feb 1959 /J.W. Carmichael.
744 sheep wool Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
746 sheep wool Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
1792 mixed culture ex UAMH 538 UAMH J.W. Carmichael 29 Sep 1963 /J.W. Carmichael.
2389 soil /A.K. Garg 585 [=ATCC 22865].
2793 river bank Blood Indian Reserve, Alta. D. Remington Jun 1967 /D. Remington.
2937 (T *Nannizzia cajetani*) monascospore isol. ex CDC B433 /IMI 117057 [=ATCC 14387 =CDC B434] + mating type 2938. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., Mycoses 41:229-233, 1998) // pigment: rose.
2938 (T *Nannizzia cajetani*) monascospore isol. ex CDC B433 /IMI 117058 [=ATCC 14388 =CDC B435] - mating type 2937. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., Mycoses 41:229-233, 1998).
3280 cotton rat Newton, Georgia /CDC B-0157 [=ATCC 26344] mates with UAMH 3283.
3281 soil Idaho Emmons (#246 ex Cooke) /CDC B-0275.
3282 rat Mysore, India /CDC B-0359.
3283 cotton rat Newton, Georgia /CDC X-36 [=ATCC 26345].
3284 rat Australia /CDC X-256.
3285 soil Szezecin, Poland /CDC X-301.
3301 cross UAMH 3280 x 3283 UAMH A. Padhye Dec 1969 /A.

Padhye.

- 3318 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (1A) Jan 1970 /CDC [=ATCC 26346] +.
3319 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (2a) Jan 1970 /CDC [=ATCC 26347] -.
3320 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (3A) Jan 1970 /CDC [=ATCC 26348] +.
3321 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (4A) Jan 1970 /CDC [=ATCC 26349] +.
3322 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (5a) Jan 1970 /CDC [=ATCC 26350] -.
3323 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (6a) Jan 1970 /CDC [=ATCC 26351] -.
3324 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (7a) Jan 1970 /CDC [=ATCC 26352] -.
3325 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (8A) Jan 1970 /CDC [=ATCC 26353] +.
3326 monascospore isol. ex UAMH 3280 x 3283 Atlanta, GA L. Bostik (9A) Jan 1970 /CDC [=ATCC 26354] +.
3473 *Cynomolgus* monkey ex Philippines New York Gordon & Little /M.A. Gordon 3331.
7906 ex hair-baited soil, municipal landfill site Sosnowiec, Poland K. Ulfing 10 Nov 1993 /K. Ulfing IEIA 673A.
8687 sandy soil & hair at entrance of woodchuck (*Marmota monax*) burrow in *Pinus banksiana* woods North Buck Lake, Alta. S.P. Abbott (SA-M103) 16 Aug 1996 /S.P. Abbott (SA-M103).
9835 left hallux, male 61 yr with distal lateral submerged onychomycosis London, ON 5 Jun 2000 /R. Rennie MY 4715 [=OMH F-05098]. Pigment: red.

Arthroderma ciferrii Varsavsky & Ajello (morph

Chrysosporium georgiae)

- 659 CDC VM 25.
660 CDC B-0027.
661 CDC W 102.
1677 hedgehog skin /M.J. Marples TrR.
2534 (T *Arthroderma ciferrii*) soil ex hog pens Malvern, Arkansas Ajello & Varsavsky 1964 /CDC B-0590 [=ATCC 24447 =CBS 272.66 =IMI 108760 =UAMH 2824 =GenBank AB015769 =GenBank AB040681]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
2535 opossum hair Georgia Kaplan and Ajello McKeever 1958 /CDC X-139 [=ATCC 44005 =CBS 227.79].
2560 *Rattus assimilis* Jordon Creek, Queensland Mar 1965 /R.G. Rees H 432.
2593 contaminant ex UAMH 2564 1966 /R.G. Rees.
2612 soil Johannesburg /P. Martin 192.
2619 isol. ex mixed culture UAMH /CBS.
2824 (T *Arthroderma ciferrii*) soil ex hog pens Malvern, Arkansas Ajello & Varsavsky 1964 /CDC B-0590 [=ATCC 24447 =CBS 272.66 =IMI 108760 =UAMH 2534 =GenBank AB040681 LSU =GenBank AJ877217 ITS =GenBank AJ007844 CBS 272.66]. Pigment: yellow on PDA.
3174 soil Ohio P.V. Kurup 1 Jan 1969 /P.V. Kurup SL-60.
3429 soil Czechoslovakia Otcenasek et al. 1967 /CDC X-749.
3430 CDC X-750.
3515 skin scrapings, female age 24 yr Red Deer J.W. Carmichael 13 Sep 1972 /J.W. Carmichael.
4016 coats of wild mice L. Kapica 1976 /L. Kapica 11.
4197 clinical specimen D. Frey /D. Frey 78-1035.
5081 soil by keratin bait India /S.K. Agnihotri 7.
6342 R. Aho K115. Pigment: pink on OAT.
6343 R. Aho K117L.
6344 R. Aho K120. Pigment: pink on OAT.
7312 ex feet, female 10 yr Quebec G. St-Germain 1992 /G. St-Germain LSPQ 239.
7314 New Zealand /D. Parr 2.

- 7315 New Zealand /D. Parr 3.
 7389 feet Quebec G. St-Germain (MY 3674) /R.C. Summerbell FR 1733. Pigment: wine red.
 7564 unknown, DE - Hawkesbury, Ont. 9 Nov 1993 /R.C. Summerbell FR 3324. Pigment: brown.
 8945 lung, northern flying squirrel (*Glaucomys sabrina*) Lac La Biche, Alta. J. Csotonyi 1997 /R.S. Currah AT[F13/21-1MT/1G]col B. Culture conditions: ascospores produced.
 9517 skin, elderly male farmer with suspected tinea Rochester, Minnesota G. Roberts /G.D. Roberts I76144. Mesophilic: NG @ 37C // culture conditions: no requirement for vitamins.

Arthroderma corniculatum see *Microsporium boullardii*

Arthroderma crocatum Udagawa, Kubo & Shibaki (morph *Chrysosporium an. Arthroderma crocatum*)

- 6331 (T) soil Nakagawa-cho, Nakagawa-gun, Hokkaido, Japan H. Kubo 6 May 1986 /S.-I. Udagawa NHL 2986 [=ATCC 66309] homothallic. Culture conditions: opt. sporulation on Takashio medium.

Arthroderma cuniculi Dawson (morph *Chrysosporium an. Arthroderma cuniculi*)

- 1788 (T *Arthroderma cuniculi*) single ascospore isolate from IMI 96243 ex soil & hair of rabbit Scotland C.O. Dawson 1963 /C.O. Dawson S.A. No. 1 [=CBS 495.71 =ATCC 18444 = IMI 096245 =GenBank AB050585 (chitin synthase)] + mating type UAMH 1789 Dawson, Sabouraudia 2:185-191, 1963. Molecular systematics: chitin synthase 1.
 1789 (T *Arthroderma cuniculi*) single ascospore isolate from IMI 96243 ex soil & hair of rabbit Scotland C.O. Dawson 1963 /C.O. Dawson S.A. No. 6 [=CBS 492.71 =ATCC 28442 =IMI 096244 =RV 20035 =GenBank AJ390382] - mating type UAMH 1788 Dawson, Sabouraudia 2:185-191, 1963. Molecular systematics: 5.8S rRNA gene, ITS1 & ITS2 (Vidal et al., Phylogeny of the anamorphic genus *Chrysosporium* and related taxa, pp 22-29, 2000).
 3110 feathers ex dead bird Sheffield, England J. Webster (2553b) Oct 1961 /R.K. Benjamin RSA 1238.
 3205 black loam under Xmas berry tree (*Heteromeles arbutifolia*) Claremont, Calif. J.W. Carmichael 30 Jan 1969 /J.W. Carmichael.
 3212 sandy soil, grass & weed covered Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
 3217 sandy soil with cow dung Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
 3452 sand dunes England Pugh /G.F. Orr O-3036.
 3586 soil on sandy beach ridge Delta, Man. /J. Reid UM 75.
 4001 G.F. Orr 76-060459.
 4258 ex lesion & hair, foreleg muskox Wainwright, Alta. /B. Murray 6211.
 4768 dung Michel Reservoir, S. Alta. L. Sigler Mar 1983 /L. Sigler.
 4776 bottom sediments of polluted river /K. Ulfig 3.
 4779 sewage sludge /K. Ulfig 1.
 4974 soil Katowice, Poland K. Ulfig 1984 /K. Ulfig 12.
 5090 soil by keratin bait India /S.K. Agnihotri 6.
 5966 carnivore dung UADBG, Edmonton, Alta. S. Hambleton 14 May 1987 /S. Hambleton.
 5967 marten dung Tonquin Valley nr Jasper, Alta. S. Hambleton (D-104a) 4 Sep 1987 /S. Hambleton (D-104a).
 6332 soil near nest *Vulpes vulpes schrencki* Engaru-cho, Monbetsu-gun, Hokkaido, Japan (C) H. Kubo Nov 1985 /S.-I. Udagawa NHL 2994 + mating type 6333.
 6333 soil near nest *Vulpes vulpes schrencki* Engaru-cho, Monbetsu-gun, Hokkaido, Japan (C) H. Kubo Nov 1985 /S.-I. Udagawa NHL 2995 - mating type 6332.
 6817 ex soil by hair bait UADBG, Alta. L. Sigler 2 Nov 1990 /L. Sigler.

- 7267 skin, female Edmonton, Alta. C. Sand 20 Aug 1992 /R. Rennie MY 3975.
 8778 soil on Victoria Golf Course Edmonton, Alta. W. Zuk 26 Sep 1996 /W. Zuk.

Arthroderma curreyi Berkeley (morph *Chrysosporium an. Arthroderma curreyi*)

- 1493 soil, turkey run Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
 2607 nail clippings Johannesburg, S. Africa 1965 /P. Martin 26.
 3171 soil Ohio P.V. Kurup 31 Oct 1968 /P.V. Kurup SL2.
 3617 skin /L. Friedman 5381-H homothallic, fruits on cereal or oatmeal agars.
 7313 New Zealand /D. Parr 1 homothallic, fruits on Takashio or oatmeal agars.
 7687 ex abscess on ear margin of dog New Zealand /A. Woodgyer MY 93-273 homothallic, fruits on Takashio or oatmeal agars.
 7903 ex arm, female 22 yr, DE+ Melbourne, Australia /A. Woodgyer 94.479 homothallic, fruits on Takashio or oatmeal agars. Pigment: brown.
 8728 on bark of decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 7-5A) T. Lumley (EI-09-S1A 05 Jul 1995 /R.S. Currah EI-09-S1A, 7-5A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
 10694 ex European Ground Beetle (Coleoptera: Carabidae) (UASM 90033) caught in a trap baited with coyote dung site adjacent to Elk Island National Park, Alta. M. Greif 19-Jun-2002 /R.S. Currah C 34.

Arthroderma flavescens Rees (morph *Trichophyton flavescens*)

- 2934 (T *Arthroderma flavescens*) bird feathers Australia R.G. Rees (H 333) /IMI 117341 [=ATCC 22561] -.

Arthroderma fulvum (Stockdale) Weitzman, McGinnis, Padhye & Ajello (syn. *Nannizzia fulva*; morph *Microsporium fulvum*)

- 1480 (T *Nannizzia fulva*) monascospore isol. C.O. Dawson 1961 /IMI 86180 [=ATCC 16446 =CBS 168.64] - mating type 1481. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., Mycoses 41:229-233, 1998).
 1481 (T *Nannizzia fulva*) monascospore isol. C.O. Dawson 1961 /IMI 86179 [=ATCC 16445 =CBS 167.64] + mating type 1480. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., Mycoses 41:229-233, 1998).
 3362 I. Weitzman 218 +.
 3363 soil Kew, England Stockdale /I. Weitzman [=IMI 86179 =ATCC 16445 =CBS 167.64] +.
 3364 soil Kew, Surrey, England Stockdale /I. Weitzman [=IMI 86180 =ATCC 16446 =CBS 168.64] -.
 3365 Atlanta, GA L. Ajello /I. Weitzman 73 [=ATCC 26355] -.
 3366 Atlanta, GA L. Ajello /I. Weitzman 644 [=ATCC 26356] -.

Arthroderma gertleri Bohme (morph *Trichophyton vanbreuseghemii*)

- 566 soil ex ploughed field Edmonton, Alta. J.W. Carmichael Oct 1956 /J.W. Carmichael - mates with UAMH 2818.
 567 soil, chicken yard Edmonton, Alta. J.W. Carmichael Oct 1956 /J.W. Carmichael.
 568 soil, chicken yard Edmonton, Alta. J.W. Carmichael Oct 1956 /J.W. Carmichael.
 629 garden soil Edmonton, Alta. J.W. Carmichael Feb 1959 /J.W. Carmichael.
 734 garden soil Edmonton, Alta. J.W. Carmichael 6 Feb 1959 /J.W. Carmichael.
 2620 soil Germany Bohme (127) /H. Bohme - mates with

- UAMH 2818. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma gertleri* (fide V. Hubka 2015).
- 2818 Ajello /CDC X-847 +. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma gertleri* (fide V. Hubka 2015).
- 2819 Ajello /CDC X-848 -. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma gertleri* (fide V. Hubka 2015).
- 2998 soil Alberta Game Farm, Edmonton A. Padhye Nov 1968 /A. Padhye.
- 3424 soil Needles, Calif. /G.F. Orr O-1042 +. Molecular systematics: Blast match 98% ITS similarity with *Arthroderma gertleri* (fide V. Hubka 2015).
- Arthroderma glorieae*** Ajello (morph *Trichophyton glorieae*)
- 658 soil New Mexico (83) /CDC X-138 [=ATCC 16655] + mates with UAMH 2821. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma glorieae* (fide V. Hubka 2015).
- 2820 soil Ajello /CDC X-779 [=ATCC 16657 =GenBank AB050581 (chitin synthase)] + mating type 2821 *Mycologia* 59:255-263, 1967. Thermotolerant: grows @ 35 C // culture conditions: BCP-MS-G profuse growth; alkalinity; urea positive // molecular systematics: BLAST match 100% ITS similarity to *Arthroderma glorieae* (fide V. Hubka 2015).
- 2821 soil Ajello /CDC X-780 [=CBS 663.77 =ATCC 16658] - mating type 2820 *Mycologia* 59:255-263, 1967.
- 3417 soil San Diego Co., Calif. /G.F. Orr DPG-76. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma glorieae* (fide V. Hubka 2015).
- 3418 soil San Diego Co., Calif. /G.F. Orr DPG-77. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma glorieae* (fide V. Hubka 2015).
- 3421 soil San Diego Co., Calif. /G.F. Orr DPG-48.
- 3866 contaminant in lab. Botany, UCLA, Calif. /G.F. Orr O-3090.
- Arthroderma grubyi*** (Georg, Ajello et al.) Ajello, Weitzman, McGinnis & Padhye (syn. *Nannizzia grubyi*; morph *Microsporium vanbreusegheimii*)
- 1465 (T *Nannizzia grubyi* paratype) monospore isol. ex pairing of CDC X322 (ATCC 14419) X CDC X321 (ATCC 14420) /CDC X-470 [=ATCC 14422 =CBS 100083 =IFM 49901 =JCM 1901] +. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 1466 (T *Nannizzia grubyi* paratype) monospore isol. ex CDC X322 x X321 /CDC X-471 [=ATCC 14423 =IAM 12721 =IFM 49902 =JCM 1902 =GenBank AB698455 ITS] -. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- Arthroderma gypseum*** (Nannizzi) Weitzman, McGinnis, Padhye & Ajello (syn. *Nannizzia gypsea*; morph *Microsporium gypseum*)
- 1485 (T *Nannizzia gypsea*) monospore isol. ex CMI 80558 C.O. Dawson (SA 3) 1961 /IMI 86175 [=ATCC 22925] + mating type 1486. Benomyli // biocontrol.
- 1486 (T *Nannizzia gypsea*) monospore isol. ex CMI 80558 C.O. Dawson (SA 2) 1961 /IMI 86176 [=ATCC 22926 =CBS 171.64] - mating type 1485. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 1616 soil Oklahoma City J.M. Hale /E.S. Keeping 3.
- 3342 child Saginaw, Michigan Dr. Hand /CDC X-11 +.
- 3344 Norway rat Menges (2655) /CDC X-40 -.
- 3345 dog Menges (NC 13) /CDC X-41 +.
- 3346 field mouse Menges (2600) /CDC X-42.
- 3347 horse Kaplan (VM 66-56) /CDC X-45 +.
- 3348 horse Kaplan (VM 66-56) /CDC X-49 +.
- 3349 horse Japan Dr. Okoshi (str. Katsuyama) /CDC X-492 +.
- 3350 eye lesion ex girl S. Carolina Board of Health (CDC 45-387-62) /CDC X-531.
- 3351 Marquette U., Milwaukee, Wisconsin S.E. McDonough (M-252-y) /CDC X-722.
- 3357 I. Weitzman 1315 +.
- 3358 I. Weitzman PS2 +.
- 3359 I. Weitzman S152 +.
- 3360 I. Weitzman 539 -.
- 3361 I. Weitzman 1317 -.
- Arthroderma gypseum*** see ***Microsporium gypseum***
- Arthroderma incurvatum*** (Stockdale) Weitzman, McGinnis, Padhye & Ajello (syn. *Nannizzia incurvata*; morph *Microsporium gypseum*)
- 1484 (T *Nannizzia incurvata*) skin lesion ex man Hertfordshire, Engl. Whittle & Stockdale (LSHTM D132) 1951 /IMI 82777 [=CBS 174.64 =GenBank AY176738]. Culture conditions: ascumata on TWA plus hair after 4 months // molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002).
- 2833 marine coastal soil Bombay, India A. Padhye Jan 1967 /A. Padhye.
- 2916 I. Weitzman 5912 + mating type 2917.
- 2917 I. Weitzman 5912 - mating type 2916.
- 2935 IMI 86518 [=ATCC 26357] -. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 2936 IMI 86523 [=ATCC 26358] +. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 3343 Norway rat Menges (2683) /CDC X-37 +.
- 3352 monospore isol. ex CMI 82777 x #6 ex Gentles /I. Weitzman S912A +.
- 3353 I. Weitzman PS 24A +.
- 3354 I. Weitzman H4A +.
- 3355 I. Weitzman L50(a) -.
- 3356 monospore isol. ex IMI 82777 x #6 ex Gentles /I. Weitzman S912 a -.
- Arthroderma incurvatum*** see ***Microsporium gypseum***
- Arthroderma insingulare*** Padhye & Carmichael (morph *Trichophyton terrestre*)
- 662 soil /CDC +. Molecular systematics: Blast match 100% ITS similarity to *Trichophyton terrestre* KM091305 (96% to T. onychocola) (fide V. Hubka 2015).
- 663 soil /CDC B-0025 +.
- 754 horse pasture Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael. Molecular systematics: Blast match 98% ITS similarity with *Arthroderma insingulare* (fide V. Hubka 2015).
- 2922 soil Hungary Szathmary 1962 /R.S. Pore 579-2 +.
- 2923 soil Hungary Szathmary 1962 /R.S. Pore 579-3 -.
- 3438 soil Alberta Game Farm, Edmonton A. Padhye 1968 /A. Padhye + mating type 3440 *Sabouraudia* 10:47-51, 1972. Molecular systematics: BLAST match 99% ITS similarity to *Arthroderma insingulare* (fide V. Hubka 2015).
- 3439 soil Alberta Game Farm, Edmonton A. Padhye Jul 1968 /A. Padhye +. Molecular systematics: BLAST match 99% ITS similarity to *Arthroderma insingulare* (fide V. Hubka 2015).
- 3440 chicken feathers Fort Macleod, Alta. A. Padhye Aug 1969 /A. Padhye - mating type 3438 *Sabouraudia* 10:47-51, 1972. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma insingulare* (fide V. Hubka 2015).

- 3441 monascospore isol. ex cross UAMH 3438x3440 Edmonton, Alta. A. Padhye 1971 /A. Padhye [=ATCC 22519 =CBS 521.71] + mating type 3442. Molecular systematics: BLAST match 99% ITS similarity to *Arthroderma insingulare* (fide V. Hubka 2015).
- 3442 monascospore isol. ex cross UAMH 3438x3440 Edmonton, Alta. A. Padhye 1971 /A. Padhye [=ATCC 22520 =CBS 522.71] - mating type 3441. Molecular systematics: BLAST match 99% ITS similarity to *Arthroderma insingulare* (fide V. Hubka 2015).
- 3455 human hair Guatemala /R. Mayorga 68C + mates with UAMH 2923.

Arthroderma insingulare see *Trichophyton terrestre*

Arthroderma lenticularum Pore, Tsao & Plunkett (morph *Trichophyton terrestre*)

- 565 soil, ploughed field Edmonton, Alta. J.W. Carmichael Oct 1956 /J.W. Carmichael +. Molecular systematics: BLAST match 98% ITS similarity to *Arthroderma lenticularum* (fide V. Hubka 2015).
- 2899 CDC X-755 -.
- 2900 CDC X-756 +.
- 2931 IMI 113772 [=GenBank AB050583 (chitin synthase)] + mating type 2932 *Mycologia* 57:970-971, 1965.
- 2932 IMI 113773 - mating type 2931 *Mycologia* 57:970-971, 1965. Molecular systematics: BLAST match 100% ITS similarity to *Arthroderma lenticularum* (fide V. Hubka 2015).

Arthroderma lenticularum see *Trichophyton terrestre*

Arthroderma multifidum Dawson (morph *Chrysosporium an. Arthroderma multifidum*)

- 1786 (T *Arthroderma multifidum*) /C.O. Dawson S.A. No. 3 [=ATCC 18441 =CBS 420.71 =IMI 94206] - mating type 1787.
- 1787 (T *Arthroderma multifidum*) /C.O. Dawson S.A. No. 1 [=ATCC 18440 =CBS 419.71 =IMI 94205 =GenBank AB050587 (chitin synthase)] + mating type 1786.
- 1978 pasture soil Olomouc, Moravia, Czech. /J. Kunert CH 9.
- 1979 pasture soil Olomouc, Moravia, Czech. /J. Kunert CH 28.
- 2708 Romanian soil /I. Alteras No. 3.
- 2783 gopher hole diggings S. Edmonton D. Remington 23 May 1967 /D. Remington.
- 4600 soil Spain /J. Guarro FFBA 340.
- 4601 soil /J. Guarro FFBA 341 + crossed with UAMH 1786.
- 4602 soil /J. Guarro FFBA 342 + crossed with UAMH 1786.
- 4766 bottom sediments polluted pond Poland /K. Ulfig No. 4 + mates with UAMH 1786.

Arthroderma obtusum (Dawson & Gentles) Weitzman, McGinnis, Padhye & Ajello (syn. *Nannizzia obtusa*; morph *Microsporium nanum*)

- 592 ringworm-like lesions ex female Vegreville, Alta. J.W. Carmichael Dec 1957 /J.W. Carmichael.
- 1128 ex human Mexico /CDC X-427.
- 1129 ex human with tinea capitis Louisiana, U.S. /CDC X-310.
- 1130 ex 4 yr old with tinea capitis Indiana 1960 /CDC X-313.
- 1482 monascospore isol. ex ringworm lesion Dawson & Gentles 1961 /IMI 84310 [=ATCC 22465 =CDC X718] - mating type 1512 no ascocarps. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 1512 ringworm lesion England Dawson & Gentles 1961 /IMI 84309 [=ATCC 24446 =CDC X719] + mating type 1482 no ascocarps. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 3498 skin ex palm of Philippine female Edmonton, Alta. J.W.

- Carmichael 16 Aug 1972 /J.W. Carmichael.
- 4133 skin lesion ex pig Vet. Lab., Lethbridge, Alta. /B. Murray 911.
- 5335 ex scalp lesion, female 45 yr Saskatchewan H. Congly /H. Congly 2M. Human/animal pathogen: tinea capitis.
- 5336 ex wrist lesion, male 57 yrs Saskatchewan H. Congly /H. Congly 28M. Human/animal pathogen: tinea manuum.
- 5378 body lesion, tinea corporis, sow Sask. H. Congly Apr 1986 /H. Congly 1200M.
- 6306 left thigh lesion, female 29 yrs Sask. H. Congly 1988 /H. Congly 2383M.
- 7115 skin scrapings from back, female 25 yr Saskatchewan H. Congly 1991 /H. Congly 3158M.91.
- 7373 ex skin on arm, female, 37 yr, DE + Mundare, Alta. Jun 1993 /R. Rennie MY 2739.

Arthroderma otae (Hasegawa & Usui) McGinnis, Weitzman, Padhye & Ajello (syn. *Nannizzia otae*; morph *Microsporium canis*)

- 3754 (T *Nannizzia otae*) feline ringworm /CDC B-2095 [=ATCC 28328 =IMI 213848 =GenBank AY176739 28S =GenBank AJ270792 ITS] - mating type 3755. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002).

Arthroderma otae see *Microsporium canis*

Arthroderma persicolor (Stockdale) Weitzman, McGinnis, Padhye & Ajello (syn. *Nannizzia persicolor*; morph *Microsporium persicolor*)

- 2939 (T *Nannizzia persicolor*) shrews (*Sorex araneus*) England /IMI 117064 [=ATCC 22440 =UAMH 5095] - mating type 2940. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 2940 (T *Nannizzia persicolor*) bank voles (*Clethrionomys glareolus*) England /IMI 117073 [=ATCC 22439 =UAMH 5096] + mating type 2939. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
- 3214 sandy soil with cow dung Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
- 3448 (T *Nannizzia quinckeanum*) /U. Balabanoff 331 [=ATCC 22559 =IMI 158887].
- 3509 Athlete's foot Baltimore, MD Dr. Spatz (40-72-018500) /CDC +.
- 3510 as *Nannizzia quinckeanum* /C. Shonborn 1672 self-fertile.
- 3511 man Quebec /F. Blank 1.
- 3512 man Quebec /F. Blank 2.
- 3513 man Quebec /F. Blank 3.
- 3514 man Philadelphia /F. Blank 12.
- 3771 human skin Edmonton, Alta. 1975 /A.S. Sekhon PLM 323.
- 4023 wild vole Montreal, Que. 1976 /L. Kapica.
- 4024 skin nose, female veterinary assistant; DE hyphae Montreal, Que. L. Kapica 1975 /L. Kapica. Human/animal pathogen: dermatophytosis (English & al., *Mycopathologia* 64:35-37, 1978).
- 4370 skin scraping ex male patient Edmonton, Alta. C. Rodvang Oct 1980 /C. Rodvang.
- 4548 ankle skin scrapings ex 25 year old male with tinea Saskatoon, Sask. H. Congly /H. Congly.
- 4857 bottom sediments ex polluted Ruda R. Poland /K. Ulfig 5.
- 4966 J. Kane NY128-339.
- 5093 J. Kane A-276 [=IP 1461-83].
- 5094 France /J. Kane A-273 [=IP 10276-71].
- 5095 (T *Nannizzia persicolor*) /J. Kane A-199 [=IMI 117064 =UAMH 2939].
- 5096 (T *Nannizzia persicolor*) /J. Kane A-200 [=IMI 117073 =UAMH 2940].

- 5097 New York /J. Kane A-201 [=IMI 123336].
 5098 New York /J. Kane A-201 [=IMI 123339].
 5099 France /J. Kane A-274 [=IP 197-74].
 5100 France /J. Kane A-275 [=IP 1287-81].
 5376 chin lesion tinea faciae, 22 yrs Regina, Sask. H. Congly 1986 /H. Congly 562M.
 5676 waist line ex male 32 yr Regina H. Congly /H. Congly 144M.
 5677 right leg ex female, 32 yr Regina H. Congly /H. Congly 3087M.
 6307 right forearm lesion, female 37 yrs Sask. H. Congly 1988 /H. Congly 1527M.
 6308 right leg lesion, male 12 yrs H. Congly 1988 /H. Congly 2576M.
 6750 skin, male Edmonton, Alta. 16 Nov 1990 /P. Kibsey MY 3079.
 7876 tissue ex back, male 30 yr Lac La Biche, Alta. C. Sand 5 Jan 1995 /R. Rennie MY 0038. Pigment: brown.
 8375 left arm, male 45 yr Saskatchewan H. Congly 1996 /H. Congly 187-M-96. Pigment: brown.
 10760 ex skin scraping of face, male 6 yr Winnipeg, MB 22-Sep-2006 /R. Rennie MY 6917. Culture conditions: typical macroconidia and microconidia present; no requirement for vitamins (fide UAH); BCP-MS-G profuse growth; no alkalinity; urea positive (fide UAMH) // thermotolerant; growth restricted @ 35 C.
- Arthroderma quadrifidum* Dawson & Gentles (morph *Trichophyton terrestre*)**
- 458 skin from Rt hand Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael +. Molecular systematics: Blast match 98% ITS similarity to *Arthroderma quadrifidum* (CBS 613.74 AJ877214) (fide V. Hubka 2015).
 544 soil ex sheep yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael + mates with UAMH 2942.
 546 soil ex pig run Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael - mates with UAMH 2941.
 669 lung ex *Citellus richardsoni* Bittern Lake, Alta. J.W. Carmichael May 1959 /J.W. Carmichael +.
 755 soil ex pig yard Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael + mates with UAMH 2942. Molecular systematics: BLAST match 97% ITS similarity to *Arthroderma quadrifidum* (CBS 613.74; AJ877214) (fide V. Hubka 2015).
 756 soil ex pig yard Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael - mates with UAMH 2941.
 760 soil ex chicken run Alberta J.W. Carmichael 21 Jul 1959 /J.W. Carmichael - mates with UAMH 2941.
 761 soil ex chicken run Alberta J.W. Carmichael 21 Jul 1959 /J.W. Carmichael - mates with UAMH 2941.
 763 soil near chicken house Alberta J.W. Carmichael 21 Jul 1959 /J.W. Carmichael -.
 790 skin from foot Edmonton, Alta. J.W. Carmichael 23 Mar 1960 /J.W. Carmichael -.
 794 scrapings ex toes Edmonton, Alta. A. Padhye Apr 1960 /A. Padhye self-fertile.
 824 hair of hedgehog New Zealand M.J. Marples (H-7) 1960 /M.J. Marples -.
 863 soil L.K. Georg /L.K. Georg [=Orr 101] - mates with UAMH 2941.
 864 soil Hungary /L.K. Georg [=Orr O-889] - mates with UAMH 2942.
 865 soil /L.K. Georg [=Orr 101a] self fertile.
 1328 sandy soil ex badger paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael + mates with UAMH 2942.
 1491 soil under sparrow tree Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael self-fertile.
 1611 soil /M.A. Gordon F 27 + mates with UAMH 2942.
 1686 soil ex flower bed Edmonton, Alta. J.W. Carmichael 17 Jun 1963 /J.W. Carmichael - mates with UAMH 2941.
 1688 soil ex flower bed Edmonton, Alta. J.W. Carmichael 19 Jun 1963 /J.W. Carmichael + mates with UAMH 2942.
 1848 Hungarian soil /G.F. Orr +.
 1849 Hungarian soil /G.F. Orr self-fertile.
 1850 contaminant in culture Edmonton, Alta. J.W. Carmichael 3 Feb 1964 /J.W. Carmichael +.
 1854 soil /G.F. Orr I2 +.
 1864 soil Dugway, Utah /G.F. Orr DPG 52.
 2125 feet ex female, 16 yr Edmonton, Alta. J.W. Carmichael 19 Aug 1964 /J.W. Carmichael self-fertile.
 2496 scrapings from shoulder Edmonton, Alta. J.W. Carmichael 28 May 1965 /J.W. Carmichael +.
 2504 Orr 1963 /G.F. Orr O-3040.
 2513 soil Hungary Szathmary 1964 /G.F. Orr Szath B-511 self-fertile.
 2514 soil Hungary Szathmary 1964 /G.F. Orr Szath 717 - mates with UAMH 2941.
 2518 soil Hungary Szathmary 1964 /G.F. Orr SZT-20 - mates with UAMH 2941.
 2523 contaminant /G.F. Orr 2883 -.
 2525 soil Hungary Szathmary 1964 /G.F. Orr Szath 635 - mates with UAMH 2941.
 2527 soil Hungary Szathmary 1964 /G.F. Orr - mates with UAMH 2941.
 2562 *Rattus assimilis* Mt. Nebo, Queensland, Aust. Dec 1964 /R.G. Rees H 317 -.
 2703 hair & skin scrapings ex cat Edmonton, Alta. J.W. Carmichael /J.L. McManus self-fertile.
 2843 hair ex cat forepaw Edmonton, Alta. J.W. Carmichael 21 Dec 1967 /J.W. Carmichael.
 2858 soil ex fabric bait Hungary Szathmary 1967 /G.F. Orr O-3516 - mates with 2941.
 2895 CDC X-458 -.
 2896 CDC X-459 +.
 2920 soil California /R.S. Pore 470-2 + mates with UAMH 2921, 863, 1688.
 2921 soil California /R.S. Pore 470-3 - mates with UAMH 2920, 544, 755, 864, 1611.
 2924 soil California /R.S. Pore 528-1 + *Sabouraudia* 11:64-69, 1973.
 2925 soil California /R.S. Pore 528-3 - *Sabouraudia* 11:64-69, 1973.
 2941 (*T Arthroderma quadrifidum*) monascospore isol. Dawson & Gentles 1961 /IMI 84307 [=GenBank AY176728 LSU =ATCC 22954 =UAMH 3183 =GenBank AB050584 (chitin synthase)] + mating type 2942. Pigment: brown // molecular systematics: Blast match 98% ITS similarity to *A. quadrifidum* KM091306 (CBS 613.74 AJ877214) (fide V. Hubka 2015).
 2942 (*T Arthroderma quadrifidum*) monascospore isol Dawson & Gentles 1961 /IMI 84308 [=ATCC 22955 =UAMH 3184 =UAMH 3187] - mating type 2941.
 3065 chicken feathers Farina, Illinois R.K. Benjamin Sep 1950 /R.K. Benjamin RSA 62 [=ATCC 26339 =NRRL A-3609 =GenBank AB050586]. Molecular systematics: Blast match 98% ITS similarity to *Arthroderma quadrifidum* (CBS 613.74 AJ877214) (fide V. Hubka 2015).
 3183 (*T Arthroderma quadrifidum*) monascospore isol. C.O. Dawson & J.C. Gentles 1961 /IMI 84307 [=ATCC 22954 =UAMH 2941 =GenBank AY176728] + mating type 3184. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
 3184 (*T Arthroderma quadrifidum*) monascospore isol. C.O. Dawson & J.C. Gentles 1961 /IMI 84308 [=ATCC 22955 =UAMH 2942 =UAMH 3187] - mating type 3183.
 3187 (*T Arthroderma quadrifidum*) monascospore isol. C.O. Dawson & J.C. Gentles 1961 /IMI 84308 [=ATCC 22955 =UAMH 2942 =UAMH 3184] -.
 3419 soil Hungary Szathmary /G.F. Orr O-3008 - mates with UAMH 2941.

- 3420 soil Hungary Szathmary (317)/G.F. Orr O-3551 self-fertile.
 3422 soil Terra, Utah /G.F. Orr DPG-143 -.
 3423 soil ex fabric bait Hungary Szathmary /G.F. Orr O-3516 - crosses with UAMH 2941, 3546.
 3425 G.F. Orr O-3576 + mates with UAMH 2942.
 3432 CDC +.
 3449 soil from new polder Flevoland, Netherlands /De Vries 11-7-B. Molecular systematics: Blast match 98% ITS similarity to *Arthroderma quadrifidum* (CBS 613.74 AJ877214) (fide V. Hubka 2015).
 3456 human hair, apparently normal /R. Mayorga 131 C + mates with UAMH 2921, 3457.
 3457 human hair /R. Mayorga 152 E - mates with UAMH 2920, 3456.
 3459 sputum California /CDC 45-1050-71 - crosses with UAMH 2941, 3546.
 3470 monascospore isol. ex UAMH 1863x2924 Bethesda, MD K.J. Kwon-Chung 28 Feb 1972 /K.J. Kwon-Chung NIH 1 (+)A +.
 3471 monascospore isol. ex UAMH 1863x2924 Bethesda, MD K.J. Kwon-Chung 28 Feb 1972 /K.J. Kwon-Chung NIH 3 (-)a -.
 3546 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye +.
 3547 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye -.
 3548 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye -.
 3549 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye.
 3550 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye -.
 3554 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye +.
 3555 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye +.
 3557 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye +.
 3558 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye +.
 3559 monascospore isol. ex UAMH 1863x3424 Edmonton, Alta. A. Padhye 1972 /A. Padhye +.
 5622 soil by hair bait Edmonton, Alta. L. Sigler /L. Sigler.
 6435 cow skin Alberta K. Manninen Mar 1989 /K. Manninen 5775. Molecular systematics: Blast match 98% ITS similarity with *Arthroderma quadrifidum* (CBS 613.74 AJ877214) (fide V. Hubka 2015).
 11336 swab ex skin of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 76 C.1. Molecular systematics: Blast match 97% ITS similarity with *Arthroderma quadrifidum* (CBS 613.74 AJ877214) (fide V. Hubka 2015).

Arthroderma quadrifidum see *Trichophyton terrestre*

Arthroderma racemosum (Rush-Munro, Smith & Borelli)

Weitzman, McGinnis, Padhye, Ajello (syn. *Nannizzia racemosa*; morph *Microsporium racemosum*)

- 3367 (T *Nannizzia racemosa*) hair bait soil /F.M. Rush-Munro CDC X902 [=ATCC 18910 =CBS 423.74 =IMI 135822 =CDC X902] + mating type 3368. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).
 3368 (T *Nannizzia racemosa*) hair bait soil /F.M. Rush-Munro CDC X903 [=ATCC 18911 =CBS 424.74 =IMI 135823 =CDC X903] - mating type 3367. Molecular systematics: characterization of *Microsporium* species using RAPD analysis (Kano et al., *Mycoses* 41:229-233, 1998).

Arthroderma silverae Currah, Abbott & Sigler (morph *Chrysosporium an. Arthroderma silverae*)

- 6517 (T *Arthroderma silverae*) dung, Arctic fox Svalbard Archipelago R. Currah (Sv32j) Aug 1988 [=GenBank AY176729 LSU as strain 6715]. Keratinophilic: in vitro penetrating bodies (Currah RS, Abbott SA, Sigler L, *Mycol. Res.* 100:195-198, 1996) // mesophilic: growth equivalent at 18 & 22C; opt. temp 15-22C; range 4-30C; growth restricted @ 30C // cycloheximide: resistant // molecular systematics: 100% ITS similarity among UAMH 6517, 6518 and 7304 (fide UAMH 2011).
 6518 dung, Arctic fox Svalbard Archipelago R. Currah (Sv43d) Aug 1988 /R. Currah (Sv43d). Keratinophilic: in vitro (Currah et al., *Mycol. Res.* 100:195-198, 1996) // mesophilic: growth equivalent @ 18C and 22C; opt. temp 22; NG @ 30C // molecular systematics: 100% ITS similarity among UAMH 6517, 6518 and 7304 (fide UAMH 2011).
 7304 wolf (*Canis lupus*) dung Wilcox Pass, Jasper National Park, Alta. S.P. Abbott (SA 79) Jul 1990 /R.S. Currah. Keratinophilic: in vitro (Currah et al., *Mycol. Res.* 100:195-198, 1996) // mesophilic: grows better at 22C than at 18C or 30C; good growth @ 30C // molecular systematics: 100% ITS similarity among UAMH 6517, 6518 and 7304 (fide UAMH 2011).

Arthroderma simii Stockdale, Mackenzie & Austwick (morph *Trichophyton simii*)

- 2825 chicken yard soil Poona, India A. Padhye (181) Jun 1967 /A. Padhye (181) -.
 2826 soil Poona, India A. Padhye (185) Jun 1967 /A. Padhye (185) -.
 2827 chicken feathers ex poultry farm Poona, India A. Padhye (188) Jun 1967 /A. Padhye (188) -.
 2828 chicken feathers ex poultry farm Poona, India A. Padhye (189) Jun 1967 /A. Padhye (189) -.
 2897 CDC X-716 +.
 2898 CDC X-717.
 2943 (T *Arthroderma simii*) monascospore isol. ex IMI 98944 (T ex poultry, India) England Stockdale et al. /IMI 101693 [=ATCC 16447 =CBS 448.65 =GenBank AF170454] + mating type 2944 *Sabouraudia* 4:112-123, 1965. Molecular systematics: dermatophytes (Summerbell et al., *J. Clin. Microbiol.* 37:4005-4011, 1999).
 2944 (T *Arthroderma simii*) monascospore isol. ex IMI 98944 (T ex poultry, India) England Stockdale et al. /IMI 101695 [=ATCC 16448 =CBS 417.65 =GenBank AF170455] - mating type 2943 *Sabouraudia* 4:112-123, 1965. Molecular systematics: dermatophytes (Summerbell et al., *J. Clin. Microbiol.* 37:4005-4011, 1999).
 10390 provenance unknown /W. Untereiner WUC 397 [=GenBank AY176745 =OMH 1585214]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002).

Arthroderma tuberculatum Kuehn (morph *Chrysosporium an. Arthroderma tuberculatum*)

- 854 soil Panama N.M. McClung /CDC B-0491 [=ATCC 16263] - mates with UAMH 3147, 1007.
 873 (T *Arthroderma tuberculatum*) feathers ex *Turdus americanus* Urbana, Ill. M. Kuehn 1954 /M.M. Kuehn [=ATCC 26700 =CBS 473.77 =GenBank AJ877221 ITS] + mating type 3182.
 1007 soil ex fowl yard New South Wales, Aust. /D. Frey 18b + mates with UAMH 3182.
 1095 NRRL A-10,054 + mates with UAMH 3182.
 1266 soil Panama City N.M. McClung Apr 1960 /N.M. McClung 25 - mates with UAMH 1967, 1007.
 1450 soil Panama N.M. McClung (R-53) 1 Oct 1962 /CDC B-0491 [=ATCC 16263] - mates with UAMH 3181.

- 1593 soil ex chicken feeding ground Tonasi, Panama /G.F. Orr O-2503 self-fertile.
- 1636 rat Newton, Georgia R.W. Menges /CDC A-0919.
- 1724 soil Christie Is., Howe Sound, B.C. J.W. Carmichael 13 Jun 1963 /J.W. Carmichael - mates with UAMH 3181.
- 1905 soil USA /G.F. Orr [=RSA 1254] + mates with 3182.
- 1967 soil Argentina E. Varsavsky 1962 /G.F. Orr EV7A + mates with UAMH 3182.
- 1974 soil Argentina Varsavsky 1963 /G.F. Orr EV8W + mates with UAMH 3182.
- 1998 soil S. California G.F. Orr 1960 /G.F. Orr O-919 - mates with UAMH 3181.
- 2831 soil Poona, India A. Padhye Jul 1967 /A. Padhye + mates with UAMH 3182.
- 3147 finger lesion Los Angeles, Calif. G.F. Orr (2503) 1963 /R.K. Benjamin RSA 1495 [=ATCC 15507 =NRRL A-12,090] + mates with UAMH 3182.
- 3172 soil Ohio P.V. Kurup 25 Jan 1969 /P.V. Kurup SL 57 - mates with UAMH 873, 3147.
- 3181 (T *Arthroderma tuberculatum*) monascospore isol. Orr, Dawson Kuehn /IMI 86177 [=ATCC 26702] - mating type 3182.
- 3182 (T *Arthroderma tuberculatum*) monascospore isol. Orr, Dawson Kuehn /IMI 86178 [=ATCC 26701 =GenBank AB050588 (chitin synthase)] + mating type 3181.
- 3229 soil ex turkey corral Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.
- 3232 turkey corrals Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.
- 3237 turkey corrals Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.
- 4589 soil Spain /J. Guarro FFBA 216.
- 4859 skin from foot 1983 /J. Kane F 11112-(83).
- 10035 shed ventral abdomen skin ex collared lizard (*Crotaphytus collaris*), male 2 yr Hogle Zoo, Salt Lake City, Utah J. Pare May 2001 /J. Pare UW126A-A. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 99-100% ITS similarity with *Arthroderma uncinatum* (fide V. Hubka 2015).
- 749 ex sheep wool Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael self-fertile.
- 750 ex sheep wool Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
- 1315 sandy soil ex badger paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael - mates with UAMH 2929. Molecular systematics: Blast match 99-100% ITS similarity with *Arthroderma uncinatum* (fide V. Hubka 2015).
- 2711 soil under spruce tree Edmonton, Alta. J.W. Carmichael 10 Jan 1967 /J.W. Carmichael + mates with UAMH 2930.
- 2759 garden soil Edmonton, Alta. J.W. Carmichael May 1967 /J.W. Carmichael.
- 2929 (T *Arthroderma uncinatum*) monascospore isol. ex soil hair bait U.K. Dawson & Gentles 1961 /IMI 084305 [=UAMH 3185 =UAMH 3271 =UKNCC 71194] + mating type 2930.
- 2930 (T *Arthroderma uncinatum*) monascospore isol. ex soil hair bait U.K. Dawson & Gentles 1961 /IMI 84306 [=UAMH 3186 =UAMH 3272] - mating type 2929. Pigment: black.
- 3185 (T *Arthroderma uncinatum*) monascospore isol. ex soil hair bait U.K. Dawson & Gentles 1961 /IMI 084305 [=UAMH 2929 =UAMH 3271] + mating type 3186. Pigment: blue-black.
- 3186 (T *Arthroderma uncinatum*) monascospore isol. ex soil hair bait U.K. Dawson & Gentles 1961 /IMI 84306 [=UAMH 2930 =UAMH 3272] - mating type 3185. Pigment: blue-black.
- 3269 soil New York /I. Weitzman [=RV13418].
- 3270 soil /I. Weitzman [=RV23561].
- 3271 (T *Arthroderma uncinatum*) monascospore isol. ex soil hair bait U.K. Dawson & Gentles 1961 /I. Weitzman [=UAMH 3185 =UAMH 2929 =UKNCC 71194 =IMI 084305] + mating type 3272. Molecular systematics: Blast match ITS similarity with *Arthroderma uncinatum* (fide V. Hubka but low quality sequence).
- 3272 (T *Arthroderma uncinatum*) monascospore isol. ex soil hair bait U.K. Dawson & Gentles 1961 /I. Weitzman [=IMI 84306 =UAMH 2930 =UAMH 3186] - mating type 3271. Molecular systematics: Blast match 99-100% ITS similarity with *Arthroderma uncinatum* (fide V. Hubka 2015).
- 3389 (T Isotype *Keratinomyces ajelloi* v. *nanum*) soil Czechoslovakia M. Hejtmánek Jul 1964 /CBS 180.64 [=CBS H-7870 herbarium]. Culture conditions: expressed macroconidia typical of both variety *nanum* phenotype and *ajelloi* phenotype at time of deposit.
- 3394 Received as *Keratinomyces ajelloi* var. *nana* /CDC X-883. Culture conditions: expressed macroconidia typical of variety *nanum* phenotype at time of deposit // molecular systematics: Blast match 99-100% ITS similarity with *Arthroderma uncinatum* (fide V. Hubka 2015).
- 3955 (T *Epidermophyton stockdaleae*) pig yard Szczecin, Poland 1973 /IMI 156619 [=Genbank AJ000628 ITS =ATCC 28687 =NCPF 472 =CBS 128.75 =GenBank AJ232171 28S partial]. Systematics/taxonomy: Type strain of *Epidermophyton stockdaleae* // culture conditions: macroconidia, 1-4 septate, with frequent internal chlamydospores; colonial and microscopic morphology atypical for *A. uncinatum* // molecular systematics: Blast match ITS 100% similarity with *Arthroderma uncinatum* (fide UAMH 2011); *Epidermophyton stockdaleae* CBS 128.75 ex type placed with *Arthroderma uncinatum* (Graser et al, Med. Mycol. 37 (2), 105-114, 1999).
- 4027 skin scrapings ex patient S. Africa /CDC 77-014263.
- 5157 single ascospores isolate Michigan C.D. Jeffries 1985 /C.D. Jeffries F1-16 +.
- 5158 ?ex soil Michigan C.D. Jeffries 1985 /C.D. Jeffries 53-1 +.
- 5159 single ascospore isolate Michigan C.D. Jeffries 1985 /C.D. Jeffries 72-1A +.
- 5160 single ascospore isolate Michigan C.D. Jeffries 1985 /C.D.

Arthroderma uncinatum Dawson & Gentles (syn.)*Epidermophyton stockdaleae*; morph *Trichophyton ajelloi*)

- 519 soil ex pig pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael + mates with UAMH 2930.
- 520 soil ex sheep pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 522 soil ex horse pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael - mates with UAMH 2929.
- 524 soil ex cattle pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 531 soil ex cattle pasture Edmonton, Alta. J.W. Carmichael Jun 1956 /J.W. Carmichael + mates with UAMH 2930.
- 536 soil ex chicken yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 547 soil outside pighthouse Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 556 soil ex ploughed field Edmonton, Alta. J.W. Carmichael Oct 1956 /J.W. Carmichael - mates with UAMH 2939.
- 557 soil Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 735 garden soil Edmonton, Alta. J.W. Carmichael 6 Feb 1959 /J.W. Carmichael.
- 736 garden soil Edmonton, Alta. J.W. Carmichael 6 Feb 1959 /J.W. Carmichael - mates with UAMH 2929.
- 739 garden soil Edmonton, Alta. J.W. Carmichael 28 Feb 1959 /J.W. Carmichael - mates with UAMH 2929.
- 740 soil ex ploughed lawn Edmonton, Alta. J.W. Carmichael 28 Feb 1959 /J.W. Carmichael.
- 741 soil ex ploughed lawn Edmonton, Alta. J.W. Carmichael 28 Feb 1959 /J.W. Carmichael - mates with UAMH 2929.
- 745 ex sheep wool Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael. Molecular systematics: Blast match

- Jeffries 72-1B -.
5161 single ascospore isolate Michigan C.D. Jeffries 1985 /C.D. Jeffries 68-1B -.
6480 received as presumed ex-type of *Keratinomyces ceretanicus* ATCC 58594 but mated with *A. uncinatum* strains /CDC B-4562 [=ATCC 58594] + mating type 3272.
9278 toenails, male 60 yr Edmonton, Alta. C. Sand 23 Mar 1998 /R. Rennie MY 1767a. Molecular systematics: Blast match 99-100% ITS similarity with *Arthroderma uncinatum* (fide V. Hubka 2015).

Arthroderma vanbreuseghemii Takashio (morph*Trichophyton mentagrophytes*)

- 3740 man France Badillet & Rivalier 1971 /R. Vanbreuseghem RV 27435 [=ATCC 24956] +.
3741 man Belgium Maes /R. Vanbreuseghem RV 25060 [=ATCC 24952] +.
3744 human G. Badillet /R. Vanbreuseghem RV 27439 [=ATCC 24958] +.
5888 toe scraping Toronto 1987 /J. Kane FR 1759. Culture conditions: velvety form typical; BCP-MS-G profuse growth; alkalinity; urea positive // application: QC & teaching strain for *Trichophyton mentagrophytes* (Summerbell, Clinical Microbiology Procedures Handbook 2002) // molecular systematics: BLAST match 100% ITS similarity with *Arthroderma vanbreuseghemii* - *T. mentagrophytes* complex (fide UAMH Oct 2008).
8543 toenail, 69 yr old patient, DE + Ontario 13 Jan 1996 /R.C. Summerbell FR 475 [=GenBank AF170465]. Molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999) // culture conditions: cottony form typical.
8544 Rt 3rd toenail, female, DE - Guelph, Ont. 29 Jan 1996 /R.C. Summerbell F 1048 [=GenBank AF170466 =GenBank Z98001 =CBS 558.66]. Molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999); rapid identification using ITS1 & ITS2 region sequences (Pryce, Palladino, Kay & Coombs, Med. Mycol. 41:369-381, 2003) // culture conditions: cottony form typical.
10828 tinea right foot, female; DE + Toronto, ON U. Bunn 19-Mar-07 /Ursula Bunn F 1007. Culture conditions: BCP-MS-G profuse growth; alkalinity; urea weak positive (fide UAMH); produces copious macroconidia // keratinophilic: digests hairs with penetrating bodies // molecular systematics: BLAST match 100% ITS similarity with *Arthroderma vanbreuseghemii* - *T. mentagrophytes* complex (fide UAMH).
10922 typical strain UAMH. Molecular systematics: 100% ITS similarity with *Arthroderma vanbreuseghemii* AB246678 (IFM 51386, CBS 346.55) // culture conditions: produces macroconidia, coils and peridial hyphae // keratinophilic: digests hairs with penetrating bodies.

Arthroderma vanbreuseghemii see *Trichophyton mentagrophytes****Arthrographis alba*** Ulfig, Gene & Guarro

- 2546 fasting gastric wash specimen, female 11 yr Edmonton, Alta. J.W. Carmichael 8 Oct 1965 /J.W. Carmichael. Culture conditions: no ascospores formed on any medium // cycloheximide: resistant (MYC) // mesophilic: NG @ 35C.
3715 human source Los Angeles, Cal. G.F. Orr /G.F. Orr O-2556. Mesophilic: NG @ 35C // culture conditions: no ascospores formed on any medium // cycloheximide: resistant (MYC).
6568 sheep dung Spain J. Guarro /J. Guarro FMR 3308. Mesophilic: NG @ 37C // cycloheximide: resistant (MYC).
7219 (T *Arthrographis alba*) sediment Sabanell Beach, Catalonia, Spain 13 Feb 1991 /J. Guarro FMR 4029 [=CBS 370.92 =GenBank AB213450 ITS =IFM 52648]. Cycloheximide:

resistant // mesophilic: NG @ 37C.

- 7220 sediment Prat Beach, Catalonia, Spain 14 Feb 1991 /J. Guarro FMR 4030. Cycloheximide: resistant // mesophilic: NG @ 37C.
7221 sediment Myga River, Catalonia, Spain 26 Jun 1991 /J. Guarro FMR 4028 [=CBS 369.92]. Cycloheximide: resistant // mesophilic: NG @ 37C.
7222 sediment Prat Beach, Catalonia, Spain 3 Aug 1991 /J. Guarro FMR 4031. Cycloheximide: resistant // mesophilic: NG @ 37C.
7701 ex skin, female 38 yr Toronto, Ont. 22 Nov 1993 /R.C. Summerbell FR 3808. Cycloheximide: slightly sensitive // benomyl: sensitive.

Arthrographis an. Leucothecium emdenii see *Leucothecium emdenii****Arthrographis cuboidea*** see *Scytalidium cuboideum****Arthrographis kalrae*** (Tewari & Macpherson) Sigler & Carm. (syn. *Oidiodendron kalrae*; morph *Eremomyces langeronii*)

- 2298 soil New Delhi L.N. Mohapatra 1963 /C.C. Campbell Y-4 [=UAMH 2610 =UAMH 2617]. Thermotolerant: grows @ 35 C.
2578 Geum urbanum J.A. von Arx /CBS 344.49?.
2610 ex culture received as Y-4 L. Mohapatra 1963 /R.P. Tewari [=UAMH 2298 =UAMH 2617].
2617 ex culture received as Y-4 L. Mohapatra 1963 /R.P. Tewari [=UAMH 2298 =UAMH 2610].
3279 air Rabat, Morocco J. Chabert /J. Nicot 5216.
3380 skin Rt foot (medial surface of the metatarsus) /L. Friedman 192.
3464 (T *Arthrographis langeroni*) onychomycosis, chronic digital lesions France Cochet 1939 /CBS 112.39. Cycloheximide: resistant // thermotolerant: opt. 25-45C.
3616 (T *Oidiodendron kalrae*) sputum of man with ill-defined respiratory ailment Tewari & McPherson /ATCC 18434 [=GenBank AB116537 D1D2 =GenBank AB116529 ITS =GenBank AB213429 LSU =ATCC 18434 =GenBank AB213445 ITS]. Produces proteases. Cycloheximide: resistant // thermotolerant: opt. 25-45C // molecular systematics: comparison with isolate from patient in China (Xi L, Fukushima K, Lu C, Takizawa K, Liao R, Nishimura K, J Clin Microbiol 42:4828-4831, 2004).
4164 saprophyte ex fur short tailed wallaby (*Setonix brachyurus*) W. Australia R. McAleer 1978 /R. McAleer Zool 1a.
4165 fur ex short tailed wallaby (*Setonix brachyurus*) W. Australia R. McAleer 1978 /R. McAleer Zool 6.
4471 eye swab of female, 18 yr N. Island, New Zealand /K.A. Hobbs 810578.
4472 chest aspirate ex draining lung lesion, female 21 yr New Zealand /K.A. Hobbs.
4597 soil /J. Guarro FFBA 239. Thermotolerant: grows @ 35 C.
4653 scrapings ex circular lesion on skin of horse Edmonton, Alta. J.W. Carmichael Sep 1982 /G. Moonie. Cycloheximide: resistant // thermotolerant: opt. 25-30C, NG @ 45C; grows @ 35 C; grows @ 35 C but more slowly than other *A. kalrae* strains.
5036 ear infection ex boy 4 yr New York State 1984 /I. Salkin M1278-84. Cycloheximide: resistant.
5037 toenail (*Fusarium* also isolated) Wellington, N.Z. 1984 /A. Woodgyer Myc 840819. Cycloheximide: resistant // thermotolerant: opt. 25-45C.
5118 toe cleft, DE negative Wellington, New Zealand A. Woodgyer 1985 /A. Woodgyer 850341. Cycloheximide: resistant // thermotolerant: opt. 25-45C.
5119 thumbnail New Zealand 1985 /A. Woodgyer 850260. Cycloheximide: resistant // thermotolerant: opt. 25-45C.

- 5850 sputum Perth, Australia R. McAleer 1987 /R. McAleer 87/3388. Thermotolerant: grows @ 46C.
- 5851 corneal ulcer Perth, Australia R. McAleer 1987 /R. McAleer 87/3817 [=GenBank AB116538 D1D2 =GenBank AB116530 ITS =GenBank AB213430 LSU =GenBank AB213446 ITS]. Thermotolerant: grows @ 40C // human/animal pathogen: keratitis (McAleer, Froudust & Cherian, X ISHAM Congress Abstr 172, 1988).
- 7103 ex bone marrow, boy with chronic granulomatous disease Milan, Italy M. Viviani (90-3156-bone of L.G.) 1991 /M. Kemna M131-91 [=GenBank AB213431 LSU =GenBank AB213447 ITS]. Thermotolerant: grows @ 37C, NG @ 45C // culture conditions: urea +, nitrate assim +, does not ferment glucose.
- 7433 anterior chamber tap New Zealand D. Parr 1993 /D. Parr MH 3047. Pigment: brown.
- 7674 ex traumatic wound, male Worcester, Mass. Univ Massachusetts Medical Centre (B 27453) /M.G. Rinaldi UTHSC 94-1425. Cycloheximide: resistant.
- 7768 ex soil Edmonton, Alta. R. Lee 5 Oct 1994 /R. Lee.
- 8209 toenail, female 54 yr Alberta Provincial Laboratory for Southern Alberta May 1995 /R. Rennie MY 2355.
- 8292 nail, great right toe, male 77 yr Alberta Provincial Laboratory for Southern Alberta 16 Aug 1995 /R. Rennie MY 3341 [=GenBank AB116539 D1D2 =GenBank AB116531 ITS =GenBank AB213432 LSU =GenBank AB213448 ITS]. Pigment: brown // thermotolerant: grows @ 45C.
- 8615 corneal infiltrate & photophobia, female 49 yr, probable exposure to soil Rhode Island Hospital, Providence, RI L. Binns Aug. 1996 /L. Binns 96-180-1617 [=GenBank AB116540 D1D2 =GenBank AB116532 ITS =GenBank AB213433 LSU =GenBank AB213449 ITS]. Human/animal pathogen: mycotic keratitis (Perlman & Binns, Am. J. Ophthalmol. 123:547-549, 1997).
- 8679 soil Edmonton, Alta. M. Rosario Oct 1996 /M. Rosario.
- 8776 soil around trees near La Marchand Mansion Edmonton, Alta. W. Zuk 26 Sep 1996 /W. Zuk.
- 9853 sinus, male 38 yr Nacogdoches, TX Jul 2000 /Texas Dept. of Health BY 1123.
- [=CFB 21920]. Arthrographol (norheptaketide). Pigment: tan/orange // biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6374 gallery of *Ips latidens*, *Pinus contorta* v. *latifolia* Whitney Creek, Alta. Y. Yamaoka 30 Jul 1986 /Y. Yamaoka NOF 1309 [=CFB 21920]. Arthrographol (norheptaketide). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6375 *Ips latidens* in *Pinus contorta* v. *latifolia* Nojack, Alta. Y. Yamaoka 1 Jan 1987 /Y. Yamaoka NOF 1310. Arthrographol (norheptaketide). Pigment: tan/orange // biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6376 *Ips latidens* in *Pinus contorta* v. *latifolia* Nojack, Alta. Y. Yamaoka 1 Jan 1987 /Y. Yamaoka NOF 1311. Arthrographol (norheptaketide). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6402 (T Arthrographis pinicola) *Ips latidens* galleries in *Pinus contorta* Nojack, Alta. L. Sigler 6 Apr 1989 /L. Sigler [=DAOM 210573 =ATCC 66466 =CBS 653.89 =NOF 1461 =IFM 52651 =GenBank AB213437 LSU =GenBank AB213453 ITS]. Arthrographol (norheptaketide) (Ayer & Nozawa, Can. J. Microbiol. 36:83-85, 1990). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6431 *Ips latidens* gallery in *Pinus contorta* v. *latifolia* Nojack, Alta. Y. Yamaoka 30 Mar 1989 /Y. Yamaoka NOF 1449. Arthrographol (norheptaketide). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6432 *Ips latidens* gallery in *Pinus contorta* v. *latifolia* Nojack, Alta. Y. Yamaoka 30 Mar 1989 /Y. Yamaoka NOF 1448. Arthrographol (norheptaketide). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6433 *Ips latidens* gallery in *Pinus contorta* v. *latifolia* Nojack, Alta. Y. Yamaoka 30 Mar 1989 /Y. Yamaoka NOF 1451. Arthrographol (norheptaketide). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).

Arthrographis kalrae see *Eremomyces langeronii*

Arthrographis lignicola Sigler

- 4095 (T Arthrographis lignicola) wood chips & bark ex logging truck Westlock, Alta. L. Sigler 14 Feb 1978 /L. Sigler [=GenBank GQ272633 ITS =IHM 52650 =ATCC 52699 =CBS 689.83 =IMI 282334 =GenBank AB213436 LSU =GenBank AB213452 ITS]. Pigment: yellow // odor: fruity // molecular systematics: placement of species among ascomycetes (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 4516 red stained wood *Pinus contorta* Hinton, Alta. (C) J. Nighswander 25 Nov 1960 /Y. Hiratsuka NFRC C497.
- 6756 creosote-treated southern pine pole Atlanta, GA /C.J.K. Wang P-442 [=ATCC 66651]. Pigment: brown.

Arthrographis pinicola Sigler & Yamaoka

- 5983 galleries *Dendroctonus ponderosae* in *Pinus contorta* v. *latifolia* Alta. Y. Yamaoka /Y. Yamaoka C1222. Arthrographol (norheptaketide) (Ayer & Nozawa, Can. J. Microbiol. 36:83-85, 1990). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6005 galleries *Dendroctonus ponderosae* in *Pinus contorta* Alta. Y. Yamaoka 1987 /Y. Yamaoka C1223. Arthrographol (norheptaketide). Biodiversity: associated with *Ips latidens* in *Pinus contorta* var. *latifolia* (Sigler, Yamaoka & Hiratsuka, Can. J. Microbiol. 36:77-82, 1990).
- 6373 gallery of *Ips latidens*, *Pinus contorta* v. *latifolia* Whitney Creek, Alta. Y. Yamaoka 30 Jul 1986 /Y. Yamaoka NOF 1308

Arthrographis sp.

- 987 lung, Richardson's ground squirrel Alberta J.W. Carmichael May 1959. Mesophilic: NG @ 35C // molecular systematics: BLAST match 98% ITS similarity with *Arthrographis longispora* GenBank HG004555 (fide UAMH); BLAST match groups 95-98% with *Arthrographis* species.
- 6042 galleries *Dendroctonus ponderosae* in *Pinus contorta* Alta. Y. Yamaoka 1987 /Y. Yamaoka C1224.
- 7394 right thumb nail, male 43 yr Toronto, Ont. 16 Jun 1992 /R.C. Summerbell FR 1339. Pigment: reddish-brown.
- 10195 nail, male 53 yr Quebec 2001 /G. St-Germain MY 56237. Mesophilic: NG @ 37C // culture conditions: no ascospores formed on any medium.
- 11476 swab ex skin of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 51 C.1. Mesophilic: grows slower @ 30C; growth almost equivalent @ 18C, 22C & 25C; grows slower @ 30C; NG @ 35C // culture conditions: very slow growing, not thermotolerant.
- 11477 swab ex skin of living female little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 55 C.4. Culture conditions: very slow growing, not thermotolerant // mesophilic: growth almost equivalent @ 18C, 22C & 25C;

- grows slower @ 30C; NG @ 35C // molecular systematics: Blast match 95% ITS similarity to *Arthrographis kalrae* AB116529 UAMH 3613 T (fide UAMH 2011).
- Arthrospis cirrhata*** van Oorschot & de Hoog
5042 (T *Arthrospis cirrhata*) crumbling walls near Schiphol, Netherlands /CBS 628.83.
- Arthrospis hispanica*** Gene, Ulfig & Guarro
7223 (T *Arthrospis hispanica*) sediment Empuriabrava Beach, Girona, Catalonia, Spain 16 Sep 1991 /J. Guarro FMR 4058 [=CBS 351.92 =IMI 353699]. Cycloheximide: resistant // thermotolerant: restricted growth @ 37C.
7224 sediment Estartit Beach, Girona, Catalonia, Spain 17 Sep 1991 /J. Guarro FMR 4059 [=CBS 353.92 =IMI 353700]. Cycloheximide: resistant // thermotolerant: restricted growth @ 37C.
- Arthrospis microsperma*** (Berk. & Br.) Sigler
4290 grass hay treated with ammonium bis-propionate and 8-quinolinol Silsoe England J. Lacey (C2428) 1979 /IMI 235598. Biodeteriogen/biodegradation: experimental treatment to inhibit spontaneous heating (Sigler & Carmichael Mycotaxon 18:495-507, 1983) // molecular systematics: Blast match ITS-D1D2 sequence groups within Helotiales (fide J. Gene 2012).
6523 *Quercus garryana* acorn Witty Beach, Vancouver Island, B.C. (C) A. Mackinnon & K. Seifert Apr 1989 /K. Seifert. Pigment: brown.
7613 ex hand 2 Nov 1994 /W. Mullenbach. Pigment: brown // cycloheximide: resistant.
8110 ex living leaves of *Linnaea borealis* H.J. Andrews Experimental Forest, Lane County, Oregon Jan 1995 /G. Carroll Cap 1-1 C10. Mesophilic: NG @ 37C // pigment: brown.
8206 tissue, Lt. palm, male 62 yr, DE- Camrose, Alta. C. Sand 2 Jun 1995 /R. Rennie MY 1876. Pigment: brown // cycloheximide: resistant // benomyl: sensitive.
- Arthrospis truncata*** Sigler, Dunn & Carmichael
4430 (T *Arthrospis truncata*) leaf litter in moist chamber Puca Urquillo, Peru /M.T. Dunn MTD 3121 [=ATCC 48176 =CBS 584.82 =DAOM 184712 =IMI 272977]. Polyketide metabolites including arthrospadiol A (Ayer et al. Can. J. Chem. 70:1338, 1992); polyketide biosynthesis (Ayer & Craw, Can. J. Chem. 70:1348-1355, 1992).
- Arthroxyllaria elegans*** Seifert & W. Gams
4811 (T *Arthroxyllaria elegans*) pack rat dung Mid Hills area, New York Mountains, NE San Bernardino Co., Calif. R.K. Benjamin 15 May 1977 /CBS 537.79 [=RSA 2455 =GenBank AF432180 SSU =DAOM 226684 =IMI 286722 =GenBank AF432179 ITS]. Molecular systematics: xylariaceous anamorph close to *Xylaria* (Seifert, Gams & Louis-Seize, Czech. Mycol. 53:297-307, 2002); synanamorph selenosporella-like.
- Ascobolus americanus*** (Cooke et Ellis) Seaver
3248 mule dung Argentina I. Gamundi & J.E. Wright 1962 /IMI 108707.
- Ascobolus denudatus*** Fries
4577 carnivore dung Lesser Slave Lake, Alta. L. Sigler May 1982 /L. Sigler.
- Ascocalvatia alveolata*** Malloch & Cain (morph *Chrysosporium an. Ascocalvatia alveolata*)
6475 (T *Ascocalvatia alveolata*) carnivore dung Muskoka Dist., S of Dorest, Ontario D. Malloch 19 Sep 1966 /CBS 777.70
- [=ATCC 22147 =TRTC 45318 =CBS 777.70 =GenBank AB040697 LSU =GenBank AY176710 LSU =GenBank AB015782 SSU]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
7346 forest soil Soroa, Cuba J. Cano 25 Mar 1992 /J. Guarro FMR 4201 [=CBS 283.93]. Pigment: brown.
8385 soil Soroa, Cuba J. Cano Mar 1993 /J. Guarro FMR 5036.
- Ascocyta adzamethica*** see *Didymosphaeria archidicola*
- Ascocyta sp.***
4150 hand lesion, man 61 yr Edmonton, Alta. L. Sigler Aug 1978 /L. Sigler.
4526 lichens ex rock Phoenix, Ariz. L. Sigler 12 Feb 1982 /L. Sigler.
7166 indoor air ex RCS strip Fort McMurray, Alta. S.P. Abbott (KC6-2I) 23 Apr 1992 /S. Poznanski 6.
- Ascocoryne sarcoides*** (Jacquin:Gray) Groves & Wilson (morph *Coryne an. Ascocoryne sarcoides*)
1443 *Pinus banksiana* railway tie Bylon, Manitoba Shields (63-32) Sep 1959 /DAOM 84226.
- Ascodesmis nigricans*** v. Tieghem
8576 soil Delhi, India J. Guarro Oct 1994 /J. Guarro FMR 5551.
- Ascodesmis sphaerospora*** Obrist
2756 dung Austin, TX 1963 /C. Alexopoulos [=GenBank U62008]. Molecular systematics.
3063 Urbana, Illinois G.W. Zizka 1950 /R.K. Benjamin RSA 122.
- Ascoidea rubescens*** Brefeld
640 Fitzpatrick /IMI 51500 [=CBS 116.35].
- Ascorhizoctonia cretea*** Yang & Korf (morph *Tricharina cretea*)
5764 (T *Ascorhizoctonia cretea*) Sweden R. Kristiansen 13 Aug 1982 /DAOM 191899 [=ATCC 58706 =CBS 235.85 =IMI 294723]. Pigment: brown.
- Ascorhizoctonia gilva*** Yang & Korf (morph *Tricharina gilva*)
5763 (T *Ascorhizoctonia gilva*) Greenland S. Sivertsen & H. Dissing 6 Aug 1982 /DAOM 191898 [=ATCC 58707 =CBS 236.85 =IMI 294724 =GenBank U38629]. Pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- Ascorhizoctonia groenlandica*** Yang & Korf (morph *Tricharina groenlandica*)
5762 (T *Ascorhizoctonia groenlandica*) Greenland H. Dissing 20 Jul 1983 /DAOM 191897 [=ATCC 58708 =CBS 237.85 =IMI 294725 =GenBank U38577 =GenBank U38576]. Pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- Ascorhizoctonia intermedia*** Egger, Yang & Korf (morph *Tricharina praecox*)
5761 (T *Ascorhizoctonia intermedia*) ascospores, burnt soil Christina Lake, British Columbia K. Egger (KNE 1126-ps) 8 May 1984 /DAOM 191895 [=ATCC 58709 =CBS 239.85 =IMI 294727 =GenBank U38625]. Pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).

Ascorhizoctonia ochroleuca Yang & Korf (morph*Tricharina ochroleuca*)

- 5774 (T *Ascorhizoctonia ochroleuca*) Norway S. Sivertsen & H. Dissing 18 Aug 1979 /DAOM 191896 [=ATCC 58710 =CBS 238.85 =IMI 294726 =GenBank U38579 =GenBank U38578]. Pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).

Ascorhizoctonia praecox Yang & Korf (morph *Tricharina praecox*)

- 5773 (T *Ascorhizoctonia praecox*) Norway H. Dissing & S. Sivertsen 17 Aug 1979 /DAOM 191894 [=ATCC 58711 =CBS 240.85 =IMI 294728]. Pigment: brown.

Ascospaera aggregata Skou

- 6639 mass ascospore isolate ex alfalfa leaf-cutting bee (*Megachile rotunda*) Utah J. Vandenberg /M. Goettel.

Ascospaera apis (Maassen ex Claussen) Olive & Spiltoir

- 7055 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 229) Aug 1990 /D. Inglis (HD 229). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Ascospaera atra Skou & Hackett

- 7007 frass ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 261) Aug 1990 /D. Inglis (HD 261). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7008 frass ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 263) Aug 1990 /D. Inglis (HD 263). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7009 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 303) Aug 1990 /D. Inglis (HD 303). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7010 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 311) Aug 1990 /D. Inglis (HD 311). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7011 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 312) Aug 1990 /D. Inglis (HD 312). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Ascotricha bosei Hawksworth (morph *Dicyma an. Ascotricha bosei*)

- 7585 ex soil from date palm plantation Basrah, Iraq Jul 1983 /S.-I. Udagawa NHL 2923.
- 7586 ex soil from date palm plantation Basrah, Iraq Jul 1983 /S.-I. Udagawa NHL 2936. Thermotolerant: grows @ 37C.
- 9046 toe nail, female 53 yr, DE- Whitecourt, Alta. C. Sand 29 Jul 1997 /R. Rennie MY 3963a.

Ascotricha canariensis Stchigel, D. Garcia & Guarro

- 9657 (T *Ascotricha canariensis*) soil La Laguna, Gran Canaria, Canary Islands, Spain (C) B. Acosta; isol. A.M. Stchigel 7 Apr 1998 /J. Guarro FMR 6738 [=IMI 381334 Holotype =CBS 102197].

Ascotricha chartarum Berk. (morph *Dicyma ampullifera*)

- 5989 cardboard Scarborough, Ont. R. Khan 27 Mar 1985 /R. Khan TRTC 50752.

Ascotricha erinacea see ***Dicyma olivacea******Ascotricha guamensis*** Ames (morph *Dicyma an. Ascotricha guamensis*)

- 7642 ex cultivated soil Shandong, China Y. Horie 10 Nov 1989 /Y. Horie CBM-FA-0027.

Ascotricha lusitanica Kenneth (morph *Dicyma an.**Ascotricha lusitanica*)

- 7361 contaminant ex bronchial wash; DE - Edmonton, Alta. C. Sand 1993 /R. Rennie MY 2038c.
- 10741 pus of leg wound, male 59 yr Quebec G. St-Germain 27-Jul-2005 /G. St-Germain MY 62566. Thermophilic: grows better @ 35C than @ 30C.

Ascotricha xylina Ames (morph *Dicyma an. Ascotricha**xylina*)

- 7699 ex cultivated soil Shandong, China Y. Horie 10 Nov 1989 /Y. Horie CBM-FA-0029. Odor: musty // pigment: brown.
- 7700 ex cultivated soil Shandong, China Y. Horie 10 Nov 1989 /Y. Horie CBM-FA-0028.

Aspergillus aculeatus Iizuka

- 5879 air inside hospital Ontario R.C. Summerbell 29 Jul 1987 /R.C. Summerbell F 2.
- 6645 Raper & Fennell WB 5094, ex tropical soil, 1962 /M. Christensen WB 5094 [=ATCC 16872 =CBS 172.66].
- 10664 alga *Caulerpa racemosa* (sea grapes)- internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 1A.

Aspergillus aeneus Sappa

- 8087 (T *Aspergillus aeneus*) ex forest soil "Modilen" Giuba River, Somalia F. Sappa /M. Christensen WB 4769 [=ATCC 16803 =QM 1945 =CBS 128.54 =IMI 69855 =WB 4279 =MUCL 13570]. Pigment: orange-brown.

Aspergillus alabamensis Balajee, Baddley, Frisvad & Samson

- 11632 ex peritoneal fluid, 5 year old spayed English Springer Spaniel dog; histopathology + for hyphae and conidia-like structures Lloyd Veterinary Medical Center, Iowa State University College of Veterinary Medicine, Ames, IA 2011 /D.A. Sutton UTHSC 10-1030 [=GenBank JQ286488 bt2 =UTHSC R-4572]. Human/animal pathogen: disseminated aspergillosis in immunosuppressed canine (Burrough E, Deitz K, Kinyon J, Andreasen C, Frana T, Sutton D, et al, Med Mycol Case Reports 1:1-4, 2012) // culture conditions: non sporulating on deposit; no conidia obtained; atypical isolate // pigment: yellow // thermotolerant: grows @ 35 C.

Aspergillus albertensis see ***Petromyces albertensis******Aspergillus an. Emericella aurantiobrunnea*** see ***Emericella aurantiobrunnea******Aspergillus an. Emericella nidulans var. dentata*** see ***Emericella nidulans var. dentata******Aspergillus an. Emericella nidulans var. lata*** see ***Emericella nidulans var. lata******Aspergillus an. Eurotium carnoyi*** see ***Eurotium carnoyi***

Aspergillus an. Eurotium montevidense see ***Eurotium montevidense****Aspergillus an. Eurotium umbrosum* see ***Eurotium umbrosum******Aspergillus aureolatus*** Munt.-Cvet. & Bata

- 7645 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 48) 2 Dec 1993 /S.P. Abbott (OHS 48). Xanthocillins, kotanin-like compounds & chromanol-like compounds (Fide J.C. Frisvad, pers. comm.). Chemotaxonomy: produces mycotoxin sterigmatocystin (Rank C, Nielsen KF, Larsen TO, Varga J, Samson RA, Frisvad JC, Fungal Biology 115:406-420, 2011).
- 7646 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Manning, Alta. S.P. Abbott (OHS 49) 2 Dec 1993 /S.P. Abbott (OHS 49). Xanthocillins, kotanin-like compounds & chromanol-like compounds (Fide J.C. Frisvad, pers. comm.).
- 8047 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility Clyde Corner, Alta. S.P. Abbott (OHS 128) 21 Jan 1994 /S.P. Abbott (OHS 128). Xanthocillins, kotanin-like compounds & chromanol-like compounds (Fide J.C. Frisvad, pers. comm.). Pigment: gold.
- 8048 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 129) 21 Jan 1994 /S.P. Abbott (OHS 129). Pigment: gold.
- 8049 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 130) 24 Jan 1994 /S.P. Abbott (OHS 130). Xanthocillins, kotanin-like compounds & chromanol-like compounds (Fide J.C. Frisvad, pers. comm.).
- 8050 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 131) 30 Jan 1994 /S.P. Abbott (OHS 131).
- 8051 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 439) 2 Dec 1993 /S.P. Abbott (OHS 439). Xanthocillins, kotanin-like compounds & chromanol-like compounds (Fide J.C. Frisvad, pers. comm.).
- 8230 (T *Aspergillus aureolatus*) air Belgrade, Yugoslavia M. Muntanola-Cvetkovic and J. Bata (5 BKZ) /ATCC 16810 [=CBS 190.65 =IMI 136527 =WB 5126]. Chemotaxonomy: produces mycotoxin sterigmatocystin (Rank C, Nielsen KF, Larsen TO, Varga J, Samson RA, Frisvad JC, Fungal Biology 115:406-420, 2011).

Aspergillus auricomus (Gueguen) Saito

- 9111 bronchial washings, DE- Australia A. Woodgyer 1997 /A. Woodgyer 9704547.

Aspergillus avenaceus Smith, G.

- 9621 (T lectotype *Aspergillus avenaceus*) seed peas (*Pisum sativum*) England G.E. Turfitt 1938 /M. Christensen WB 517 [=ATCC 16861 =IMI 016140 =Thom 5725 =LCP 89.2592 =NRRL 517 =QM 6741 =CBS 109.46]. Systematics/taxonomy: designated as lectotype (Samson & Gams in Samson & Gams, eds. Advances in Penicillium & Aspergillus Systematics, NY, Plenum Press, 1985, p. 34).

Aspergillus brasiliensis Varga, Frisvad & Samson

- 7576 wireless radio equipment New South Wales, Australia W. (S.N. 26) Weston /NRRL 3536 [=ATCC 9642 =CBS 246.65 =IFO 6342 =IMI 91855 =NRRL A-5243 =QM 386 =DSM 63263 =Australian Mycol. Panel series 26 =IBT 28083 =GenBank DQ900597 ITS =GenBank DQ900607 Btub =GenBank DQ196204 ITS =GenBank FJ195349 ITS]. Pullulan 4-glucanohydrolase (Arch. Biochem. Biophys. 153:180-187, 1972 (PubMed: 73091650)); glyoxalase I (J.

Biochem. 102:583-589, 1987 (PubMed: 88115253)). Fungus resistance testing: U.S. federal & military specifications (ASTM Std. G21-80); wood preservatives (Schmidt E & French DW. For. Prod. J. 29: 39-42, 1979); wax (Wax, impregnating, waterproofing, for laminated paper tubes for small arms ammunition. MIL W-10885B); cork (Treatment, fungus resistant, parantiphenol, for cork products. MIL T-12664B); leather (Standard test method for mold growth resistance of blue stock (leather). ASTM D4576-86 (reapproved 1991)); varnish (Varnish, moisture-and-fungus resistant (for treatment of communications, electronic, and associated equipment). MIL V-173C); airborne equipment (Environmental conditions and test procedures for airborne equipment -- Fungus resistance. RTCA DO-160C); automotive parts (Fungus resistance test, automotive components. MIL F-13927A (AT)); electrical insulation (Insulation, electrical, synthetic-resin composition, nonrigid. MIL I-631D; Insulation sleeving, electrical, flexible. MIL I-7444D); adhesives (Standard test methods for resistance of adhesive preparations in container to attack by bacteria, yeast, and fungi. ASTM D4783-89; Standard test method for determining the rate of bioleaching of iron from pyrite by *Thiobacillus ferrooxidans*. ASTM E1357-90); polymers (Standard practice for determining resistance of synthetic polymeric materials to fungi. ASTM G21-90); ATCC 9642 listed on Environment Canada Domestic Substances List (<http://www.ec.gc.ca/substances/nouvelles-news/default.asp?lang=En&n=C4E09AE7-1>); Environmental test methods and engineering guidelines, Washington DC (Military Standard MIL-STD-810F, 2000) // biodeteriogen/biodegradation: plastics (Int. Biodet. Bull. 8:3-7, 1972); assay of wood preservative chemicals (For. Prod. J. 29:39-42, 1979) // molecular systematics: description of *Aspergillus brasiliensis*, a biserial black *Aspergillus* (Varga J, Kocsube S, Toth B, Frisvad JC, Perrone G, Susca A, Meijer M, Samson RA, Int J Syst Evol Microbiol 57:1925-1932, 2007); fungus resistance testing strain originally identified as *Aspergillus niger*.

Aspergillus brunneo-uniseriatus Singh & Bakshi

- 6620 (T) Raper & Fennell WB 4273, ex soil under *Dalbergia sissoo*, from B. Bakshi, 06-55 /M. Christensen WB 4273 [=CBS 127.61 =ATCC 16916 =QM 6990 =Herb. IMI 227677]. Pigment: tan.

Aspergillus brunneus see ***Eurotium echinulatum******Aspergillus caespitosus*** Raper & Thom

- 9512 (T *Aspergillus caespitosus*) soil Fayetteville, Arkansas /M. Christensen WB 1929 [=NRRL 1929 =IMI 16034 ii =QM 7399 =ATCC 11256 =CBS 103.45 =MUCL 13587 =NCTC 6972 =NCTC 6973]. Verruculogen (Schroeder HW et al., Appl. Microbiol. 29: 857-858, 1975); 3-methyl-6-methoxy-8-hydroxy-3,4-dihydrocoumarin (Schroeder HW and Stipanovic RD., Appl. Microbiol. 29: 706-707, 1975); fumitremorgin B (Schroeder H.W. et al., Appl. Microbiol. 29: 857-858, 1975).

Aspergillus calidoustus Varga, Houbraken & Samson

- 10555 endophthalmitis of eye following cataract surgery Turkey /D.A. Sutton UTHSC 03-3531 [=CBS 121609]. Molecular systematics: description (Varga J, Houbraken J, Van Der Lee HA, Verweij PE, Samson RA, Eukaryotic Cell 7:630-638, 2008).

Aspergillus campestris M. Chr.

- 1324 mouse collected on horsefarm Edmonton, Alta. J.W. Carmichael 2 Aug 1962. Candidusin C (2,2-epoxy-terphenyllin), terphenyllin, 3-hydroxyterphenyllin (Rahbaek L, Frisvad JC, Christophersen C, Phytochemistry

53:581-586, 2000). Chemotaxonomy: produced secondary metabolites consistent with those of *A. campestris* ex-type CBS 348.81 (Rahbaek L, Frisvad JC, Christophersen C, Phytochemistry 53:581-586, 2000).

Aspergillus candidus Link

- 990 spleen, meadow mouse Slave Lake, Alta. J.W. Carmichael May 1959 /J.W. Carmichael.
 1898 scrapings toe nails, female, 40 yr Calgary, Alta. J.W. Carmichael 16 Jan 1964 /J.W. Carmichael.
 2747 toe nail 4 May 1967 /J.W. Carmichael.
 4224 contaminant in culture originally determined to be *C. immitis* Argentina A.L. Borghi (5) /A.L. Borghi 5.
 5691 onychomycosis Rt hallux, female 54 yr Saskatchewan H. Congly 1987 /H. Congly 310M. Human/animal pathogen.
 6304 2nd toenail, female 50 yrs Sask. H. Congly 1988 /H. Congly 2856M.
 7185 ex 3rd toenail, female 51 yr Saskatchewan H. Congly 1992 /H. Congly 1528M-92.
 7647 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Camp Creek, Alta. S.P. Abbott (OHS 133) 21 Jan 1994 /S.P. Abbott (OHS 133). Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
 9306 P.G. Stansly (B81) /DAOM 222002 [=SRRC 310 =CBS 283.95 =IMI 78734 =ATCC 13686 =NRRL 2297 =IFO 33019]. Candidulin (Stansly PG & Ananenko NH, Arch. Biochem. 23: 256-261, 1949). Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996).

Aspergillus carneus Blochwitz

- 10204 air contaminant Washington, DC /M. Christensen WB 527. Molecular systematics: Transferred to section *Terrei* (Peterson SW, in *Integration of Modern Taxonomic Methods for Penicillium & Aspergillus* classification, pp 323-355, 2000) // thermotolerant: grows better @ 35C than @ 30C.

Aspergillus carnoyi see *Eurotium carnoyi*

Aspergillus citrisporus von Höhnel (morph *Sclerocleista thaxteri*)

- 8 soil Harvard Forest Petersham, Mass. F. Raymond /F. Raymond III-1-22.

Aspergillus citrisporus see *Sclerocleista thaxteri*

Aspergillus clavatoflavus Raper & Fennell

- 9619 (T lectotype *Aspergillus clavatoflavus*) rain forest soil collected in 1954 nr. Tulley, Queensland, Australia J.H. Warcup (186/1) 1963 /M. Christensen WB 5113 [=ATCC 16866 =IMI 124937 =LCP 89.2589 =CBS 473.65 =Herb. IMI 124937]. Systematics/taxonomy: designated as lectotype (Samson & Gams in Samson & Gams, eds. *Advances in Penicillium & Aspergillus Systematics*, NY, Plenum Press, 1985, p. 51).

Aspergillus clavato-nanicus Batista, Maia & Alecrim

- 6621 (T *Aspergillus clavato-nanicus*) Raper & Fennell WB 4741, ex nail lesions female, by Da Alecrim, Recife, Brazil, from ATCC, 1955 /M. Christensen WB 4741 [=CBS 474.65 =ATCC 12413 =IMI 235352 =Herb. IMI 235352].

Aspergillus clavatus Desmazieres

- 3451 contaminant(?) ex home-grown LSD Edmonton, Alta. J.W. Carmichael Dec 1971 /J.W. Carmichael.
 6622 Raper & Fennell WB 2254, ex ATCC 10058 (as 1005), 1950 /M. Christensen WB 2254 [=ATCC 16926 =CBS 514.65 =QM

6884 =NRRL A-1432 =NRRL 2254 =IMI 32883].

- 6632 (T *Aspergillus clavatus*) Raper & Fennell WB 1, recd by C. Thom from J. Westerdijk, 1909 /M. Christensen WB 1 [=UAMH 11637 =CBS 513.65 =ATCC 9598 =ATCC 9602 =NRRL 1 =QM 7404 =IMI 15949 =Herb. IMI 15949 =GenBank GCF_000002715.2 =GenBank GCF_000002715.2 as NRRL 1]. Cytochalasins. Molecular systematics: genome sequence (BioProject PRJNA18467).
 9307 dung D.H. Linder /DAOM 222003 [=ATCC 10058 =ATCC 16926 =IMI 232883 =IMI 321306 =MUCL 15642 =NRRL 2254 =NRRL 4 =NRRL A-1432 =QM 6884 =WB 2254 =JCM 10251 =IFO 33020 =CBS 514.65]. Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996).
 11637 (T *Aspergillus clavatus*) Raper & Fennell WB 1, recd by C. Thom from J. Westerdijk, 1909 /J. Vederas NRRL 1 [=UAMH 6632]. Cytochalasin E and K. Application: identification and engineering of the cytochalasin gene structure (Qiao K, Chooi Y-H, Tang Y, *Metabolic Engineering* 13:723-732, 2011).
 11638 transformant from parental strain NRRL 1 (UAMH 11637) UCLA, California /J. Vederas T2. Cytochalasins. Application: identification and engineering of the cytochalasin gene structure (Qiao K, Chooi Y-H, Tang Y, *Metabolic Engineering* 13:723-732, 2011); elevated production of cytochalasin E and K (Qiao et al 2011).

Aspergillus compatibilis see *Emericella heterothallica*

Aspergillus conjunctus Kwon & Fennell

- 9482 (T *Aspergillus conjunctus*) forest soil Palmar, Province of Puntarenas, Costa Rica Sept 1962 /M. Christensen WB 5080 [=WB 5080 =ATCC 16796 =IMI 135421 =CBS 476.65 =QM 8878]. Pigment: yellow on PDA at 14 da.

Aspergillus crustosus Raper & Fennell

- 8069 (T Neotype *Aspergillus crustosus*) ex skin scrapings Kanakee, Illinois S.L. Bernheim (6292) Jul 1950 /M. Christensen WB 4988 [=ATCC 16806 =CBS 478.65 =NRRL A-3254 =IMI 135619 =CBS H-6744 =NRRL 4988 =GenBank EF652489 ITS =GenBank EF652489 cal =GenBank EF652313 btub =GenBank EF652225 RPB =GenBank U29833 D1Dw]. Pigment: brown.

Aspergillus deflectus Fennell & Raper

- 5760 cervical mass aspirate, dog California S. Jang Jun 1983 /CDC B-3873. Human/animal pathogen: deep infection, dog (Jang & al., *J. Med. Vet. Mycol.* 24:95-104, 1986) // thermotolerant.
 9483 (T *Aspergillus deflectus*) soil Rio de Janeiro, Brazil (C) A. Cury April 1949 /M. Christensen NRRL 2206 [=NRRL 2206 =ATCC 16807 =IMI 061448 =IMI 061448ii =QM 1904 =CBS 109.55 =UC 4638 =NRRL A-2700a]. Desferritriacetylfulsigen (Anke H., *J. Antibiot.* 30: 125-128, 1977); deflectins (Anke, H. et al., *J. Antibiot.* 34: 923-928, 1981).

Aspergillus dimorphicus Mehrotra & Prasad

- 8821 soil Las Palmas de Gran Canarias, The Canaries, Spain Begona Acosta Nov 1996 /J. Guarro FMR 5887.

Aspergillus eburneo-cremeus Sappa

- 8088 (T *Aspergillus eburneo-cremeus*) ex forest soil Giuba River, Somalia F. Sappa /M. Christensen WB 4773 [=ATCC 16802 =QM 1949 =CBS 130.54 =IMI 69856 =MUCL 13588 =NRRL 4773]. Pigment: yellow.
 9183 bronch wash Orange Co. Public Health Laboratory, CA /M.G. Rinaldi UTHSC 97-1313. Thermotolerant: grows @ 37C & 42C // pigment: burgundy to brown.
 9572 bronchial wash, female 60 yr with lung mass & damage following *M. avium* infection Texas S. Lock 1999 /Texas

Dept. of Health BY 166. Thermotolerant: grows better at 37C than 25C.

Aspergillus echinulatus see *Eurotium echinulatum*

Aspergillus ellipticus Raper & Fennell

6646 (T) Raper & Fennell WB 5120, ex soil, Costa Rica, K.J. Kwon, 1962 /M. Christensen WB 5120 [=ATCC 16876 =CBS 482.65 =IMI 172283].

Aspergillus equitis see *Eurotium chevalieri*

Aspergillus fischerianus see *Neosartorya fischeri*

Aspergillus flavipes (Bainier & Sartory) Thom & Church (morph *Fennellia flavipes*)

1726 soil Christie Is. Howe Sound, B.C. J.W. Carmichael 13 Jun 1963 /J.W. Carmichael.

9484 Raper & Fennell state received in 1922 from Da Fonseca as *Sterigmatocystis flavipes* from the Bainier collection /M. Christensen WB 302 [=WB 302 =ATCC 24487 =QM 9566 =IMI 171885 =NRRL 302].

Aspergillus flavus Link (morph *Petromyces flavus*)

362 sputum Edmonton, Alta. J. Carmichael 1955 /J. Carmichael.

400 infection ear canal Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.

892 ear Edmonton, Alta. J.W. Carmichael 27 Feb 1961 /J.W. Carmichael.

1260 toenails Edmonton, Alta. J.W. Carmichael 1962 /J.W. Carmichael.

1645 contaminant ex UAMH 1562 (*Thielavia setosa*) UAMH 1963 /J.W. Carmichael.

2626 swab ex Lt ear, female 41 yr Edmonton, Alta. J.W. Carmichael May 1966. Thermotolerant: grows @ 42 C (fide UAMH 2011) // molecular systematics: Blast match 99-100% beta tubulin similarity with *Aspergillus flavus* / *A. oryzae* (fide UAMH 2011).

2663 D. Westlake [=PRL 895].

2679 D. Westlake [=PRL 187].

4336 dust & grain sample Edmonton, Alta. L. Sigler Oct 1980 /L. Sigler. Biocontrol: bioassay utilizing wax moth larvae, *Galleria mellonella* (Lepidoptera) (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006) // molecular systematics: comparison with auxotrophic mutants derived from UAMH 6982 *Aspergillus flavus* (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006).

5074 A.S. Sekhon PLM 1180.

5377 lesion Rt tibia graft site, male 12 yrs Sask. H. Congly Apr 1986 /H. Congly 1183M.

5711 M. Hamilton [=MRE 2]. Aflatoxins.

5756 M. Hamilton [=NRC 401006].

6982 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 20) Aug 1990 /D. Inglis (MR 20) [=Genbank EU016187 =Genbank EU016186 =Genbank EU016185 =Genbank EU016184 =GenBank AY521473 SSU]. Biocontrol: bioassay utilizing wax moth larvae, *Galleria mellonella* (Lepidoptera) (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006) // molecular systematics: comparison with auxotrophic mutants derived from UAMH 6982 *Aspergillus flavus* (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006).

7402 onychomycosis in Rt great toenail, female; DE + in KOH & calcofluor Edmonton, Alta. C. Sand 11-Jun-1993 /R. Rennie MY 2549.

7574 ex shoe sole New Guinea W. (NDRC S.N. 3) Weston /NRRL A-3537 [=ATCC 9643 =CBS 131.61 =IFO 6343 =IMI 91856 =NRRL A-5244 =QM 380]. Blastocidin S deaminase (J. Antibiot. (Tokyo) 28:7-14, 1975). Fungus resistance testing:

U.S. federal and military specifications; Environmental test methods and engineering guidelines, Washington DC (Military Standard MIL-STD-810F, 2000) //

7648 biodeteriogen/biodegradation: assay of wood preservative chemicals (For. Prod. J. 29:39-42, 1979) // pigment: orange. indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 313) 22 Mar 1994 /S.P. Abbott (OHS 313).

8304 male with bilateral otitis externa; DE not done New Zealand /A. Woodgyer 95-211.

9308 moldy maize Iowa J.L. Richard (MC-21) /DAOM 222004 [=SRRC 1304 =CBS 282.95 =IMI 370082 =ATCC 22546 =JCM 10252 =IFO 33021]. Aflatoxins (Richard JL et al. Mycopathol. Mycol. Appl. 38: 313-326, 1969; Richard JJ & Cysewski SJ. Mycopathol. Mycol. Appl. 44: 221-229, 1971); aflatoxins including B1 and B2 (Wei DL & Jong SC., Mycopathologia 93: 19-24, 1986). Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996) // biocontrol: bioassay utilizing wax moth larvae, *Galleria mellonella* (Lepidoptera) (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006) // molecular systematics: comparison with auxotrophic mutants derived from UAMH 6982 *Aspergillus flavus* (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006) // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).

10242 subepidermal lesion on Jackson's chameleon (5 animals affected); histopathology showed bacterial filaments pet shop; Madison, WI J. Pare /J. Pare 603. Human/animal pathogen: skin lesions in 5 Jackson's chameleons housed in pet shop; A. flavus grown from lesions on 3 animals but histopathology showed branching filaments of a bacterium (fide J. Pare).

10665 sponge *Terpios zeteki* (yellow-brown-black) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 8A.

10904 a cysteine/methionine auxotroph isolated following UV irradiation of *A. flavus* UAMH 6982 and passage through *Galleria mellonella* (Lepidoptera) larvae Brock University, St. Catharines, Ont. L. R. Scully 2006 /M.J. Bidochka 6982conins [=EU016185 adenosine-5'-phosphosulphate kinase gene =GenBank EU382741 thioredoxin reductase gene =GenBank EU016187 =GenBank EU382739 thioredoxin (trx2) gene =GenBank EU382737 thioredoxin (trx1) gene =GenBank EU016185]. Biocontrol: auxotrophic mutant virulent for insect *Galleria mellonella* (Lepidoptera) (wax moth) (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006; Scully LR, Bidochka MJ, Mycol Res 113:230-239, 2009); bioassay utilizing wax moth larvae, *Galleria mellonella* (Lepidoptera) (fide Scully & Bidochka 2006) // culture conditions: auxotrophic mutant having low conidial production on routine media (Scully LR, Bidochka MJ, Microbiology 152: 223-232, 2006); cysteine / methionine mutant derived from UAMH 6982 (fide Scully & Bidochka 2006); demonstrates insect-dependent conidiation (fide Scully & Bidochka 2006). ex marine source Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 21A.

Aspergillus fruiticans see *Emericella fruiticulosa*

Aspergillus fumigatus Fres. (morph *Neosartorya fumigata*)

6 Edmonton, Alta. 7 Mar 1950. Thermotolerant.

9 University of Michigan. Thermotolerant.

604 bovine foetal stomach contents Prov. Vet. Lab., Edmonton, Alta. G.R. Wenham. Thermotolerant // pigment: yellowish-green on PDA (fide UAMH 2011).

605 bovine foetal stomach contents Prov. Vet. Lab., Edmonton, Alta. G.R. Wenham. Thermotolerant.

625 skin ex Lt ear canal; atypical showing greyish-white and blue-green sectors Edmonton, Alta. J.W. Carmichael 1959. Thermotolerant // culture conditions: original culture slow

- growing and poorly sporulating @ 25C, good growth at 37C // molecular systematics: Blast match 99-100% beta tubulin similarity with *Aspergillus fumigatus* (fide UAMH 2011).
- 997 lung ex woodchuck High Prairie, Alta. J.W. Carmichael Jul 1959.
- 1080 slant, biochemistry autoanalyzer Edmonton, Alta. 10 Jun 1961. Thermotolerant.
- 1141 thoracic & abdominal cavity ex turkey Edmonton, Alta. J.W. Carmichael 10 Nov 1961 /H.C. Carlson. Thermotolerant.
- 2978 sputum ex adult Edmonton, Alta. J.W. Carmichael Apr 1968. Thermotolerant.
- 3109 lung ex autopsy Edmonton, Alta. J.W. Carmichael 13 Mar 1969 mating type MAT1-2. Thermotolerant // application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 3714 granulomatus lesion in nose of dog /J.R. Long 363. Thermotolerant: grows at 42C // molecular systematics: Blast match 99-100% beta tubulin similarity with *Aspergillus fumigatus* (fide UAMH 2011) // culture conditions: atypical isolate sectoring with paler colonies and poor sporulation.
- 3762 human lung tissue Edmonton, Alta. Feb 1975 /A.S. Sekhon MY 0320 mating type MAT1-1. Thermotolerant // application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 3906 human lung biopsy Edmonton, Alta. Jul 1975 /A.S. Sekhon PLM 400 mating type MAT1-2. Thermotolerant // application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 4052 tissue culture contaminant Edmonton, Alta. Kaneko 6 Sep 1977 /Kaneko mating type MAT1-1. Thermotolerant // application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 4270 atypical, white non-sporulating colony from sputum, male 68 yr Aberhart Hosp., Edmonton, Alta. L. Sigler 29 Jan 1980 /A.S. Sekhon specimen 549 [=UAMH 4269 =UAMH 4271 =UAMH 4275 =UAMH 4279 =UAMH 5878]. Thermotolerant: opt. 37-45C, NG @ 55C // pigment: purple // human/animal pathogen: atypical isolate (Sigler & Carmichael, ASM Abstracts Ann. Mtg. 1981:320).
- 4271 atypical, white, non-sporulating colony from sputum, male 68 yr Aberhart Hosp., Edmonton, Alta. L. Sigler 29 Jan 1980 /A.S. Sekhon specimen 569 [=UAMH 4269 =UAMH 4270 =UAMH 4275 =UAMH 4279 =UAMH 5878]. Thermotolerant: opt. 37-45C, NG @ 55C // pigment: purple // human/animal pathogen: atypical isolate (Sigler & Carmichael, ASM Abstracts Ann. Mtg. 1981:320).
- 4275 atypical, white, non-sporulating colony from sputum, male 68 yr Aberhart Hosp., Edmonton, Alta. L. Sigler 29 Jan 1980 /A.S. Sekhon specimen 549 [=UAMH 4269 =UAMH 4270 =UAMH 4271 =UAMH 4279 =UAMH 5878]. Thermotolerant: opt. 37-45C, NG @ 55C // pigment: purple // human/animal pathogen: see ref. (ASM Abstracts Ann. Mtg. 1981:320).
- 4279 green sector ex UAMH 4269 L. Sigler 29 Jan 1980 [=UAMH 4269 =UAMH 4270 =UAMH 4271 =UAMH 4275 =UAMH 5878]. Human/animal pathogen: atypical isolate (Sigler & Carmichael, ASM Abstracts Ann. Mtg. 1981:320) // thermotolerant.
- 4299 brain abscess ex Rt motor strip following renal transplant, female, on immunosuppressants Edmonton, Alta. F.L. Jackson Jun 1980 /F.L. Jackson UAH 11060 mating type MAT1-1. Thermotolerant // application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 4338 dust & grain sample ex bin Edmonton, Alta. L. Sigler Oct 1980 mating type MAT1-2. Thermotolerant // application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 5878 sputum ex patient with bronchiectasis Edmonton, Alta. P. Kibsey Oct 1987 /P. Kibsey MY1787 [=UAMH 4269 =UAMH 4270 =UAMH 4271 =UAMH 4275].
- 6173 atypical isolate from ear Pennsylvania /M. Kemna M372-88. Thermotolerant: grows @ 37C.
- 6854 sputum, female; isolated repeatedly ex sputum Edmonton, Alta. R. McWhirter 1991 /P. Kibsey MY 0806.
- 6948 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 75) Aug 1990 mating type MAT1-2. Application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 7256 ex peat passed through drier (45C) Seba Beach, Alta. A. Jones Nov 1992 /T. Cable Eb.
- 7479 atypical isolate ex lung, lower Rt lobe, female Winfield, Alta. Grey Nuns Hospital 20 Sep 1993 /R. Rennie MY 4122 [=NRRL 22827]. Serology: exoantigen positive for *Aspergillus fumigatus* (fide C. Sand 1994) // culture conditions: vesicles are brown, conidia are slightly roughened // molecular systematics: confirmed as *Aspergillus fumigatus* (fide S.W. Peterson).
- 7676 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 21) 2 Dec 1993 mating type MAT1-2. Application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 8515 atypical strain ex male 19 yr with granulomatous lymphadenitis; PAS stained histopathology of lymphonodal biopsy samples positive for spherule-like bodies Milan, Italy M. Viviani (#952885) 1995 /M.G. Rinaldi UTHSC R-2923. Human/animal pathogen: causes infection in the mesocolon, preaorta & epiplon area (Sigler, L. et al., ISHAM Abstr. P396, 1997).
- 8641 atypical strain ex patient with endocarditis /K. Hazen W 75944. Serology: exoantigen + *Aspergillus fumigatus* (fide C. Sand) // pigment: brown.
- 9309 grain dust from a grain elevator; strain designated as representing *Aspergillus fumigatus* (epitype). New Orleans, Louisiana /DAOM 222005 [=SRRC 2006 =JCM 10253 =IFO 33022 =CBS 286.95 =ATCC 96918 =IMI 370079] mating type MAT1-2. Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996); virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011) // application.
- 9729 white variant ex wound swab right leg ex male 12 Y with open tibia/fibula fracture Toronto, Ont. /R.C. Summerbell FR 1529 [=BB 1807]. Systematics/taxonomy: white heavily sporulating confirmed by sequence studies as *A. fumigatus* (fide R.C. Summerbell).
- 10100 atypical isolate ex liver biopsy, male 11 yr with fatal infection Vellore, India /CDC B 6115 [=CDC B-6209] mating type MAT1-1. Culture conditions: atypical isolate, initially nonsporulating, eventually producing sectors typical of *A. fumigatus* // molecular systematics: ITS & partial 28S rDNA from B-6209 confirmed identity as *A. fumigatus* (fide S. Peterson USDA-ARS, Peoria IL) // application: virulence in an insect model differs between mating types in *Aspergillus fumigatus* (Cheema MS, Christians JK, Medical Mycology 49:202-207, 2011).
- 10899 ex sputum, female 12 yr, with cystic fibrosis St. John, NB /R. Rennie MY 8356. Culture conditions: grows @ 45C (fide UAH); atypical; sparse conidial production // serology:

exoantigen - for *A. fumigatus* (fide UAH) // molecular systematics: BLAST match 100% ITS similarity with *Aspergillus fumigatus* (fide UAMH).

***Aspergillus giganteus* Wehmer**

- 2670 contaminant ex UAMH 2681 /D. Westlake [=PRL 530].
2681 D. Westlake [=PRL 1512].
6633 Raper & Fennell WB 10, ex bat dung, Yucatan caves, by F. Wolf 1938 /M. Christensen WB 10 [=ATCC 10059 =CBS 526.65 =Herb. IMI 227678 =IFO 5818 =IMI 227678 =NRRL 10 =QM 1970]. Pigment: brown.
6643 Raper & Fennell WB 4560, ex soil, Panama, 1960 /M. Christensen WB 4560.

Aspergillus glaber see ***Eurotium glabrum***

Aspergillus glaucocaffinis see ***Eurotium pseudoglaucum***

Aspergillus glauconiveus see ***Eurotium niveo-glaucum***

Aspergillus glaucus see ***Eurotium herbariorum***

***Aspergillus granulosis* Raper & Thom**

- 9513 (T *Aspergillus granulosis*) soil Fayetteville, Arkansas F.R. Earle 1942 /M. Christensen WB 1932 [=WB 1932 =IMI 17278 ii =NRRL 1932 =CBS 452.93 =CBS 588.65 =QM 6846 =ARK A2]. Thermotolerant: good growth @ 37C.
9873 Denison, TX Oct 2000 /Texas Dept. of Health BY 2670. Pigment: brown // thermotolerant: good growth @ 37C // culture conditions: degenerate poorly sporulating.
9977 sphenoid mass penetrating into anterior ethmoid, male 79 yr; DE +?, abnormal CT Hendrick, TX 2000 /Texas Dept. of Health BY 3937. Thermotolerant: good growth @ 37C (9977A, the white/tan sector, had good growth @ 37C; 9977B, the green sector, did not grow @ 37C).
10935 ex autopsy brain stem specimen from an 18 yr old male lung and bone marrow transplant recipient San Antonio, TX D.A. Sutton 2007 /D.A. Sutton UTHSC R-3921 [=GenBank FJ771045 ITS =GenBank FJ771046 D1D2 =GenBank FJ771047 beta tubulin =UTHSC 07-462]. Human/animal pathogen: cerebral aspergillosis in a lung transplant recipient (Sutton DA, Wickes BL, Romanelli AM, Rinaldi MG et al, J Clin Microbiol 47: 3386-3390, 2009).

Aspergillus hiratsukae see ***Neosartorya hiratsukae***

Aspergillus hollandicus see ***Eurotium amstelodami***

***Aspergillus ingratus* Yaguchi, Someya & Udagawa**

- 10346 (T *Aspergillus ingratus*) soil on campus Univ. Southern California, Los Angeles T. Yaguchi 9-12-91 /S.-I. Udagawa PF 1116. Pigment: yellow // odor: musty // culture conditions: produces sclerotia.

***Aspergillus itaconicus* Kinoshita**

- 2698 D. Westlake [=PRL 2155].

Aspergillus mangini see ***Eurotium herbariorum***

Aspergillus medius see ***Eurotium medium***

Aspergillus microthecius see ***Emericella parvathecica***

Aspergillus minor see ***Eurotium herbariorum***

Aspergillus montevidense see ***Eurotium montevidense***

***Aspergillus multicolor* Sappa**

- 8086 (T *Aspergillus multicolor*) ex forest soil Giuba River, Somalia F. Sappa /M. Christensen WB 4775 [=ATCC 16804 =CBS 133.54 =QM 1952 =IMI 69857 =IFO 8133 =WB 4281]. Dimethylxysterigmatocystin (Agric. Biol. Chem. 44:1149-1155, 1980).

Aspergillus multiplicatus see ***Neosartorya multiplicata***

Aspergillus muricatus see ***Petromyces muricatus***

Aspergillus neoglaber see ***Neosartorya glabra***

Aspergillus nidulans see ***Emericella nidulans***

***Aspergillus niger* van Tieghem**

- 237 skin ex foot Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael. Molecular systematics: Confirmed by PCR and sequencing as *A. niger* (fide Dr. P. Pitsikakis).
353 hair ex neck Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
573 ear canal Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael. Molecular systematics: Confirmed by PCR and sequencing as *A. niger* (fide Dr. P. Pitsikakis).
982 ear swab Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
1240 swab ex ear canal Edmonton, Alta. J.W. Carmichael 1962 /J.W. Carmichael.
1456 ear swab Edmonton, Alta. J.W. Carmichael 17 Oct 1962 /J.W. Carmichael.
6949 frass ex healthy *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (HD 266) Aug 1990 /D. Inglis (HD 266). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
7040 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 125) Aug 1990 /D. Inglis (HD 125).
7575 leather R. Steinberg /NRRL 334 [=ATCC 6275 =CBS 131.52 =IFO 6341 =IMI 45551 =QM 324 =QM 458 =WB 334]. Citric acid (US Patent 4,040,906). Fungus resistance testing: mildew resistance test for corrosion-resistant baking primer & water-based vinyl adhesive (Dev. Ind. Microbiol., 20:25-39, 1979); paper & paperboard (ASTM Std. D2020-76); Environmental test methods and engineering guidelines, Washington DC (Military Standard MIL-STD-810F, 2000) // biodeteriogen/biodegradation: sulfur bioassay (Acta Pathol. Microbiol. Scand. 71:333-338, 1967; Bot. Gaz. 126:120-123, 1965); degradation of apple distillery waste (Eur. J. Appl. Microbiol. Biotechnol. 17:243-247, 1983) // pigment: yellow.
7649 indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Camp Creek, Alta. S.P. Abbott (OHS 314) 21 Jan 1994 /S.P. Abbott (OHS 314).
8716 Moyer strain Doelger 2 /ATCC 9142 [=NRRL 599 =IMI 41874]. 18-homo-19-norcortisone & 18-homo-19-norhydrocortisone (US Pat. 3,529,000); gluconic acid (Eur. J. Appl. Microbiol. Biotechnol. 15:88-92, 1982); gluconic, malic & citric acids (Appl. Environ. Microbiol. 56:1594-1597, 1990); 12-hydroxy-trans-nerolidol (Biocatalysis 2:59-67, 1988); hydroxygrindelanes (Phytochemistry (Oxf.) 27:2125-2127, 1988); grindelane dimers (Phytochemistry (Oxf.) 31:3045-3049, 1992); lipase. Application: Production of citric acid from molasses (J. Food Sci. 56:878-880, 1991; Ind. Eng. Chem 26:1142-1149, 1934; J. Ind. Microbiol. 7:71-74, 1991); Production of citric acid from apple pomace (Biotechnol. Lett. 6:763-764, 1984); Production of citric acid from inulin (Lett. Appl. Microbiol. 20:252-254, 1995); 18-hydroxylation of steroids (Chem Commun. 1195:1197, 1971); conversion of acronycine to

- 9-hydroxyacronycine (J. Med. Chem. 17:599-602, 1974); reduction of
3-methoxy-8(14)-seco-1,3,5(10),9(11)-estratetraene-14,17-dione (US Pat. 3,562,112); reduction of 3-methoxybenzoic acid & 3,5-dimethoxybenzoic acid (Z. Naturforsch. 48:52-57, 1993); transformation of chromanone (J. Nat. Prod. (Lloydia) 53:1471-1478, 1990); transformation of flavonoids (J. Nat. Prod. (Lloydia) 53:644-656, 1990); Production of citric acid from cotton waste (Appl. Environ. Microbiol. 42:1-4, 1981).
- 9310 (T neotype *Aspergillus niger*) tannin-gallic acid fermentation Connecticut A. Hollander 1913 /DAOM 222006 [=CBS 554.65 =ATCC 16888 =NRRL 326 =JCM 10254 =IFO 33023 =Thom 2766 =IHEM 3415 =IMI 50566]. Pseudonigeron (1-3)-alpha-D-glucan (Horisberger M et al., Carbohydr. Res. 23: 183-188, 1972); kynureninase-type enzymes (Shetty AS & Gaertner FH, J. Bacteriol. 122: 235-244, 1975); beta-glucosidases (Witte K & Wartenberg A. Acta Biotechnol. 9: 179-190, 1989); gluconic acid & glucose oxidase (Murado MA et al. Bioresour. Technol. 44: 155-163, 1993). Application: treatment of pulp-mill wastes (Storm AM & Gasner LL. U.S. Pat. 3,737,374); transformation of sesquiterpene lactone costunolide (Clark AM & Hufford CD, J. Chem. Soc. Perkin Trans. 1979: 3022-3028, 1979); transformation of acetanilid to aniline (Lasswell WL et al. Am. J. Pharm. Educ. 47: 127-129, 1983); transformation of pergolide to pergolide sulfoxide and pergolide sulfone (Smith RV, J. Pharm. Sci. 72: 733-736, 1983) // systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996).
- 10666 alga *Caulerpa racemosa* (sea grapes) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 1B.
- 10667 sponge *Mycale* sp. (orange specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 4A.
- 10846 ex heavy growth of mixed molds on steam line covering in greenhouse tunnel Univ Alberta campus, Edmonton, Alta. (I) L. Sigler (C) N. Dhanani /N. Dhanani #1. Culture conditions: mixed originally with *Mucor* sp. UAMH 10862 // biodiversity: heavy growth of mixed molds (*Mucor*, *Aspergillus* and *Trichoderma*) on steamline covering (fide Environmental Health & Safety, U of A).
- 11026 sponge *Haliclona* sp. (grey specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 4D.
- Aspergillus niveo-glaucus* see *Eurotium niveo-glaucum*
- Aspergillus niveus* Blochwitz (morph *Fennellia nivea*)
1325 mouse Edmonton, Alta. J.W. Carmichael 2 Aug 1962 /J.W. Carmichael.
- Aspergillus ochraceus* Wilhelm
226 laboratory contaminant Farlow Herbarium, Cambridge MA J.W. Carmichael 1953 /J.W. Carmichael.
1131 skin ex toes Edmonton, Alta. J.W. Carmichael 9 Oct 1961 /J.W. Carmichael.
2666 D. Westlake [=PRL 2216].
2768 gopher hair Cardston, Alta. D. Remington (1) 23 May 1967.
4552 ex osmium tetroxide Med. Microbiol, U of A L. Sigler 13 Apr 1982 /L. Sigler.
7171 indoor air ex RCS strip Fort McMurray, Alta. S.P. Abbott (SA-M263) 23 Apr 1992 /S.P. Abbott (SA-M263).
7893 plate contaminant UAMH, Devon, Alta. S.P. Abbott (SA-M45) 8 Jan 1993 /S.P. Abbott (SA-M45).
9189 rubber sheet C. Thom (4718) /ATCC 18500 [=NRRL 405 =ATCC 18500]. 11-alpha-hydroxyprogesterone; l-malic and succinic acids. Application: 11-alpha-hydroxylation of progesterone (Appl. Microbiol. 16: 393-400, 1968;; Can. J. Microbiol. 14: 529-532, 1968); hydroxylation of 11,13-dehydrosantonin (J. Ferment. Bioeng. 76:296-299, 1993); transformation of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979); transformation of flavonoids (Xenobiotica 20: 363-373, 1990) // pigment: brown.
- 9311 DAOM 222007 [=SRRC 335 =CBS 280.95 =IMI 370080 =ATCC 96919 =JCM 10255 =IFO 33025]. Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996) // pigment: brown // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 10668 sponge *Terpios zeteki* (yellow-brown-black specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 8D. Molecular systematics: BLAST match 100% ITS similarity to marine isolate DQ336712; slightly more distant from other *A. ochraceus* // culture conditions: morphology compatible with *A. ochraceus*.
- 11023 ex marine source Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 19A.
- 11024 ex marine source Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 17A.
- 11025 sponge *Halichondria* sp. (purple specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 13A.
- Aspergillus oryzae* (Ahlburg) Cohn
10863 derived from *A. oryzae* FN-16, having the ArgB gene /J. Vederas M-2-3. Culture conditions: grow on Czapek-Dox supplemented with 100 ug/ml arginine or citrulline.
10906 (T Neotype *Aspergillus oryzae*) ex Thom # 113; soy sauce /M. Christensen WB 447 [=CBS 110.47 =CBS 102.07 =IMI 16266 =IFO 30105 =ATCC 1011 =ATCC 4814 =ATCC 9102 =JCM 2239 =CBS 100925]. Amylase. Application: koji mold used in food fermentation.
10907 Chinese soy sauce ex C. Thom 1917 /M. Christensen WB 451 [=ATCC 16868 =CBS 570.65 =NRRL 451 =Thom 4235.15]. Application: koji mold used in food fermentation.
11862 quadruple auxotrophic transformant strain from parents, RIB4 wild type and NSR13 (niaD- sC- adeA-) /J. Vederas NSAR1. Application: to promote higher yield in heterologous protein production for use in industry and agriculture (Jin JF, Maruyama J, Juvvadi RP et al. FEMS Microbiology Letters 239: 79-85, 2004).
- Aspergillus ostianus* Wehmer
10205 rec'd by Thom from Raistrick in 1924, reported by him as from Westerdijk. CBS fide Raper & Fennell, p 285 /M. Christensen WB 420. Molecular systematics: LSU rDNA sequence identity with *Aspergillus ochraceus* (Peterson SW, in Integration of Modern Taxonomic Methods for Penicillium & Aspergillus classification, pp 323-355, 2000).
- Aspergillus panamensis* Raper & Thom
9480 (T lectotype *Aspergillus panamensis*) soil Panama (C) J.T. Bonner Jan 1942 /M. Christensen WB 1785 [=WB 1785 =CBS 120.45 =IMI 19393 =LSHB A61 =NCTC 6974 =QM 6829 =QM 8897 =NRRL 1785 =ATCC 16797]. Tetroneic acid derivatives with antibacterial and antitumor activity (Anke H et al., J. Antibiot. 33: 931-939, 1980); cyclogregatin and gregatin A (Anke H et al. Cyclogregatin, a new metabolite from *Aspergillus panamensis*. J. Antibiot. 41: 1681-1684, 1988 PubMed: 89066426). Systematics/taxonomy: designated as lectotype (Samson & Gams in Samson & Gams, eds. Advances in Penicillium & Aspergillus Systematics, NY, Plenum Press, 1985, p. 34).
- Aspergillus parasiticus* Speare
577 ear canal Edmonton, Alta. J.W. Carmichael 1957 /J.W. Carmichael.

- 1931 pig skin scrapings Edmonton, Alta. 3 Mar 1964 /J.W. Carmichael.
- 2377 swab ex ear, male 61 yr Edmonton, Alta. J.W. Carmichael 16 Mar 1965 /J.W. Carmichael.
- 2410 toe nails, female 53 yr Edmonton, Alta. 5 Apr 1965 /J.W. Carmichael.
- 3108 contaminant ex culture CMI 11951 (Oedocephalum coprophilum) UAMH Mar 1969 /J.W. Carmichael.
- 4939 J. Kane JF 9127.
- 5727 dry crakower sausage /M. Hamilton [=ATCC 26770]. Aflatoxins (Acta Microbiol. Polonica 4:233-239).
- 7567 bronchial washing, male 46 yr Edmonton, Alta. C. Sand 29 Mar 1994 /R. Rennie MY 1407.
- 9602 peanuts Uganda P.K. C. Austwick 1962 /M. Christensen WB 5013.
- 9603 (T lectotype *Aspergillus parasiticus*) sugar cane mealy bug (*Pseudococcus calceolariae*) Oahu, Hawaii, USA A.T. Speare 1912 /M. Christensen WB 502 [=ATCC 1018 =ATCC 6474 =ATCC 7865 =IFO 4082 =IFO 4351 =IMI 15957 =LCP 89.2566 =LSHB Ac 14 =NCTC 975 =NRRL 1731 =NRRL 502 =Thom 3509 =NRRL 3315 =NRRL A-13360 =NRRL A-14693]. Systematics/taxonomy: designated lectotype by Kozakiewicz (1982) (Samson & Gams in Samson & Gams, eds. *Advances in Penicillium & Aspergillus Systematics*, NY, Plenum Press, 1985, p. 51).
- Aspergillus parvulus* Smith**
964 soil ex pine & sweet gum forest C.F. Andrus 1942 /NRRL 1846 [=ATCC 16911 =IMI 86558 =CBS 136.61]. Naphthalenone (Can. J. Microbiol. 25:130-137, 1979).
- Aspergillus penicilloides* Spegazzini (syn. *Redaellia elegans*)**
9312 dried fish (Ikan bilis) Australia (imported from Hong Kong) A.D. Hocking (FRR 2178) /DAOM 222008 [=SRRC 2169 =CBS 285.95 =IMI 370081 =ATCC 42692 =IFO 33024 =CCFC 222008 =NBRC 33024 =FRR 2178 =FRR 4975 =GenBank AB004331 ITS =GenBank AB006434]. Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996) // osmophilic // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 10041 pleural fluid, female 73 yr Bryan, TX May 2001 /Texas Dept. of Health BY 1426. Osmophilic: grows better on high sugar medium.
- Aspergillus primulinus* see ***Neosartorya primulina***
- Aspergillus puniceus* Kwon & Fennell**
9481 soil Panama (C) W. W. Scott /M. Christensen WB 4688 [=WB 4688]. Pigment: yellow on PDA at 14 da.
- Aspergillus puulaauensis* Jurjevic, S.W. Peterson & B.W. Horn**
7651 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Clyde Corner, Alta. S.P. Abbott (OHS 134) 21 Jan 1994 /S.P. Abbott (OHS 134) [=NRRL 62516]. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species as *A. versicolor* (A. Cywinska) // molecular systematics: Blast match 99% ITS similarity to *Aspergillus versicolor* NRRL 238 Neotype and other strains (fide UAMH 2012); Closest match (605/607 nt) to NRRL 227 and 4642 as "*Aspergillus versicolor*"; Determined as *Aspergillus puulaauensis* by Jurjevic et al (Jurjevic Z, Peterson SW, Horn BW, IMA Fungus 3:59-79, 2012).
- Aspergillus raperi* Stolk**
6623 (T) Raper & Fennell WB 4778, ex grassland soil, Yangambi, Zaire, from A. Stolk, 09-53 /M. Christensen WB 4778 [=ATCC 16917 =WB 4221 =QM 1898 =CBS 123.56 =IMI 70949 =IMI 70949ii =IFO 6416].
- Aspergillus recurvatus* Raper & Fennell**
8085 (T *Aspergillus recurvatus*) ex lizard dung desert area near Blythe, California G.F. Orr (O-566) /M. Christensen WB 4902 [=QM 7972 =CBS 496.65 =IMI 136528 =ATCC 16809]. Pigment: brown.
- Aspergillus reptans* see ***Eurotium repens***
- Aspergillus restrictus* Smith**
244 hair ex beard Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael. Osmophilic.
814 IMUR 541. Osmophilic.
908 sputum Edmonton, Alta. J.W. Carmichael 4 Apr 1961 /J.W. Carmichael. Osmophilic.
910 skin ex arm Edmonton, Alta. J.W. Carmichael 4 Apr 1961 /J.W. Carmichael. Osmophilic.
3465 CBS 254.28. Osmophilic.
4111 contaminant ex UAMH 4035 UAMH L. Sigler Jan 1978 /L. Sigler. Osmophilic.
4247 pine beetle galleries ex lodgepole pine UAMH L. Sigler 1979 /A. Funk. Osmophilic // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
6570 sputum, female 48 yr Edmonton, Alta. 16 Nov 1989 /P. Kibsey MY3451. Osmophilic.
7894 indoor air of warehouse ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M55) 25 May 1993 /S.P. Abbott (SA-M55). Osmophilic.
11452 swab ex fur of living male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 92 C.1. Osmophilic // biodiversity: mycobiota of bat caves.
- Aspergillus rugulovalvus* see ***Emericella rugulosa***
- Aspergillus salviicola* Udagawa, Kamiya & Tsubouchi**
8211 (T *Aspergillus salviicola*) imported dried Turkish sage leaves (*Salvia officinalis*) Japan H. Tsubouchi 25-Mar-1993 /H. Tsubouchi NCI 2090 [=ATCC 96334 =RF 23443].
- Aspergillus sclerotiorum* Huber**
9951 (T *Aspergillus sclerotiorum*) rotting apple (*Malus sylvestris*) Oregon G.A. Huber /M. Christensen WB 415 [=NRRL 415 =ATCC 16892 =CBS 549.65 =DSM 870 =IFO 7542 =IMI 056673 =LCP 89.2594 =QM 6732 =Thom 5351]. Neohydroxyaspergillilic acid (ARS Filamentous Fungus Collection). Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
10018 shed ventrum & mid-dorsal skin ex Mohave rattlesnake (*Crotalus scutulatus scutulatus*), male 15 yr Hogle Zoo, Salt Lake City, Utah UAMH (UW125B-C) 4 May 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
10025 shed dorsum skin ex Goin's kingsnake (*Lampropeltis getula goini*), male 10yr Six Flags Marine World, Vallejo, CA UAMH (UW030B-A) 5 Dec 2000 /UAMH (UW030B-A). Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
10120 cuticle, coffee berry borer (*Hypothenemus hampei*) on artificial diet El Colegio de la Frontera Sur (ECOSUR), Chiapas, Mexico J. Perez 27 Jun 2001 /F. Vega DI-CU R29-13. Culture conditions: no sclerotia produced.

Aspergillus sejunctus see *Eurotium rubrum*

Aspergillus spinosus see *Neosartorya spinosa*

Aspergillus stellifer see *Emericella variegata*

Aspergillus striatulus see *Emericella striata*

Aspergillus sublevisporus see *Neosartorya sublevispora*

Aspergillus subolivaceus Raper & Fennell

- 6647 (T *Aspergillus subolivaceus*) Raper & Fennell WB 4998, ex Lintafelt cotton, E. Yuill (A-92), UK, from CMI as 44882, 1962 /M. Christensen WB 4998 [=ATCC 16862 =CBS 501.65 =IMI 44882].

Aspergillus sydowii (Bain. & Sart.) Thom & Church

- 1538 nail clippings ex Rt great toe Edmonton, Alta. J.W. Carmichael 14 Jan 1963 /J.W. Carmichael. Pigment: brown // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 4889 contaminant ex culture from soil UAMH Oct 1983 /R. Kushwaha CCD 2. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 4908 contaminant ex culture of abortion specimen Edmonton, Alta. Jan 1984 /J. Robertson 815. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 6787 indoor air ex RCS strip Saskatoon, Sask. D. Inglis (2A) 19 Feb 1991 /S. Poznanski. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 6812 indoor air ex RCS strip Saskatoon, Sask. D. Inglis (2P) 20 Feb 1991 /S. Poznanski.
- 6983 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 130) Aug 1990 /D. Inglis (HD 130). Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003) // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7895 indoor air ex DG18 RCS strip UAMH, Alta. S.P. Abbott (SA-M56) 28 Jan 1993 /S.P. Abbott (SA-M56). Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 10203 tissue L 3rd digit debridement, male 40 yr; KOH - Edmonton, Alta. /R. Rennie MY 3955. Thermotolerant: grows @ 35 C, NG @ 42 C // pigment: tan, copious reddish brown exudate droplets // benomyl: sensitive (NG 2 ppm) // molecular systematics: sequence identical to *A. sydowii* (fide S.W. Peterson Oct 1-02) // culture conditions: atypical flesh-colored colony.

Aspergillus taichungensis Yaguchi, Someya & Udagawa

- 10345 (T *Aspergillus taichungensis*) soil Taichung city, Taiwan. Yaguchi 10-94 /S.-I. Udagawa PF 1167. Pigment: yellow (PCYA).

Aspergillus tamarii Kita

- 9620 soy products used in making pickles China C. Thom (4235.I2) & Church /M. Christensen WB 429 [=ATCC 16865 =IFO 4099 =IMI 091888 =IMI 321319 =NCTC 599 =LCP 89.2590 =NRRL 429 =Thom 4235.x.1 =LSHB Ac26 =CBS 575.65].

Aspergillus tatenoi see *Neosartorya tatenoi*

Aspergillus terreus Thom

- 327 sputum Edmonton, Alta. J.W. Carmichael 8 May 1955 /J.W. Carmichael.
- 1646 lung abscess, contaminant? Edmonton, Alta. J.W. Carmichael 8 Apr 1963 /J.W. Carmichael.
- 1897 foot & wattles ex pigeon Edmonton, Alta. J.W. Carmichael 13 Jan 1964 /J.W. Carmichael.
- 2035 contaminant ex UAMH 1938 (*Microascus doguetii*) UAMH 1 Jun 1964 /J.W. Carmichael.
- 3627 moldy bread UAMH, Edmonton, Alta. S. Bella 1 Nov 1973 /S. Bella. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 4733 This strain has been cited in a US or other patent & should not be used to infringe patent claims. Merck & Co. Inc. (MF4845) /J. Vederas [=ATCC 20542 =UAMH 5674]. Mevinolin (Proc. Nat. Acad. Sci., USA 77:3957-3961, 1980; Moore et al, J. Am. Chem. Soc. 107:3694-3701, 1985).
- 5321 contaminant ex *Ureaplasma* medium incubated anaerobically 24 hr Med. Microbiol., U. of A. D. Fedyna 7 Feb 1986 /D. Fedyna. Thermotolerant: grows @ 37C.
- 5387 soil. (This strain has been cited in a US or other patent and should not be used to infringe patent claims.) Australia W.R. Grace & Co. G-2408 /NRRL 11156 [=ATCC 20516]. Anti-neoplastic compound quadrone (J. Antibiot. (Tokyo) 31:38-42, 1978 (U.S. Patent 4,147,798)); antitumor antibiotic terrecyclic acid A (J. Antibiot. (Tokyo) 37:1376-1381, 1984); (-) -gamma-cadinene & aristolochene (J. Antibiot. (Tokyo) 40:1331-1334, 1987).
- 5674 This strain has been cited in a US or other patent & should not be used to infringe patent claims. Merck & Co. Inc. (MF4845) /J. Vederas [=ATCC 20542 =Merck MF 4845 =UAMH 4733]. Mevinolin (Proc. Nat. Acad. Sci. USA 77:3957-3961, 1980 (This strain has been cited in a US or other patent & should not be used to infringe patent claims)).
- 6966 bone biopsy, Rt leg, dog with osteomyelitis Perth, Australia /R. McAleer SHLS 4476. Pigment: orange.
- 7058 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 104) Aug 1990 /D. Inglis (HD 104). Pigment: red/brown.
- 7344 derived from yellow spored sector of UAMH 5674 (Merck strain) Edmonton, Alta. Y. (YYN3P118B) Yoshizawa /J. Vederas YYN3P118B [=UAMH 5674].
- 7522 atypical isolate ex left parabrachial tissue, female 45 yr Woodbridge, Ont. Etobicoke General Hospital 19 Nov 1992 /R.C. Summerbell FR 2951. Pigment: dark brown.
- 7844 ex soil Texas /A. Jones [=CBS 116.46 =IAM 2054 =IFO 6123 =IMI 44243 =NRRL 1960 =QM 6856 =WB 1960 =ATCC 10020]. Itaconic acid (Arch. Biochem. 7:167, 1945; Ind. Eng. Chem. 37:405-406, 1945); cis-aconitic acid decarboxylase (Methods Enzymol. 5:593, 1962); 3-methylorsellinic acid (J. Chem. Soc. Chem. Commun. 1972:391-392, 1972); pulvinone derivatives (J. Chem. Soc. Chem. Commun. 140:717-718, 1975; Phytochemistry (Oxf.) 14:573-576, 1975; Tetrahedron Lett. 13:1013-1014, 1976); asterriquinone (Chem. Pharm. Bull. 24:1853-1859, 1976; Gann 67:623-624, 1976); asterchrome (Chem. Pharm. Bull. 29:1510-1517, 1981). Pigment: brown.
- 7845 derived from ATCC 10020 I. Nakamura (K 26) /A. Jones [=ATCC 32359]. Itaconic acid (J. Ferment. Technol. 53:286-293 and 294-302, 1975). Pigment: brown.
- 7929 derived from UAMH 5674 Y. (YYN5P98) Yoshizawa /J. Vederas YYN5P98 [=UAMH 5674]. Pigment: brown.
- 9155 mutant with cloned and overexpressed mevinolin PKS gene C.R. Hutchinson /J. Vederas E (1b). Mevinolin. Pigment: brown.
- 9156 Control strain for UAMH 9155 /J. Vederas. Mevinolin. Pigment: brown.
- 9271 strain transformed with plasmid containing a putative regulatory gene from the lovastatin biosynthesis gene cluster

- cloned into pPLOA (phleoR). Produces significantly more lovastatin than wild type strain. C.R. Hutchinson /J. Vederas XS-1P. Lovastatin (Produces significantly more lovastatin than wild type strain fide J. Vederas).
- 9295 mutant in which the esterase gene has been disrupted, mutant appears to accumulate monacolin J by TLC & RFLP analysis, consistent with the involvement of the two genes in synthesis of 2-methylbutrate and its attachment to monacolin J C.R. Hutchinson /J. Vederas esterase. Monacolin J. Pigment: brown.
- 9296 mutant in which the ScPKS gene has been disrupted, mutant appears to accumulate monacolin J by TLC & RFLP analysis, consistent with the involvement of the two genes in synthesis of 2-methylbutrate and its attachment to monacolin J C.R. Hutchinson /J. Vederas ScPKS. Monacolin J. Pigment: brown.
- 9297 mutant in which the P4501 gene has been disrupted, mutant accumulates 2 compounds that probably are not made by the parent strain, at least in measurable amounts C.R. Hutchinson /J. Vederas P4501. Pigment: brown.
- 9298 mutant in which the dehydrogenase gene has been disrupted C.R. Hutchinson /J. Vederas dehydrogenase. Pigment: brown.
- 9313 (T *Aspergillus terreus*) soil Connecticut C. Thom (144) /DAOM 222009 [=IMI 17294 =CBS 601.95 =ATCC 1012 =NRRL 255 =NCTC 981 =QM 1991 =Thom 144 =WB 255 =JCM 10257 =IFO 33026 =LSHB Ac24]. Beta-xylosidase (Stalbrand H et al., Appl. Biochem. Biotechnol. 34/35: 261-272, 1992); beta-galactosidase (Reczey K et al. Appl. Microbiol. Biotechnol. 38: 393-397, 1992). Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996) // pigment: brown // application: production of antiviral agent LL-S88 alpha (US Patent 3,701,774 (Oct. 31, 1972)); hydroxylation of aniline (Burkhead KD et al. J. Ind. Microbiol. 13:233-237, 1994).
- 9641 orf5 mutant (zeoR); production of lovastatin lower than wild-type strain Wisconsin C.R. Hutchinson 1999 /J. Vederas 5.7. Lovastatin (produces lovastatin at much lower levels than wild type strain (10%)).
- 9817 isolate with orf5 disrupted with Zeocin resistance gene /J. Vederas WMH 1752 (5.7). Culture conditions: resistant to Zeocin // pigment: brown.
- 10455 atypical isolate ex R middle lung, female, 54 yr; isolated 3x during one year Austin, TX J. Owen 2004 /Texas Dept. of Health 04BY 91. Culture conditions: GenProbe + for *Blastomyces dermatitidis* on 1 occasion; negative on repeat (fide submitting laboratory); atypical flesh-colored colony; scant sporulation // cycloheximide: resistant (MYC) // thermotolerant: grows better @ 35C than @ 30C // molecular systematics: determined as *Aspergillus terreus* by sequencing of ITS region and BLAST result (fide Dr. M. Brandt, CDC, Atlanta) // benomyl: sensitive (NG 2 ppm).
- 10584 ex left eye vitreous fluid, female with 6 mo history of iritis; no history of trauma; Gram stain & KOH positive for hyphae Victoria, B.C. P. Kibsey June 2005 /P. Kibsey 478960. Culture conditions: atypical on initial isolation from patient // human/animal pathogen: mycotic keratitis.
- 10776 atypical isolate ex dog with severe periosteal osteomyelitis Gribbles Veterinary Pathology, Melbourne, Australia DVM M. Williamson 2006 /A. Woodgyer 2006-22189. Molecular systematics: Blast match 99% ITS similarity to *Aspergillus terreus* (fide UAMH) // thermotolerant: growth equivalent at 30 & 35C.
- 10824 atypical isolate ex lymph node ex female canine, 7 yr old Brittany spaniel IDEXX Veterinary Services D. Sutton /D.A. Sutton UTHSC 07-1215. Thermotolerant: growth equivalent at 30 & 35C // cycloheximide: slightly sensitive (growth moderately inhibited) // human/animal pathogen: disseminated infection in canine // pigment: yellow on PDA.
- 11022 sponge *Halichondria* sp. (purple specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 12D.
11330 disseminated infection ex canine /D.A. Sutton R-4617.
- Aspergillus terricola* Marchal**
9601 (T neotype *Aspergillus terricola*) C. Thom 1940 /M. Christensen WB 426 [=CBS 579.65 =IMI 172294 =NRRL 426 =ATCC 16860]. Systematics/taxonomy: designated as neotype (Samson & Gams in Samson & Gams, eds. *Advances in Penicillium & Aspergillus Systematics*, NY, Plenum Press, 1985, p. 51).
- Aspergillus tetrazonus* see ***Emericella quadrilineata***
- Aspergillus thermomutatus* see ***Neosartorya pseudofischeri***
- Aspergillus tubingensis* Mosseray**
10 contaminant ex sputum culture Edmonton, Alta. J.W. Carmichael 18 Aug 1949 [=GenBank AF110528 ITS (appears to be incorrect) =GenBank AF110528 partial SSU =GenBank AF108474 ITS1 (appears to be incorrect)]. Molecular systematics: Confirmed by PCR and sequencing as *A. tubingensis* (fide Dr. P. Pitsikas).
- Aspergillus umbrosus* see ***Eurotium umbrosum***
- Aspergillus unguis* see ***Emericella unguis***
- Aspergillus ustus* (Bainier) Thom & Church**
227 plate contaminant Farlow Herbarium, Cambridge, MA J.W. Carmichael 1953 /J.W. Carmichael.
454 skin Edmonton, Alta. J.W. Carmichael 6 Dec 1955 /J.W. Carmichael.
6593 indoor air ex RCS strip Edmonton, Alta. L. Sigler (5A) 7 Feb 1990 /S. Poznanski 5 [=NRRL 29172]. Pigment: yellow // molecular systematics: confirmed as *Aspergillus ustus* (Varga J, Houbraken J, Van Der Lee HA, Verweij PE, Samson RA, *Eukaryotic Cell* 7:630-638, 2008).
6789 indoor air ex RCS strip Saskatoon, Sask. D. Inglis (2A2) 19 Feb 1991 /S. Poznanski. Pigment: yellow on PDA.
7678 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 44) 13 Dec 1993 /S.P. Abbott (OHS 44). Pigment: yellow on PDA.
9479 soil Panama /M. Christensen WB 1974 [=WB 1974 =CBS 561.65 =IMI 127148 =NRRL 1974 =QM 6857 =ATCC 16801 =NRRL 6857]. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
9499 dry, rotted wood (stage 3 decay), aspen log (*Populus tremuloides*), 3 year post-fire site Mariana Lake, Alta 2-11A) T. Lumley (H953-02-S1E 11 Feb 1999 /R.S. Currah H953-02-S1E, 2-11A).
10192 tissue of aortic valve leaflet removed prior to replacement with new valve; same fungus obtained from same specimen type of 3 different patients Saint John Regional Hospital NB St. John Apr-02 /R. Rennie MY 3445.
11646 endophyte ex stems of *Avicennia germinans* (Black mangrove) Port Royal, Kingston, Jamaica P. Feyer /R.B. Porter JM-PF-AGS07. Pigment: yellow.
- Aspergillus versicolor* (Vuillemin) Tiraboschi**
1078 mouldy book cover Edmonton, Alta. J.W. Carmichael 1961 /J.W. Carmichael.
2464 scrapings neck rash ex male 32 yr; DE very scant hyphae Edmonton, Alta. J.W. Carmichael 9 Apr 1965.
2659 D. Westlake [=PRL 2212].
4207 protein antigen from *Ureaplasma urealyticum* UAMH L. Sigler 1979 /L. Sigler.
4335 dust & grain sample Edmonton, Alta. L. Sigler Oct 1980 /L.

- Sigler.
4751 dung Milk River Ridge, S. Alta. R.S. Currah 1983 /R.S. Currah.
4956 Same strain as UAMH 9314 V.K. Charles /J. Vederas [=NRRL 238 =ATCC 9577 =QM 7478 =JCM 10258 =IMI 229970 =Thom 5519.47 =IFO 33027 =UAMH 9314]. Systematics/taxonomy: Identified from MLST and phenotype (NRRL website).
4957 South Africa fide NRRL /J. Vederas [=NRRL 5219 =NRRL A-18074]. Sterigmatocystin.
4958 corn College Station, Texas A & M Univ. Texas /J. Vederas [=NRRL 6120]. Sterigmatocystin high yield producer.
5766 beef jerky Leduc, Alta. M. Hamilton Apr 1987 /M. Hamilton KB008.
5776 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB024C.
5821 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB061A.
6788 indoor air ex RCS strip Saskatoon, Sask. D. Inglis (2E) 19 Feb 1991 /S. Poznanski.
6811 indoor air ex RCS strip Saskatoon, Sask. D. Inglis (1L2) 20 Feb 1991 /S. Poznanski.
6984 gut contents ex Megachile rotundata (alfalfa leafcutting bee) larvae, pre-defecation Lethbridge, Alta. D. Inglis (MR 1010) Aug 1990 /D. Inglis (MR 1010).
7570 ex cardboard B.C. L. Sigler 8 Apr 1994 /J. Hutchison.
7577 ex cellophane India /NRRL 20734 [=ATCC 11730 =ATCC 16020 =CBS 245.65 =IFO 30338 =IMI 45554 =MUCL 19008 =DSM 63301 =DSM 1943 =GenBank EF524033 ITS =GenBank Tsr1 gene =GenBank JN121468 RPB2 =GenBank JN121614 RPB1 =GenBank JN121899 CCT8 gene]. Acetyl-xylan esterase (Enzyme Microb. Technol. 12:127-131, 1990). Fungus resistance testing: U.S., British and NATO military specifications; adhesives, airborne equipment, automotive components; Environmental test methods and engineering guidelines, Washington DC (Military Standard MIL-STD-810F, 2000).
7650 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 51) 2 Dec 1993 /S.P. Abbott (OHS 51).
9314 (T Neotype *Aspergillus versicolor*) V.K. Charles /DAOM 222010 [=GenBank EF652442 ITS =GenBank EF652354 calmodulin =GenBank EF652266 Btub =GenBank EF652178 RPB =GenBank EF652178 ITS2 =NRRL 238 =ATCC 9577 =CBS 583.65 =IMI 229970 =QM 7478 =SRRC 2386 =WB 238 =Thom 5519.57 =JCM 10258 =IFO 33027]. Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996); Neotype strain proposed by Samson & Pitt (Samson RA, Pitt JI, eds., *Advances in Penicillium and Aspergillus* systematics, Plenum Press, NY, 1985 p. 53) // pigment: brown.
10671 brown alga *Padina sanctae-crucis* - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 5A.
11444 swab ex fur of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 16 C.4 CCI . Biodiversity: mycobiota of bat caves.
11647 ex sand sediments collected from the coastal area of Kingston Port Royal, Kingston, Jamaica P. Facey Nov-2008 /R.B. Porter JM-PF-PR01. Pigment: reddish brown.
- Aspergillus violaceo-brunneus* see *Emericella violacea*
Aspergillus warcupii see *Warcupiella spinulosa*
Aspergillus wentii Wehmer
10357 organic material within den of banner-tailed kangaroo rat (*Dipodomys spectabilis*) Socorro, NM J. Herrera 09-Sep-1992 /J. Herrera.
- 10359 (T Neotype *Aspergillus wentii*) as Wehmer's strain ex CBS in 1909, soybeans Indonesia, Java /M. Christensen WB 375 [=WB 375 =Thom 116 =ATCC 1023 =IMI 017295 =NRRL 375 =NRRL 1269 =QM 7479]. Citraconic anhydride (Assante et al., *Gazzetta Chimica Italiana* 109: 151, 1979).
- Asteromyces cruciatus* Moreau & Moreau ex Hennebert
1417 (T *Asteromyces cruciatus*) *Ammophila arenaria* root England F. Moreau 1955 /DAOM 84708 [=IMI 60913].
- Asterotremella* sp.
11621 swab ex fur of living male *Myotis lucifugus* Markhamville Mine, New Brunswick K.J. Vanderwolf 09-Feb-2010 /K.J. Vanderwolf Bat 46 C.4 S fur. Biodiversity: mycobiota of bat caves // molecular systematics: Blast match 95.2% partial LSU similarity with *Asterotremella* species (fide A. Lachance, Univ Western Ontario) // culture conditions: slow growing and yeast-like.
- Athelia fuscostratum* see *Leptosporomyces fuscostratus*
Athelia rolfsii see *Sclerotium rolfsii*
Atradidymella muscivora M.L. Davey & Currah (morph *Phoma muscivora*)
10909 (T *Atradidymella muscivora*) ex gametophytes of the moss *Polytrichum juniperinum* growing on the base of an uprooted *Picea mariana* tree on a wet lakeshore Wolf Lake, Alta. M. Davey (Pj8-D) 2008 /R.S. Currah Pj8-D [=CBS 127589 =GenBank EU817825 ITS]. Biodiversity: bryophyte pathogen (Davey ML, Currah RS, *American Journal of Botany* 96:1274-1280, 2009; Davey ML, Currah RS, *American Journal of Botany* 96:1281-1288, 2009) // pigment: pink on OAT // culture conditions: pink mucoid conidial mass on OAT; ascumata not produced in agar culture; produced ascumata only when grown on *Funaria hygrometrica* cultured in vitro.
10910 ex gametophytes of the moss *Hylocomium splendens* growing on a north facing slope in the uplands of a wetland area Redwater Natural Area M. Davey (Hs7-C) 2008 /R.S. Currah Hs7-C [=GenBank EU817828 ITS]. Biodiversity: bryophyte pathogen (Davey ML, Currah RS, *American Journal of Botany* 96:1274-1280, 2009; Davey ML, Currah RS, *American Journal of Botany* 96:1281-1288, 2009) // pigment: pink on OAT // culture conditions: ascumata not produced in agar culture.
10911 ex gametophytes of the moss *Polytrichum juniperinum* growing on the tops of *Sphagnum* hummocks in a wetland Redwater Natural Area, Alta. M. Davey (Pj9-C) 2008 /R.S. Currah Pj9-C [=GenBank EU817829 ITS]. Biodiversity: bryophyte pathogen (Davey ML, Currah RS, *American Journal of Botany* 96:1274-1280, 2009; Davey ML, Currah RS, *American Journal of Botany* 96:1281-1288, 2009) // culture conditions: ascumata not produced in agar culture.
11122 ex gametophytes of the moss *Aulacomnium palustre* growing in a mixed *Sphagnum* bog with a *Picea mariana* overstory Jackfish Lake Bog, Alta. M. Davey (Ap1-Q) 2008 /R.S. Currah Ap1-Q [=GenBank EU817826 ITS]. Biodiversity: bryophyte pathogen (Davey ML, Currah RS, *American Journal of Botany* 96:1274-1280, 2009; Davey ML, Currah RS, *American Journal of Botany* 96:1281-1288, 2009) // pigment: pink on OAT // culture conditions: ascumata not produced in agar culture; degenerate, not sporulating when received.
11123 ex gametophytes of the moss *Aulacomnium palustre* growing in a mixed *Sphagnum* bog with a *Picea mariana* overstory Jackfish Lake Bog, Alta. M. Davey (Ap1-S) 2008 /R.S. Currah Ap1-S [=GenBank EU817827 ITS]. Biodiversity: bryophyte pathogen (Davey ML, Currah RS, *American Journal of Botany* 96:1274-1280, 2009; Davey ML, Currah RS, *American*

Journal of Botany 96:1281-1288, 2009) // pigment: pink on OAT // culture conditions: ascomata not produced in agar culture; degenerate, not sporulating when received.

Atramixtia arboricola Tsuneda, Davey & Currah

11211 (T *Atramixtia arboricola*) ex black subiculum on bark of white spruce (*Picea glauca*) Larch Valley, Banff National Park, Alta. A. Tsuneda 5-Aug-2008 /A. Tsuneda SS-1 [=Genbank HM347777 LSU =Genbank HM347778 ITS]. Molecular systematics: endoconidial black meristematic fungus associated with declining white spruce (Tsuneda A, Davey ML, Currah RS, Botany 89:323-336, 2011).

11212 ex black subiculum on bark of white spruce (*Picea glauca*) Larch Valley, Banff National Park, Alta. A. Tsuneda 24-Jun-2009 /A. Tsuneda SS-2. Molecular systematics: endoconidial black meristematic fungus associated with declining white spruce (Tsuneda A, Davey ML, Currah RS, Botany 89:323-336, 2011).

Aulographina pinorum (Desm.) v. Arx & Muller (morph *Bahusakala an. Aulographina pinorum*)

4037 ex *Pinus maritima* E. Mueller (ETH M 7129) /CBS 302.71.

Aureobasidium caulivorum (Kirchner) Cooke

4445 ex *Trifolium incarnatum* C.M. Leach /CBS 242.64.

Aureobasidium lini (Lafferty) Hermanides-Nijhof

590 swab ex cervix Edmonton, Alta. J.W. Carmichael 15 Nov 1957 /J.W. Carmichael.

1215 soft rot of cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.

4008 lesions ex alfalfa roots Edmonton, Alta. Cook & Webster Dec 1974 /F. Cooke F16.

4347 black growth ex *Populus tremuloides* Edmonton, Alta. L. Sigler 30 Oct 1980 /L. Sigler.

Aureobasidium pullulans (de Bary) Arnaud

255 culture ex sea water Farlow Herbarium, Cambridge, MA J.W. Carmichael 1953 /J.W. Carmichael.

336 scrapings ex scalp Edmonton, Alta. J.W. Carmichael Jan 1955 /J.W. Carmichael.

487 pus ex wrist Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.

554 sputum Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.

795 scrapings ex toes Edmonton, Alta. Mar 1960 /J.W. Carmichael.

1200 soft rot of cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.

1208 soft rot of cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.

1801 leaves of dogwood Edmonton, Alta. J.W. Carmichael 9 Oct 1963 /J.W. Carmichael.

2112 soil IX San Andreas fault, California P. Martin Jan 1962 /P. Martin 1300.

2226 California P. Martin /P. Martin 1352.

2797 air borne contaminant Edmonton, Alta. M. Dineen 20 Jul 1967 /M. Dineen.

4424 contaminant ex wound culture, human; DE negative /B.H. Cooper SML 191F.

5526 ex scalp Calgary, Alta. 4 Oct 1986 /J. Marien MO 1759.

5785 hand cyst, male Texas 1987 /M.G. Rinaldi UTHSC 87-78. Human/animal pathogen.

8045 indoor air ex RCS strip from *Apis mellifera* (honeybee) equipment cleaning warehouse Watino, Alta. S.P. Abbott (OHS 277) 23 Apr 1995 /S.P. Abbott (OHS 277).

8813 wood plastic extruded board New Jersey L. Sigler Feb 1997 /J. Muller.

11501 liquified homemade rhubarb jelly showing black growth

Edmonton, Alta. L. Sigler 2-Feb-2011.

Aureobasidium pullulans* var. *melanigenum

Herm.-Nijhof

4431 contaminant ex UAMH 23 Jun 1981.

***Aureobasidium* sp.**

335 air contaminant Edmonton, Alta. J.W. Carmichael Dec 1954 /J.W. Carmichael.

7435 unspecified consumer product Toronto, Ont. /R.C. Summerbell FR 1114.

Auricularia auricula (Hooker) Underwood

8011 *Thuja plicata* R. Smith (6A) /S. Davies FC-314 [=ATCC 36636]. Edible: mushroom // pigment: brown.

8012 monokaryon USA H.L. Barnett /S. Davies FC-371 [=ATCC 11991 =IFO 5949 =CBS 193.38]. Edible: mushroom.

8013 cultivated edible mushroom from J. Lu China /S. Davies FC-396. Edible: mushroom.

8014 Z.Q. Li (AS 5.90) /S. Davies FC-416 [=ATCC 62496]. Edible: mushroom.

Auriscalpium vulgare Gray

9426 sporocarp on pine cones Kananaskis, Alta. R.M. Danielson (RMD 3674) 28-Jun-1989 /R.M. Danielson RMD 3674.

Auxarthron alboluteum Sigler & Hambleton (morph

Malbranchea albolutea)

1117 soil Oildale, San Joaquin Valley, Calif. /G.F. Orr 0-1024.

1846 rat dung Mercur, Utah /G.F. Orr Merc (?=0-1089).

2632 ?soil Cache la Poudre River, Colorado W.B. Cooke Jul 1965 /G.L. Barron 10527.

2846 (T *Auxarthron alboluteum*) soil Utah G.F. Orr 1967 /G.F. Orr 0-3508 [=ATCC 34522 =CBS 125.77 =IMI 211193 =GenBank L28063 =GenBank AY124494 (SSU) =GenBank AY177303 (ITS) =GenBank L28070 (chitin synthase)]. Molecular systematics: phylogeny of *Coccidioides immitis* & *Malbranchea* spp (Pan, Sigler & Cole, Microbiology 140:1481-1494, 1994); SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002); comments on GenBank L28063 (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).

2848 soil ex Szathmary fabric bait Hungary 1967 /G.F. Orr 0-3515.

2861 soil Utah G.F. Orr 1967 /G.F. Orr 0-3509.

3651 soil Wendover, Utah /G.F. Orr PO-0062.

3911 grassland soil near Laramie, WY. M. Christensen (TC-22) /G.F. Orr 0-1320.

4119 soil Argentina A.L. Borghi (9) /CDC 77-104311 (Y-336) [=Borghi 9 =GenBank U29389 as *Malbranchea dendritica* =GenBank AY124495 (SSU) =GenBank AY177304 (ITS)]. Molecular systematics: human pathogenic fungi & relatives (Bowman et al., Mol. Phylogenetics Evolution 6:89-96, 1996; Bowman & Taylor, The Fungal Holomorph, (Reynolds & Taylor, eds.), CAB International, 1993); comments on GenBank U29389 (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002); SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).

4138 soil Colorado W.B. Cooke /G.F. Orr [=ATCC 16681 =CBS 644.66 =OAC 10527].

4434 badger hole soil, single ascospore isolate Michel Reservoir L. Sigler 6 Jul 1981 /R.S. Currah 113.

4620 soil Waterton Park, Alta. R. Currah Aug 1982 /R.S. Currah.

6502 skin lesion, Indigo snake in captivity /CDC B-4860.

6543 R.C. Summerbell FR 2561.

7095 sputum, male 78 yr Winnipeg, Man. 1991 /R.C. Summerbell FR 1629.

11586 soil from construction development area Moorpark, California

- S.P. Abbott 29-Jan-2010 /S.P. Abbott SA1502. Molecular systematics: ITS 100% similarity with *Auxarthron alboluteum* UAMH 2846 T and other strains (fide UAMH).
- 11587 soil from construction development area Moorpark, California S.P. Abbott 29-Jan-2010 /S.P. Abbott SA1504. Molecular systematics: ITS 99% similarity with *Auxarthron alboluteum* UAMH 2846 T and other strains (fide UAMH).
- Auxarthron californiense* Orr & Kuehn**
- 1591 pack rat dung Warner Ranch, Calif. G.F. Orr /G.F. Orr O-908 b [=NRRL A-11,022].
- 1889 (T *Auxarthron californiense*) pack rat dung Warner Ranch, San Diego Co., Calif. G.F. Orr /G.F. Orr O-908 a [=ATCC 15600 =CBS 129.62 =IMI 99590 =NRRL A-11,022 =UAMH 3151 =GenBank AF038357 =GenBank AY176711 =GenBank AF038352 (ITS)]. Molecular systematics: comparison with members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998); phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
- 3111 dung San Bernardino Mts., Calif. R.K. Benjamin 15 May 1959 /R.K. Benjamin RSA 1241.
- 3151 (T *Auxarthron californiense*) pack rat dung Warner Ranch, San Diego Co., Calif. G.F. Orr /R.K. Benjamin RSA 1525 [=NRRL A-11,022 =ATCC 15600 =CBS 129.62 =IMI 99590 =UAMH 1889].
- Auxarthron compactum* Orr & Plunkett**
- 3152 lung ex kangaroo rat Palo Verde, Imperial Co., Calif. G.F. Orr (O-36) /R.K. Benjamin RSA 1526 [=NRRL A-10,106].
- 3153 (T *Auxarthron compactum*) rat dung Silver Queen Mine, Kern Co., Calif. G.F. Orr (O-573) /R.K. Benjamin RSA 1527 [=ATCC 15601 =CBS 200.64 =NRRL A-9997 =GenBank AB015767 =GenBank AB040692]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
- 10695 ex caterpillar (Lepidoptera) (UASM 90910) caught in trap baited with brown-rotted wood site adjacent to Elk Island National Park, Alta. M. Greif 5-Jun-2002 /R.S. Currah B 28.
- Auxarthron conjugatum* (Kuehn) Orr & Kuehn (syn. *Macronodus bifurcatus*; morph *Malbranchea an. Auxarthron conjugatum*)**
- 1876 soil Australia Warcup 1962 /G.F. Orr A 262/1.
- 3130 lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/4-E) 3 Jul 1964 /R.K. Benjamin RSA 1474.
- 3156 (T *Myxotrichum conjugatum*) soil Arizona Emmons (47) /R.K. Benjamin RSA 1530 [=NRRL 1244 =O-520 =ATCC 15602 =GenBank KC470853 ITS =GenBank AB075325 LSU =GenBank HE974414 benA =CBS 247.58 =GenBank HF545313 ITS =GenBank HE974413 RPB2 =GenBank NR_121475 ITS]. Biodiversity: ascematal dispersal by arthropods (Greif & Currah, Mycological Research 107:77-81, 2003) // pigment: orange brown // culture conditions: ultrastructure of ascemata (Skinner AJ, Tsuneda A, Currah RS, Mycologia 98:447-454, 2006).
- 3516 soil Sudan J.W. Carmichael /L. Ajello 32b.
- 3517 soil Sudan J.W. Carmichael /L. Ajello 32a.
- 3519 soil Sudan L. Ajello /L. Ajello 28a [=GenBank AJ271573 ITS (replaced by KC470854) =GenBank KC470854 ITS]. Molecular systematics: ITS sequence is identical to UAMH 3156 Type (fide S. Hambleton 2009); ITS sequence GenBank AJ271573 for UAMH 3519 groups with *Auxarthron umbrinum* and is incorrect; Sequence KC470854 replaced gi:12406822.
- 3817 soil assoc. with horn of animal *Jankia*, India Ghosh (GR-62) /G.F. Orr O-1236 [=ATCC 32462 =CBS 648.77].
- 3841 feathers ex domestic fowl Queensland, Austr. Rees (F91) /G.F. Orr O-3153 [=ATCC 32464 =CBS 650.77].
- 3874 (T *Macronodus bifurcatus*) soil Kansas /G.F. Orr O-3750 [=GenBank KC470855 ITS =ATCC 32465 =NRRL 6155]. Pigment: orange brown.
- 3954 soil Inyokern Co., Calif. /G.F. Orr O-1259 [=ATCC 32463 =CBS 649.77 =NRRL 6081].
- 4047 soil Mt. Abu, Rajasthan, India /S.C. Agrawal [=ITCC 2354].
- 10597 ex *Calosoma frigidum* (European ground beetle) nr Elk Island National Park, Alta. M. Greif 12-Jun-2002 /R.S. Currah M-37a. Culture conditions: ultrastructure of ascemata (Skinner AJ, Tsuneda A, Currah RS, Mycologia 98:447-454, 2006).
- Auxarthron filamentosum* Sigler, Hambleton & Flis (morph *Malbranchea filamentosa*)**
- 4096 soil Argentina A.L. Borghi (5) /CDC Y-334=77-104309 [=Borghi 5] + mates with UAMH 9987. Human/animal pathogen: wrongly identified as *C. immitis* (Borghi et al. Sabouraudia 15:51-57, 1977) // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).
- 4097 (T *Malbranchea filamentosa*) soil Argentina A.L. Borghi (6) /CDC Y-335=77-104310 [=ATCC 48174 =Borghi 6 =CBS 581.82 =DAOM 184714 =IMI 274926 =GenBank L28072 (chitin synthase) =GenBank L28065 =GenBank U26849 =GenBank AX110161 =GenBank AY124501 (SSU) =GenBank AY177298 (ITS)] + mates with UAMH 9987, 10139, 10140. Human/animal pathogen: wrongly identified as *C. immitis* (Borghi et al. Sabouraudia 15:51-57, 1977) // molecular systematics: phylogeny of Coccidioides immitis & *Malbranchea* spp (Pan, Sigler & Cole, Microbiology 140:1481-1494, 1994); SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002) // thermotolerant: good growth @ 35 C.
- 7164 ex soil Benatshimpuma, Kasai, Zaire, Africa C. de Vroey Aug 1968 /J. Guarro FMR 3859 [=CBS 199.92 =RV 24801] + mates with UAMH 9987. Pigment: brown // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).
- 9986 (T plus mating type strain) shed back of head skin ex frilled lizard (*Chlamydosaurus kingii*), male >7yr San Diego Zoo, San Diego, CA J. Pare Jan 2001 /J. Pare UW076A-B + mates with UAMH 9987, 10139, 10140. Pigment: dark brown // cycloheximide: resistant // thermotolerant: good growth @ 35 C // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 9987 (T minus mating type strain) shed ventral mid-body skin ex twin-spotted rattlesnake (*Crotalus pricei*), female 7yr Audubon Park & Zoological Garden, New Orleans, LA J. Pare Jan 2001 /J. Pare UW079A-D [=GenBank AY177301 (ITS)] - mates with UAMH 4096, 4097, 7164, 9986, 10138. Pigment: dark brown // cycloheximide: resistant // thermotolerant: good growth @ 35 C // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10042 (T *Auxarthron filamentosum*) cross of UAMH 9986 x 9987 UAMH A. Flis 15 Aug 2001 /A. Flis. Pigment: reddish brown // systematics/taxonomy: mating studies (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002).
- 10138 single ascospore isolate, UAMH 10042 UAMH L. Sigler (sai B) 2 Nov 2001 /L. Sigler (sai B) + mates with UAMH 9987. Pigment: dark brown // systematics/taxonomy: mating

- studies (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002).
- 10139 single ascospore isolate, UAMH 10042 UAMH L. Sigler (sai G) 2 Nov 2001 /L. Sigler (sai G) - mates with UAMH 9986. Pigment: dark brown // systematics/taxonomy: mating studies (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002).
- 10140 single ascospore isolate, UAMH 10042 UAMH L. Sigler (sai H) 2 Nov 2001 /L. Sigler (sai H) - mates with UAMH 9986. Pigment: dark brown // systematics/taxonomy: mating studies (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002).

Auxarthron filamentosum see *Malbranchea filamentosa*

Auxarthron ostraviense Hubka, Dobiasova & M. Kolarik

- 10260 ex air by Burkard sampler onto DG18 agar; underground preserved cemetery (no public access) Archaeology and History Museum, Montreal, Que. S. Hambleton 9-11-98 /DAOM 228561 [=GenBank KC470860 ITS =GenBank KC470859 SSU]. Pigment: purplish-red // molecular systematics: Blast match 99% ITS similarity with *Auxarthron ostraviense* CCF 4241 Type (fide L. Sigler & S. Hambleton 2013).
- 11822 (T *Auxarthron ostraviense*) ex fingernail, male 26 yr with psoriasis; DE + for irregular septate hyphae Ostrava, Czech Republic S. Dobiasova 2011 /V. Hubka DMF 316411 [=CCF 4241 =CBS 132919 =GenBank HE974452 ITS =PRM 860535 Holotype =GenBank HE974411 RPB2 =GenBank HE974417 Btub]. Human/animal pathogen: onychomycosis affecting many fingernails in a male with psoriasis (Hubka V, Dobiasova S, Lyskova P, Mallatova N, et al, Med Mycol 51: 614-624, 2013) // molecular systematics: description of *Auxarthron ostraviense* and related *Auxarthron* species (Hubka V, Dobiasova S, Lyskova P, Mallatova N, et al, Med Mycol 51: 614-624, 2013).

Auxarthron pseudauxarthron Orr & Kuehn

- 3404 (T *Auxarthron pseudauxarthron*) rabbit dung Utah /G.F. Orr O-3083 [=ATCC 22158 =NRRL 5132].

Auxarthron reticulatum (Zukal) Orr & Plunkett

- 1585 (T *Auxarthron reticulatum*) wood flat ex greenhouse Los Angeles G.F. Orr /G.F. Orr O-1020 [=ATCC 18426 =NRRL A-10,748 =UAMH 1659 =UAMH 3154].
- 1659 (T *Auxarthron reticulatum*) wood flat ex greenhouse Los Angeles G.F. Orr /G.F. Orr O-1020 [=NRRL A-10,748 =ATCC 18426 =UAMH 1585 =UAMH 3154].
- 1877 contaminant in culture Brazil 1963 /G.F. Orr.
- 1988 soil England C. Dickinson 1961 /G.F. Orr Dex 2.
- 2006 S. California G.F. Orr 1963 /G.F. Orr OCR 12 [=GenBank AJ271568 (ITS)].
- 3079 soil Lakenheath, Warren, Suffolk, England Warcup & Kuehn A207/2 1959 /IMI 76603 [=GenBank AJ291977 =GenBank AJ292098 (chitin synthase) =GenBank AJ292114 (OMPD)]. Molecular systematics: genealogies based on genes coding for orotidine 5'(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, Mol. Biol. Evol. 18:1246-1256, 2001); determined as *Auxarthron reticulatum*.
- 3112 pack rat dung Eagle Mts., San Ber. Co., Calif. R.K. Benjamin (D483/1) 12 Oct 1959 /R.K. Benjamin RSA 1242.
- 3154 (T *Auxarthron reticulatum*) wood flat ex greenhouse Los Angeles G.F. Orr (O-1020) /R.K. Benjamin RSA 1528 [=NRRL A-10,748 =ATCC 18426 =UAMH 1585 =UAMH 1659].

***Auxarthron* sp.**

- 1592 pack rat dung Weldon Valley, Kern Co., Calif. G.F. Orr 1960

/G.F. Orr O-2016 [=GenBank KC470856 ITS]. Molecular systematics: Determined as *Auxarthron conjugatum* G.F. Orr; Determined as *Auxarthron* sp. based on ITS sequence (fide S. Hambleton).

- 1992 soil Lakenheath Warren, Suffolk, Engl. J.H. Warcup (B 30) /G.F. Orr [=QM 1795].
- 10258 soil ex field planted with 6-row barley by Warcup plating onto MYA+cycloheximide Manitoba, Canada S. Hambleton (SH 2001-12d) 1-8-01 /DAOM 230092 [=GenBank KC470857 ITS].
- 10259 soil ex field planted with 6-row barley by Warcup plating onto MYA+cycloheximide Manitoba, Canada S. Hambleton (SH 2001-12j) 1-8-01 /DAOM 230094 [=GenBank KC470858 ITS]. Culture conditions: ascospores produced on PDA; sparse on CMA // pigment: yellow on PDA.

Auxarthron thaxteri (Kuehn) G.F. Orr & Kuehn

- 1584 lung ex kangaroo rat Blythe, Calif. G.F. Orr 1957 /G.F. Orr O-30 [=NRRL 10,056].
- 1601 Illinois H.H. Kuehn 1954 /G.F. Orr O-1022.
- 1859 soil Dugway, Utah /G.F. Orr.
- 3912 (T *Auxarthron thaxteri*) dung of opossum shrew (*Selenodon*) Haiti R. Thaxter /G.F. Orr O-532 [=ATCC 15598 =NRRL 1714 =CBS 248.58 =IFO 31703 =Orr O-532 =GenBank HE974416 benA =GenBank HE974412 RPB2 =GenBank AY177305 ITS =GenBank AY124497 SSU =GenBank AJ271571 ITS]. Molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).
- 5675 soil Spain J. Guarro /CBS 293.86.

Auxarthron umbrinum (Boudier) G.F. Orr & Plunkett

- 161 ex *Neotoma micropus* Texas Emmons 1949 /C.W. Emmons A4718.
- 162 ex *Neotoma micropus* Texas Emmons 1949 /C.W. Emmons A4966. Molecular systematics: ITS sequence differs at 3 positions from UAMH 3952 Type (fide S. Hambleton 2009).
- 1587 soil ex gopher hole Riverside Co., Calif. O.A. Plunkett 1961 /G.F. Orr OAP 350.
- 1599 soil ex ploughed field Haseby, York, England J.H. Warcup (A212/4) /G.F. Orr O-1023. Pigment: purplish-red // molecular systematics: groups with *Auxarthron umbrinum* by ITS sequencing (fide S. Hambleton 2009); ITS sequence differs at 1 position from 3952 Type.
- 1874 lab contaminant Univ. of Calif., Los Angeles /G.F. Orr O-1040 [=GenBank AY124499 (SSU) =GenBank AY177308 (ITS)]. Pigment: purplish-red // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).
- 3118 lizard dung Montezuma, Chihuahua, Mexico R.K. Benjamin (D1287/1-A) 4 Jul 1964 /R.K. Benjamin RSA 1428.
- 3132 lizard dung Villa Ahumada, Chihuahua, Mexico R.K. Benjamin (D1288/9-B) 4 Jul 1964 /R.K. Benjamin RSA 1476.
- 3133 lizard dung Villa Ahumada, Chihuahua, Mexico R.K. Benjamin (D1288/1-B) 4 Jul 1964 /R.K. Benjamin RSA 1477.
- 3134 lizard dung Moctezuma, Chihuahua, Mex. R.K. Benjamin (D1286/8-B) 4 Jul 1964 /R.K. Benjamin RSA 1478.
- 3139 lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/6-E) 3 Jul 1964 /R.K. Benjamin RSA 1484.
- 3143 lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/1-E) 3 Jul 1964 /R.K. Benjamin RSA 1488.
- 3952 (T *Auxarthron umbrinum*) soil U.K. /G.F. Orr O-1030 [=NRRL 3657 =ATCC 15606 =CBS 105.09 =GenBank AY124499 =GenBank HE9774415 benA =GenBank HE974407 RPB2 =GenBank AY124498 SSU =GenBank AY177309 ITS]. Culture conditions: failed to produce ascospores under any conditions // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).

- 4484 prairie dog dung Little Bo Reservoir, Alta. R. Currah (81-17) 4 Apr 1981 /R. Currah (81-17).
 4784 dung Alberta R. Currah 1983.
 4814 coyote dung Slave Lake, Alta. L. Sigler Jul 1983 /L. Sigler.
 6006 water sample St. Lawrence River, Quebec City K. Millar 26 Jun 1986 /K. Millar 86154. Pigment: orange.
 6763 ring finger, male Florida 1990 /M.G. Rinaldi UTHSC 90-908. Pigment: orange.
 6835 fox dung M. Locquin-Linard /M. Locquin-Linard L-326, S-2176.
 8767 toenail, DE+ New Zealand D. Parr 1996 /D. Parr 96/MF 6284.
 10540 skin scraping, sole of foot, female 30 yr B.C. 2-Feb-2005 /R. Rennie MY 767. Cycloheximide: resistant (MYC) (fide submitting laboratory).

Auxarthron zuffianum (Morini) G.F. Orr & Kuehn (morph *Malbranchea an. Auxarthron zuffianum*)

- 1875 (T *Gymnoascus brevisetosus*) lung ex prairie dog Texas /G.F. Orr O-514 [=ATCC 13484 =CBS 219.58 =CDC 958 =GenBank AJ292111 =GenBank AJ291975 =Emmons E5001 =GenBank AY124493 (SSU) =GenBank AY177306 =GenBank AY176712 =GenBank AY177306 (ITS) =GenBank AJ292095 (chitin synthase) =GenBank AJ292111 (OMPD)]. Molecular systematics: human pathogenic fungi & relatives (Bowman et al., Mol. Phylogenetics Evolution 6:89-96, 1996; Bowman & Taylor, The Fungal Holomorph, (Reynolds & Taylor, eds.), CAB International, 1993); phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002); geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, Mol. Biol. Evol. 18:1246-1256, 2001); SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).
 2653 soil India /H.C. Gugnani 239 [=GenBank AJ291976 =GenBank AJ292096 (chitin synthase) =GenBank AJ292112 (OMPD)]. Molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, Mol. Biol. Evol. 18:1246-1256, 2001).
 3135 lizard dung Chihuahua, Mexico R.K. Benjamin (D1288/8-B) 4 Jul 1964 /R.K. Benjamin RSA 1479 [=GenBank AJ291978]. Molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, Mol. Biol. Evol. 18:1246-1256, 2001).
 3142 lizard dung Chihuahua, Mexico R.K. Benjamin (D1284/5-E) 3 Jul 1964 /R.K. Benjamin RSA 1487.
 3150 lizard dung Chihuahua, Mexico R.K. Benjamin (D1288/5-A) 4 Jul 1964 /R.K. Benjamin RSA 1504.
 4082 soil Argentina A.L. Borghi (2) /CDC Y-333 (77-104308) [=Borghi 2 =GenBank AJ291979 =GenBank AJ292097 (chitin synthase) =GenBank AJ292113 (OMPD)]. Human/animal pathogen: wrongly identified as *C. immitis* (Borghi et al, Sabouraudia 15:51-57, 1977) // molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, Mol. Biol. Evol. 18:1246-1256, 2001).
 4098 soil Argentina A.L. Borghi (13) /CDC Y-337 (77-104312) [=Borghi 13 =GenBank L28068 (chitin synthase) =GenBank L28065 =GenBank L28072 =GenBank AY124492 (SSU) =GenBank AY177307 (ITS) =GenBank AY177307 =GenBank L28068]. Human/animal pathogen: wrongly identified as *C. immitis* (Borghi et al, Sabouraudia 15:51-57, 1977) // molecular systematics: phylogeny of *Coccidioides immitis* & *Malbranchea* spp (Pan, Sigler & Cole, Microbiology 140:1481-1494, 1994); SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler,

Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002); comments on GenBank L28062 (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).

- 4566 soil Argentina /J. Guarro FFBA 145 [=GenBank AJ271569 (ITS)].

Bactridium flavum Kunze

- 9096 decorticated poplar (*Populus*) log Wagner Natural Area near Spruce Grove, Alta S.P. Abbott (SA-M80) 29 Aug 1995 /S.P. Abbott (SA-M80).

Baeospora myriadophylla (Pk.) Sing.

- 7501 ex basidiospores from fruiting body on rotted *Picea glauca* log Spruce Grove, Alta. S.P. Abbott (SA 904) 23 Aug 1993 /S.P. Abbott (SA 904).

Baeospora sp.

- 11492 swab ex fur of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 60 C.3 . Molecular systematics: determined as *Baeospora* sp. by sequencing (fide G. Thorn, Univ Waterloo) // culture conditions: produces arthroconidia // benomyl: tolerant @ 2 ppm (fide UAMH 2011) // biodiversity: mycobiota of bat caves.

Bahusakala an. Aulographina pinorum see **Aulographina pinorum**

Bankera fuligineo-alba (Schmidt:Fr.) Pouz.

- 6194 under *Pinus banksiana* Fort McMurray, Alta. (C) R. Danielson 1976 /L. Hutchison J234. Mycorrhizae.

Basidiopycnides albertensis J. Reid, Eyjólfssdóttir et Hausner

- 9816 beetle galleries in standing, living lodgepole pine (*Pinus contorta*) Taylor Lake hiking trail, Banff National Park, AB J. Reid & B. Reid (87-4-1) 23-Sep-1987 /J. Reid UM 719 [=UAMH 10783]. Benomyl: sensitive (NG 2 ppm) // cycloheximide: sensitive (no growth MYC).
 10782 (T *Basidiopycnides albertensis*) in galleries of bark beetles in bark of *Pinus contorta* var. *latifolia* Taylor Lake Hiking Trail, Banff National Park, Alta. J. Reid & B. Reid 23-Sep-1987 /J. Reid UM 1397 [=ALTA 13277 (isotype specimen) =GenBank EF406118 SSU =GenBank EF406119 ITS]. Molecular systematics: bark beetle basidiomycete with graphium-like anamorph (Hausner G, Reid J, Eyjólfssdóttir GG, Iranpour M, Loewen PC, Mycotaxon 103:279-298, 2008).
 10783 in galleries of bark beetles in bark of lodgepole pine (*Pinus contorta* var. *latifolia*) Taylor Lake Hiking Trail, Banff National Park, Alta. J. Reid & B. Reid 23-Sep-1987 /J. Reid UM 719 [=UAMH 9816]. Molecular systematics: bark beetle basidiomycete with graphium-like anamorph (Hausner G, Reid J, Eyjólfssdóttir GG, Iranpour M, Loewen PC, Mycotaxon 103:279-298, 2008); ITS sequence identical to EF406119 UAMH 10782 (fide Hausner et al.) // benomyl: sensitive (NG 2 ppm) // cycloheximide: sensitive.
 10784 in galleries of bark beetles in bark of *Pinus contorta* var. *latifolia* Taylor Lake Hiking Trail, Banff National Park, Alta. J. Reid & B. Reid 23-Sep-1987 /J. Reid UM 720. Molecular systematics: bark beetle basidiomycete with graphium-like anamorph (Hausner G, Reid J, Eyjólfssdóttir GG, Iranpour M, Loewen PC, Mycotaxon 103:279-298, 2008); ITS sequence identical to EF406119 UAMH 10782 (fide Hausner et al.).
 10785 in galleries of bark beetles in bark of *Pinus contorta* var. *latifolia* Taylor Lake Hiking Trail, Banff National Park, Alta. J. Reid & B. Reid 23-Sep-1987 /J. Reid UM 1399. Molecular systematics: bark beetle basidiomycete with graphium-like anamorph (Hausner G, Reid J, Eyjólfssdóttir GG, Iranpour M, Loewen PC, Mycotaxon 103:279-298, 2008); ITS sequence

- identical to EF406119 UAMH 10782 (fide Hausner et al.); SSU sequence identical to EF406118 UAMH 10782.
- 10786 in galleries of bark beetles in bark of *Pinus contorta* var. *latifolia* Taylor Lake Hiking Trail, Banff National Park, Alta. J. Reid & B. Reid 23-Sep-1987 /J. Reid UM 1425. Molecular systematics: bark beetle basidiomycete with graphium-like anamorph (Hausner G, Reid J, Eyjolfsson GG, Iranpour M, Loewen PC, Mycotaxon 103:279-298, 2008); ITS sequence identical to EF406119 UAMH 10782 (fide Hausner et al.).
- Basipetospora* an. *Dichotomyces cejpui* see
Dichotomyces cejpui
- Basipetospora* an. *Dichotomyces cejpui* var. *spinus* see ***Dichotomyces cejpui* var. *spinus***
- Basipetospora* an. *Monascus floridanus* see ***Monascus floridanus***
- Basipetospora chlamyosporis* Matsushima
6547 herbivore dung Valdivia, Chile J. Guarro 6 Oct 1988 /J. Guarro FMR 3032 [=CBS 171.89].
- Basipetospora halophila* (van Beyma) Pitt & Hocking (syn. *Scopulariopsis halophilica*)
4752 salted pickles of egg plant Japan T. Awao 1982 /S.-I. Udagawa AJ-Nasu. Halophilic: salt tolerant (Pitt & Hocking Mycotaxon 22:197-199, 1985).
8736 (T *Scopulariopsis halophilica*) seaweed, *Undaria pinnatifida* Osaka, Japan K. Tubaki ex M. Baba Jun 1971 /A. Hocking FRR 2184 [=ATCC 42877 =CBS 380.74 =IMI 184617 =IFO 9650]. Benomyl: sensitive (NG 2 ppm) // cycloheximide: sensitive (no growth MYC).
- Basipetospora rubra* see ***Monascus ruber***
- Baudoinia compniacensis* (Richon) J.A. Scott & Unter.
10761 (T *Baudoinia caledoniensis*) on exterior siding of a building, 1 m above ground Kilmalid, Dumbarton, Scotland (C) J. Spouge (Scotland 3; 41/1/C) May-2005 /J. Scott SCCM 2488434 [=DAOM 237862 =GenBank EF137354 18S]. Systematics/taxonomy: description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007); characterization of warehouse staining fungi in spirits industry (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007; Scott JA et al 2007) // biodeteriogen/biodegradation: angels share fungus; warehouse staining fungus.
10762 (T *Baudoinia panamericana*) on bark of *Picea* sp. Lakeshore, near Pike Creek, Ont. J. (No. 7) (C) Scott 12-Mar-2002 /J. Scott SCCM 2488165 [=GenBank EF137357 SSU =DAOM 237861 =GenBank BioProject PRJNA53579]. Systematics/taxonomy: characterization of warehouse staining fungi in spirits industry (Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: trehalose accumulation following abiotic stress (Al-Nanma M, Ewaze JO, Green BJ, Scott JA, International Biodeterioration & Biodegradation 63:765-768, 2009); warehouse staining fungus; metabolism of ethanol (Ewaze JO, Summerbell RC, Scott JA, Mycol Res 112:1373-1380, 2008); angels share fungus; http://www.wired.com/magazine/2011/05/ff_angelsshare/ // molecular systematics: genome sequenced (<http://genome.jgi-psf.org/Baucol1/Baucol1.home.html>).
10763 on gravel Lakeshore, near Pike Creek, Ont. J. (HW-3b) (C) Scott 12-Mar-2002 /J. Scott SCCM 2488171 [=DAOM 237860]. Systematics/taxonomy: characterization of warehouse staining fungi in spirits industry (Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: warehouse staining fungus. on concrete wall Loretto, Kentucky (C) D. Livermore (No. 108) 24-May-2002 /J. Scott SCCM 2488177 [=GenBank GQ852581 LSU =GenBank EF137355 SSU =CBS 123032 =DAOM 237864]. Systematics/taxonomy: characterization of warehouse staining fungi in spirits industry (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007; Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: trehalose accumulation following abiotic stress (Al-Nanma M, Ewaze JO, Green BJ, Scott JA, International Biodeterioration & Biodegradation 63:765-768, 2009); warehouse staining fungus; metabolism of ethanol (Ewaze JO, Summerbell RC, Scott JA, Mycol Res 112:1373-1380, 2008).
10808 (T Epitype *Baudoinia compniacensis*) on tree branches (unidentified) Merpins, France (4 km E Cognac, at Remy Martin distillery) R.C. Summerbell (F18B) 20-Jul-06 /J. Scott SCCM 2488452 [=GenBank GQ852580 LSU =CBS 123031 =DAOM 238773 =GenBank EF494252 SSU]. Systematics/taxonomy: characterization of warehouse staining fungi in spirits industry (Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: warehouse staining fungus; semiselective isolation medium (Ewaze JO, Summerbell RC, Scott JA, Can J Microbiol 54:331-333, 2008).
10809 on cloth covering of whisky barrel bung near Kibirnie Loch, Willowyard, Beith, Scotland (C) J. Spouge (Scotland 200B) April-2006 /J. Scott SCCM 2488449 [=DAOM 238774]. Systematics/taxonomy: characterization of warehouse staining fungi in spirits industry (Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
10810 (T *Baudoinia antiliensis*) on PVC pipe, north face of bond warehouse St. Michael, Bridgetown, Barbados (C) J. Edwards (Barbados A) 5-Apr-2005 /J. Scott SCCM 2488422 [=DAOM 238775]. Systematics/taxonomy: characterization of warehouse staining fungi in spirits industry (Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
10811 on fallen branch (?*Acer* sp.) at a commercial bakery Olean, New York (C) W. Burch June 2005 /J. Scott SCCM 2488438 [=DAOM 238776]. Systematics/taxonomy: characterization of warehouse staining fungi in spirits industry (Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: warehouse staining fungus.
10812 on brick on north face of spirit maturing warehouse Lawrenceburg, Indiana J.A. Scott (Indiana 1A) 9-Aug-2004 /J. Scott SCCM 2488444 [=DAOM 238777]. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
10813 on stone wall at spirit aging warehouse Buenos Aires, Bella Vista, Argentina (C) C. Gomez (2M) 16-Mar-2005 /J. Scott SCCM 2488411 [=DAOM 238779]. Systematics/taxonomy:

- characterization of warehouse staining fungi in spirits industry (Scott JA et al 2007); description of *Baudoinia* a new genus accommodating *Torula compniacensis* (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 10814 (T *Baudoinia orientalis*) on building exterior of spirit aging warehouse Ich'on, ca. 60 km S. Seoul, Kyonggi-Do, Korea (C) S.P. Chang (Korea R) Feb-2005 /J. Scott SCCM 2488418 [=DAOM 238780]. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 10815 on tree bark near liquor maturing warehouse Los Reyes, Mexico (C) D. Doyle 28-Jun-2005 /J. Scott SPORO 2488437. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 10839 on concrete wall Lakeshore near Pike Creek, ON (C) J. A. Scott (No. 5) 12-Mar-2007 /J. Scott SCCM 2488166 [=DAOM 238778]. Biodeteriogen/biodegradation: warehouse staining fungus; metabolism of ethanol (Ewaze JO, Summerbell RC, Scott JA, Mycol Res 112:1373-1380, 2008).
- 11550 on painted pipe and wall Pernod Ricard Distillery, Bella Vista, Buenos Aires, Argentina (I) J. O. Ewaze; (C) C. Gomez (Argentina 3A) 16-Mar-2005 /J. Scott SCCM 2488413. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11551 on building exterior of spirit aging warehouse Jinro Distillery, Ich'on, ca. 60 km S of Seoul, Kyonggi-Do, Korea (I) J. O. Ewaze; (C) S. P. Chang (Korean T) Feb-2005 /J. Scott SCCM 2488419. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11552 on exhaust fan of warehouse Mount Gay Distillery, St. Michael, Bridgetown, Barbados (I) J. O. Ewaze; (C) J. Edwards (Barbados B) 5-Apr-2005 /J. Scott SCCM 2488423. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11553 on brick surface of a building Kilmalid, Dumbaron, Scotland (I) J. O. Ewaze; (C) J. Spouge (Scotland 1) May-2005 /J. Scott SCCM 2488427. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11554 on mortar joint of a building Kilmalid, Dumbaron, Scotland (I) J. O. Ewaze; (C) J. Spouge (Scotland 2) May-2005 /J. Scott SCCM 2488433. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11555 on fire hydrant Angostura Distillery, Laventille, Trinidad (I) J. O. Ewaze; (C) V. Doodnath (Trinidad A) Jul-2007 /J. Scott SCCM 2488459. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11556 on galvanized roofing Angostura Distillery, Laventille, Trinidad (I) J. O. Ewaze; (C) V. Doodnath (Trinidad B) Jul-2007 /J. Scott SCCM 2488460. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11557 on PVC gutter Angostura Distillery, Laventille, Trinidad (I) J. O. Ewaze; (C) V. Doodnath (Trinidad D) Jul-2007 /J. Scott SCCM 2488462. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- 11558 unknown source Lakeshore, near Pike Creek, Ont. (I) J. O. Ewaze; (C) J. A. Scott (130) 12-Mar-2002 /J. Scott SCCM 2488184. Biodeteriogen/biodegradation: warehouse staining fungus; angels share fungus.
- McLeod /D.M. McLeod I. Pigment: green-brown on CER.
- 301 Codling moth (*Cydia pomonella*) Sault St. Marie D.M. McLeod /D.M. McLeod 11.
- 302 Codling moth (*Cydia pomonella*) Sault St. Marie D.M. McLeod /D.M. McLeod 111.
- 350 skin ex thigh Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 634 hairs from barber shop Edmonton, Alta. J.W. Carmichael Mar 1959 /J.W. Carmichael.
- 984 lung ex deer mouse Blackfalds, Alta. J.W. Carmichael May 1959 /J.W. Carmichael.
- 991 spleen ex shrew Slave Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 993 spleen ex shrew Slave Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 998 lung ex deer mouse Slave Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 1001 lung ex cottontail rabbit Slave Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 1069 soil under spruce tree Saskatchewan R. bank, Edmonton, Alta. J.W. Carmichael 6 Jun 1961. Biocontrol: entomopathogenic fungi as potential biocontrol agents of the honey bee parasitic mite *Varroa destructor* (Hamiduzzaman MM, Sinia A, Guzman-Novoa E, Goodwin PH, J Invertebr Pathol 111:237-243, 2012); UAMH 4450 of *M. anisopliae* and UAMH 1069, UAMH 9744 of *B. bassiana* killed more than 50% of the varroa mites (Hamiduzzaman MM et al 2012).
- 1076 soil under Poplar with heavy underbrush Edmonton, Alta. J.W. Carmichael 6 Jun 1961 /J.W. Carmichael. Pigment: rose; grey/brown on CER.
- 1384 sandy soil, badger paddock Edmonton, Alta. J.W. Carmichael 18 Jul 1962 /J.W. Carmichael.
- 1487 (T *Beauveria stephanoderis*) *Stephanoderes hampei* (*Hypothonemus hampei*) Ceylon (Sri Lanka) Petch (NCTC 2226) 1926 /IMI 012944 [=NCTC 2226 =CBS 119.26 =ATCC 9454 = IMUR 466 = MUCL 857].
- 1514 fly Ceylon Petch (NCTC 2227) 1926 /IMI 12942 [=ARSEF 2452].
- 1819 dead insect in leaf mould Edmonton, Alta. J.W. Carmichael 23 Oct 1963 /J.W. Carmichael.
- 1857 clinical lab UCLA /G.F. Orr HO 1027.
- 3409 (T *Beauveria sulfurescens*) contaminant Baarn, Netherlands Van Beyma /J. Taylor [=CBS 209.27 =ATCC 7159 =DSM 1344 =UAMH 8717].
- 4003 muskeg soil Ft. Good Hope, N.W.T. S. Davies 1976 /S. Davies H-52-F. Biodeteriogen/biodegradation: utilizes hydrocarbons (crude oil) (Davies & Westlake, Can. J. Microbiol. 25:146-156, 1979).
- 4132 captive American alligator City Zoo, Oklahoma City G.S. Bulmer May 1978 /G.S. Bulmer OK 73190 [=ARSEF 2455]. Human/animal pathogen: fatal pulmonary infection (Fromtling RA, et al. Am. Vet. Med. Assoc. 175: 934-936, 1979).
- 4206 hand /A.S. Sekhon PLM 701, 5295.
- 4510 bark of *Abies lasiocarpa* infested with *Dryocoetes confusus* Smithers, B.C. L. Sigler /H.S. Whitney.
- 4623 contaminant from twig State College, Penn. L. Sigler Sep 1982 /L. Sigler. Oosporein (antibacterial). Pigment: rose-brown.
- 4748 Colorado potato beetle with white growth, *Leptinotarsa decemlineata* Edmonton, Alta. L. Sigler Feb 1983 /M. Goettel.
- 5089 carbonated beverage Puerto Rico /C. Betancourt 4.
- 6985 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 359) Aug 1990 /D. Inglis (MR 359). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7351 ex fruiting body of *Rhizopogon rubescens* in sandy soil under *Pinus banksiana* Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 683A) 13 Jun 1992 /S.P. Abbott (SA 683A).
- 7745 ex mycotic keratitis /D. Stevens 94-84.
- 7866 indoor air ex RCS strips, from *Apis mellifera* (honeybee)

Beauveria alba see *Engyodontium album*

Beauveria bassiana (Bals.) Vuillemin (syn. *Beauveria densa*; morph *Cordyceps bassiana*)

- 298 forest tent caterpillar (*Malacosoma disstria*) Sault Ste. Marie, Ont. D.M. McLeod /D.M. McLeod.
- 299 European pine sawfly, *Neodiprion sertifer* Sault St. Marie D.M. McLeod /D.M. McLeod. Pigment: grey/brown on CER.
- 300 Codling moth (*Cydia pomonella*) Sault St. Marie D.M.

- overwintering facility Scandia, Alta. S.P. Abbott (OHS 435)
11 Mar 1994 /S.P. Abbott (OHS 435). Mesophilic: NG @ 35C.
- 8658 atypical isolate ex forest tent caterpillar (*Malacosoma disstria*)
Edmonton, Alta. A. Keddie 23 Aug 1996 /B.A. Keddie B.b. 1.
Pigment: brown // culture conditions: scant sporulation;
atypical isolate // biocontrol: entomopathogen effective against
instars of the satin moth *Leucoma salicis* (Zurek L, Keddie
BA, *Biocontrol & Technology* 10:641-644, 2000).
- 8717 (*T Sporotrichum sulfurescens*) culture contaminant F.H. van
Beyma (DSM 1344) /ATCC 7159 [=CBS 209.27 =UAMH
3409]. Derivatives of niddamycin, magnamycin & leucomycin
(US Pat. 3,784,447); 2-deuterio-cycloalkanones (Tetrahedron
Lett. 21:4275-4278, 1980); isomeric hydroxymethylpyridines
(*Biotekhnologiya* 3:24-27, 1990); optically active
3-deuterio-cycloalkanones (J. Chem. Soc. Chem. Commun.
1980:318-319, 1980). Application: derivatives of niddamycin,
magnamycin & leucomycin (US Pat. 3,784,447); oxidation of
dialkylbenzenes (*Bioorg. Chem.* 2:99-110, 1973); oxidation of
arteether (*Bioorg. Chem.* 20:148-154, 1990); hydroxylation of
7-azabrendane & 6-azastriane derivatives (Tetrahedron Lett.
22:445-448, 1981); hydroxylation of syntheticpolycyclic
enones (Tetrahedron Asymmetry 4:1295-1306, 1993);
metabolism of phencyclidine (J. Pharm. Sci. 70:155-158,
1981); reduction of alpha, beta-unsaturated ketones (J. Org.
Chem. 47:792-798, 1982); transformation of pergolide to
pergolide sulfoxide (J. Pharm. Sci. 72:733-736, 1983);
glycosylation of 2,2,5,7,8-pentamethyl-6-hydroxychroman
(*Agric. Biol. Chem.* 53:1433-1435, 1989); converts isosorbide
dinitrate to isosorbide 5-mononitrate (Appl. Microbiol.
Biotechnol. 31:176-178, 1989); hydrolysis of racemic styrene
oxide (J. Org. Chem. 58:5533-5536, 1993); hydrolysis of
epoxyindene & dihydronaphthalene (Tetrahedron Lett.
37:3319-3322, 1996).
- 9213 corneal ulcer, female Univ. Illinois Eye Clinic, Chicago, IL A.
Cu /A. Cu 50568434. Human/animal pathogen: mycotic
keratitis (Kisla et al., *Cornea* 19:405-406, 2000).
- 9748 soil, potential insect pathogen Ontario M.J. Bidochka 2000
/M.J. Bidochka 30b2ii. Biocontrol: entomopathogenic fungi as
potential biocontrol agents of the honey bee parasitic mite
Varroa destructor (Hamiduzzaman MM, Sinia A,
Guzman-Novoa E, Goodwin PH, *J Invertebr Pathol*
111:237-243, 2012); UAMH 4450 of *M. anisopliae* and
UAMH 1069, UAMH 9744 of *B. bassiana* killed more than
50% of the varroa mites (Hamiduzzaman MM et al 2012).
- 10179 multiple skin lesions L arm, female 44 yr with ?Sweets
syndrome, DE + in histopathology Dunedin Hospital,
Dunedin, New Zealand 2002 /K. Rogers MR 2097 [=GenBank
AY513236 (ITS)]. Mesophilic: NG @ 35C (fide submitting
laboratory & UAMH) // human/animal pathogen: disseminated
infection in a patient with acute lymphoblastic leukemia..
- 11334 swab ex skin of living male Northern long-eared myotis bat
(*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J.
Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 24 C.2 CC3.
- 11450 swab ex skin of living female little brown bat (*Myotis
lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf
24-Feb-2010 /K.J. Vanderwolf Bat 58 C.3. Culture conditions:
colonies cottony // biodiversity: mycobiota of bat caves.
- Beauveria caledonica*** Bissett & Widden
5656 (T *Beauveria caledonica*) ex cotton strips from A1 horizon
moorland soil (*Calluna* sp.) Banchory, Scotland P. Widden
Dec 1981 /DAOM 191855 [=CBS 485.88 =ATCC 64970
=BCRC 32867 =CCFC005056 =IHEM 5253 =KCTC 6541
=LP 178 =GenBank AY245650 18S =GenBank Z54104 ITS
=GenBank U35284 ITS =GenBank AY245625 ITS]. Pigment:
red // cycloheximide: resistant.
- Beauveria densa*** see ***Beauveria bassiana***
- Beauveria felina*** (DeCandolle) Carmichael (syn. *Isaria felina*)
671 lung ex *Peromyreus* Manning, Alberta J.W. Carmichael Aug
1959 /J.W. Carmichael.
1430 treated soil Michigan W.B. (3333) Cooke Oct 1958 /DAOM
88671.
- Beauveria* sp.**
2787 manure Cardston, Alta. D. Remington Jun 1967 /D.
Remington. Cycloheximide: resistant.
2806 gopher hair Edmonton, Alta. D. Remington (4) Jul 1967 /D.
Remington (4). Cycloheximide: resistant.
- Bettsia alvei*** (Betts) Skou (morph *Chrysosporium farinicola*)
4343 (T *Bettsia alvei*) pollen ex honey comb Denmark J.P. Skou
1971 /CBS 688.71 [=IMI 160840]. Osmophilic: 40% dextrose
// culture conditions: incubate at 18C on 30% dextrose
medium.
4686 unspoiled dried prunes Sydney, Aust. J.I. Pitt 1970 /J.I. Pitt
FRR 380. Osmophilic: 40% dextrose.
- Bettsia alvei*** see ***Chrysosporium farinicola***
- Bifidocarpus rugulosus*** Udagawa & Uchii.
3486 soil Australia /G.F. Orr O-3622.
3488 soil Australia /G.F. Orr O-3624.
- Bionectria ochroleuca*** (Schw.) Schroers & Samuels (syn.
Nectria ochroleuca; morph *Clonostachys rosea*,
Clonostachys rosea f. *catenulatum*)
7208 ex roots of epiphytic orchid *Scaphyglottis gracilis* on fallen
Naucleopsis naga La Selva, Heredia Prov., Costa Rica K.
Richardson 1 Mar 1991 /R.S. Currah K14a. Mycorrhizae: root
endophyte epiphytic orchid *Scaphyglottis gracilis*.
8345 decaying pseudobulbs of orchid (*Stanhopea tigrina*) in
greenhouse Devonian Botanic Garden, Edmonton, Alta S.P.
Abbott (SA-M53) 06-Sep-1995 /S.P. Abbott (SA-M53).
9466 decaying pseudobulbs of orchid (*Dendrobium capituliflorum*)
UADBG, Alta S.P. Abbott (SA-M237) 22 Jul 1998 /S.P.
Abbott (SA-M237).
- Bionectria ochroleuca*** see ***Clonostachys rosea* f.
catenulata, *Clonostachys rosea***
- Bipolaris hawaiiensis*** (Ellis) Uchida & Aragaki (morph
Cochliobolus hawaiiensis)
4389 CDC B-1241. Pigment // culture conditions: sporulates at 30
C.
- Bipolaris portulacae*** (Rader) Alcorn
5071 (T Isotype *Helminthosporium portulacae*) biogenous on
Portulaca oleracea (purslane weed) Watkins Glen, New York
W.E. Rader /J. Vederas [=CBS 239.48 =ATCC 10405
=GenBank AY004778 ITS]. Culture conditions: sporulates on
tap water agar in window // systematics/taxonomy: description
of new pathogen of weed *Portulaca oleracea* (purslane); new
combinations in *Bipolaris* (Alcorn JL, *Mycotaxon* 41:
329-343, 1991).
- Bipolaris sorokiniana*** (Sacc.) Shoemaker (syn. *Drechslera
sorokiniana*; morph *Cochliobolus sativus*)
517 soil, U of A Farm, near cattle pasture Edmonton, Alta. J.W.
Carmichael 1956. Cellulolytic.
1216 soft rot of cedar cooling tower Toronto, Ont. J.W. Carmichael
1962 /J.W. Carmichael.
1379 cereal (*Hordeum*) Belgium G.L. Hennebert (992) /DAOM
74363 [=CCFC 9504]. Cellulolytic.
2677 D. Westlake [=PRL 417].
4194 barley in field Stony Plain, Alta. S. Davies 1978 /S. Davies.

- 4673 garden pea leaves, *Pisum sativum* Edmonton, Alta. J.W. Carmichael Oct 1982 /J.W. Carmichael.
- 8282 air of underground parkade ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M63) 31-Aug-1995 /S.P. Abbott (SA-M63). Biodiversity: indoor air fungi.
- Bipolaris spicifera*** (Bain.) Subram. (syn. *Drechslera spicifera*; morph *Cochliobolus spicifer*)
- 4376 lung biopsy ex leukemic patient; DE positive for hyphae Los Angeles /CDC B-3421a. Cellulolytic // human/animal pathogen.
- 4382 frontal lobe, brain ex black female 21 yr; DE positive for hyphae /M. McGinnis NCMH 1197. Cellulolytic // human/animal pathogen.
- 9903 It frontal sinus, male 24 yr Toronto, ON Aug 2000 /R. Rennie MY 6118. Thermophilic: good growth @ 37C.
- Bipolaris victoriae*** see *Cochliobolus victoriae*
- Biscogniauxia nummularia var. merrillii*** (Bres.) van der Gucht
- 2062 Nature's Valley, W. Cape, S. Africa P. Martin Jan 1959 /P. Martin 425. Cellulolytic.
- Bispora betulina*** (Corda) Hughes
- 1375 *Quercus* sp. Hull, Quebec G.L. Hennebert Oct 1960 /DAOM 71426-a [=IMI 96728 =CBS 141.61].
- 1392 *Acer* sp., culture contaminant Quebec Kendrick Jul 1960 /DAOM 70648.
- 3081 pine timber from a water cooling tower Gibraltar 1953 /IMI 52634.
- 8278 indoor air ex RCS strip from honeybee (*Apis mellifera*) overwintering facility Scandia, Alta S.P. Abbott (OHS 188) 24-Jan-1994 /S.P. Abbott (OHS 188).
- Bispora christiansenii*** Hawksworth
- 4739 *Lecanora dispersa* Herts., U.K. A.O. Lloyd /IMI 227584.
- Bispora novae-zelandiae*** Matsushima
- 6691 (T) decayed wood Warbeck Forest nr Murchison, N.Z. T. Matsushima 23 May 1983 /T. Matsushima MFC-12455.
- Bjerkandera adusta*** (Willd.:Fr.) Karst. (syn. *Polyporus adustus*)
- 4312 air sampling in house for allergenic molds /J. Kane FR 826. Application: metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999); enzymatic activity & dye decolorization (Rodríguez et al., Curr. Microbiol. 38:27-32, 1999).
- 7146 *Populus tremuloides* wood (aspen poplar) nr Whitecourt, Alta. L. Hutchison Jul 1989 /L. Hutchison NOF 1841.
- 7306 ex *Populus tremuloides* (aspen poplar) Slave Lake, Alta. G. Paul 1957 /L. Hutchison NOF 393.
- 7307 ex *Pinus contorta* (lodgepole pine) Barrier Lake, Alta. J. Powell 5 Jun 1966 /L. Hutchison NOF 590.
- 7308 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. L. Kennedy 1956 /L. Hutchison NOF 333 [=ATCC MYA 263]. Manganese peroxidase (Good production fide M. Pickard). Biodeteriogen/biodegradation: white rot; high biodegradation and mineralization of polychlorinated biphenyl congeners (Beaudette et al., Appl. Env. Microbiol. 64:2020-2025, 1998); evaluation of surfactants in stimulating degradation of polychlorinated biphenyl congeners (Beaudette et al., Letters in Appl. Microbiol. 30:155-160, 2000) // application: enzymatic activity & dye decolorization (Rodríguez et al., Curr. Microbiol. 38:27-32, 1999); metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999); ligninolytic enzymes (Pickard et al., Can. J. Microbiol. 45:627-631, 1999; Meysami P, Baheri H. Advances in Environmental Research 7:881-887, 2003); pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Chemosphere 77:687-692, 2009); high yields of enzyme manganese peroxidase (Wang, Vazquez-Duhalt & Pickard, Can. J. Microbiol. 47:277-282, 2001) // culture conditions: cereal bran for laccase production (Pickard et al., Can. J. Microbiol. 45:627-631, 1999).
- 7309 haploid strain ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. G. Paul Jun 1958 /L. Hutchison NOF 484.
- 7329 on *Acer* sp. Cayuta, NY J. Ginns (G1460) 19 Sep 1970 /DAOM 137757.
- 7330 ex *Ulmus americana* Cantley, PQ A. & J. Ginns (09888) 10 Dec 1992 /DAOM 215869.
- 7502 tissue explant from fruiting body on *Populus* sp. Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 935) 14 Sep 1993 /S.P. Abbott (SA 935).
- 8258 Alberta L.L. Kennedy (94014) /S. Davies FC-033 [=ATCC MYA 264 =GenBank DQ060037 versatile peroxidase mRNA]. Manganese peroxidase (Good production fide M. Pickard). Biodeteriogen/biodegradation: white rot; high biodegradation and mineralization of polychlorinated biphenyl congeners (Beaudette et al., Appl. Env. Microbiol. 64:2020-2025, 1998) // cellulolytic // application: metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999; Wang, Vazquez-Duhalt & Pickard, Can. J. Microbiol. 49:675-682, 2003); enzymatic activity & dye decolorization (Rodríguez et al., Curr. Microbiol. 38:27-32, 1999; Hernández-Luna CE, Gutiérrez-Soto G, Salcedo-Martínez SM. World Journal of Microbiology & Biotechnology 24:465-473, 2008); high manganese peroxidase & other ligninolytic enzymes (Pickard et al., Can. J. Microbiol. 45:627-631, 1999); high yields of enzyme manganese peroxidase; peroxidases (Pogni R, Baratto MC, Giansanti, S, et al, Biochemistry 44:4267-74, 2005); pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhalt R, Chemosphere 77:687-692, 2009); laccase production (Dantán-González E, Vite-Vallejo O, Martínez-Anaya C, Méndez-Sánchez M, et al, International Microbiology 11:163-169, 2008); transformation of pesticides with purified versatile peroxidase (Vazquez G, Tinoco R, Picard MA, Vazquez-Duhalt R, Enzyme and Microbial Technol 36:223-231, 2005); ligninolytic enzymes (Meysami P, Baheri H. Advances in Environmental Research 7:881-887, 2003); loosenin, a novel protein with cellulose-disrupting activity (Quiroz-Castañeda RE, Martínez-Anaya C, Cuervo-Soto LI, Segovia L, Folch-Mallo J. Microbial Cell Factories 10:8-16, 2011); production of cellulases and xylanases (Quiroz-Castañeda RE, Pérez-Mejía N, Martínez-Anaya C, Acosta-Urdapilleta L, Folch-Mallo J. Biodegradation 2010, Epub 11 Oct 2010) // culture conditions: cereal bran for laccase production (Pickard et al., Can. J. Microbiol. 45:627-631, 1999); cellulolytic activities on solid wheat straw medium (Quiroz-Castañeda RE, Balkcázar-López E, Dantán-González E, Martínez A, et al, E Journ Biotechnol [online] Oct 15, 2009, vol. 12(4)).
- 8369 single spore isolate (monokaryon) ex fruiting body FP-101729 on poplar (*Populus tremuloides*) Hlavade woods nr Vilas Hope Rd., Dane, WI H. Burdsall 08 Jul 1979 /H. Burdsall FP-101729 SS-1 (A).
- 8370 single spore isolate (monokaryon) ex fruiting body FP-101729 on poplar (*Populus tremuloides*) Hlavade woods nr Vilas Hope Rd., Dane, WI H. Burdsall 08 Jul 1979 /H. Burdsall FP-101729 SS-2 (B).
- 8371 single spore isolate (monokaryon) ex fruiting body L-15802 on hardwood log Onondaga Co., New York J.L. Lowe 04 Sep 1978 /H. Burdsall L-15802 SS-1 (A).
- 8372 single spore isolate (monokaryon) ex fruiting body L-15802 on hardwood log Onondaga Co., New York J.L. Lowe 04 Sep 1978 /H. Burdsall L-15802 SS-2 (B).

- 8671 single spore isolate (monokaryon) ex fruiting body FP-101729 on poplar (*Populus tremuloides*) Hlavade woods nr Vilas Hope Rd., Dane, WI H. Burdsall 08 Jul 1979 /H. Burdsall FP-101729 SS-3 (A).
- 8672 single spore isolate (monokaryon) ex fruiting body FP-101729 on poplar (*Populus tremuloides*) Hlavade woods nr Vilas Hope Rd., Dane, WI H. Burdsall 08 Jul 1979 /H. Burdsall FP-101729 SS-4 (A).
- 8673 single spore isolate (monokaryon) ex fruiting body FP-101729 on poplar (*Populus tremuloides*) Hlavade woods near Vilas Hope Rd., Dane, WI H. Burdsall 08 Jul 1979 /H. Burdsall FP-101729 SS-5 (B).
- 8674 single spore isolate (monokaryon) ex fruiting body FP-101729 on poplar (*Populus tremuloides*) Hlavade woods nr Vilas Hope Rd., Dane, WI H. Burdsall 08 Jul 1979 /H. Burdsall FP-101729 SS-6 (A). Crystals: plentiful.
- 8675 single spore isolate (monokaryon) ex fruiting body L-15802 on hardwood log Onondaga Co., New York J.L. Lowe 04 Sep 1978 /H. Burdsall L-15802 SS-5 (A).
- 8676 single spore isolate (monokaryon) ex fruiting body L-15802 on hardwood log Onondaga Co., New York J.L. Lowe 04 Sep 1978 /H. Burdsall L-15802 SS-6 (A). Crystals: plentiful.
- 8677 single spore isolate (monokaryon) ex fruiting body L-15802 on hardwood log Onondaga Co., New York J.L. Lowe 04 Sep 1978 /H. Burdsall L-15802 SS-4 (B).
- 8678 single spore isolate (monokaryon) ex fruiting body L-15802 on hardwood log Onondaga Co., New York J.L. Lowe 04 Sep 1978 /H. Burdsall L-15802 SS-7 (B). Crystals: unusual shape // odor: strong, fruity.
- 9443 blood, male 47 yr Quebec G. St-Germain 1998 /G. St-Germain MY52393. Benomyl: resistant.
- 9444 cervical lymph node, female 44 yr Quebec G. St-Germain 1998 /G. St-Germain MY51859. Benomyl: resistant.
- 9463 wood in crawlspace under school portable Seven Persons near Medicine Hat, Alta S.P. Abbott (SA 1291) 30 Nov 1998 /S.P. Abbott (SA 1291).
- 10039 living moss (*Sphagnum fuscum*) in bog with black spruce (*Picea mariana*), Labrador tea (*Rhododendron groenlandicum*) & moss (*Sphagnum fuscum*) nr Perryvale, AB (54D28N, 113D16W) M.N. Thormann 28 Jul 1997 /R.S. Currah MNT 52 [=ALTA 10853]. Biodeteriogen/biodegradation: in vitro decomposition, degrades cellulose & lignin (Thormann, Currah & Bayley, *Can. J. Microbiol.* 48:204-211, 2002); enzymatic abilities (Thormann, Currah & Bayley, *The Bryologist* 104:548-559, 2001) // culture conditions: clamps, arthroconidia.
- Bjerkandera sp.**
- 9379 buried wood The Netherlands F. de Vries (BOS 55) /M. Pickard ATCC 90940 [=CIMW 1.91 =ATCC 90940]. Manganese inhibiting peroxidase (De Jong E et al. *FEBS Lett.* 299: 107-110, 1992); veratryl alcohol, veratraldehyde, anisaldehyde, 3-chloro-anisaldehyde, and other chlorinated aromatic metabolites (De Jong E et al. *FEBS Lett.* 305: 220-224, 1992); lignin peroxidase (*Appl. Environ. Microbiol.* 62: 880-885, 1996; *Appl. Microbiol. Biotechnol.* 44: 778-784, 1996). Application: manganese peroxidase production (Mester & Field, *FEMS Microbiol. Lett.* 155: 161-168, 1997); degradation of anthracene (*Appl. Microbiol. Biotechnol.* 42: 179-186, 1994); ligninolytic enzymes (Pickard et al., *Can. J. Microbiol.* 45:627-631, 1999); enzyme manganese peroxidase.
- Blakeslea trispora** Thaxt.
- 11092 isolated multiple times from sputum of patient with respiratory symptoms; not confirmed as etiologic agent Omaha, NE J. Biehle 20-Jul-2009 /P. Iwen 01790002985.
- Blastobotrys aristata** Marvanova
- 4665 (T *Blastobotrys aristata*) moldy plaster L. Marvanova /CBS 521.75 [=GenBank DQ442686 LSU =GenBank DQ442765 SSU =GenBank U40109 partial LSU =NRRL Y-17579]. Molecular systematics: relationships among *Trichomonascus* clade including *Blastobotrys anamorphs* (Kurtzman CP, Robnett CJ, *FEMS Yeast Res* 7:141-151, 2007).
- 8479 swab ex moldy basement Ottawa, Ont. D. Malloch Dec 1995 /D. Malloch M21-4. Mesophilic: NG @ 37C.
- Blastobotrys elegans** de Hoog, Rantio-Lehtimäki & Th. Smith
- 6024 ex vacuum cleaner dust Merrickville, Ont. K. Seifert Sep 1987 /K. Seifert. Cycloheximide: resistant to 1000ppm.
- Blastobotrys navarrensis** see **Blastobotrys proliferans**
- Blastobotrys nivea** Klopotek
- 4663 (T *Blastobotrys nivea*) compost A. von Klopotek /CBS 163.67 [=ATCC 18420 =NRRL Y-17581 =GenBank DQ442690 LSU =GenBank DQ442769 SSU =GenBank U40110 partial LSU]. Molecular systematics: relationships among *Trichomonascus* clade including *Blastobotrys anamorphs* (Kurtzman CP, Robnett CJ, *FEMS Yeast Res* 7:141-151, 2007).
- Blastobotrys proliferans** Marvanova (syn. *Blastobotrys navarrensis*)
- 4664 (T *Blastobotrys navarrensis*) black pepper Spain C. Ramirez /CBS 139.77 [=ATCC 36955].
- 4666 (T *Blastobotrys proliferans*) mite-infested nut Brazil L. Marvanova /CBS 522.75 [=NRRL Y-17577 =GenBank DQ442684 LSU =GenBank DQ442763 SSU =GenBank U40098 partial LSU]. Molecular systematics: relationships among *Trichomonascus* clade including *Blastobotrys anamorphs* (Kurtzman CP, Robnett CJ, *FEMS Yeast Res* 7:141-151, 2007).
- Blastobotrys sp.**
- 6549 catheter line, female 18 yrs St.-Anne-de-Bellevue, P.Q. G. St-Germain 19 May 1989 /R.C. Summerbell FR 1784.89.
- 8898 lung, northern flying squirrel (*Glaucomys sabrinus*) Lac La Biche, Alta. J. Csotonyi 3 Feb 1997 /R.S. Currah M19[F3/39-1MT/2M]1c col B. Mesophilic: NG @ 37C.
- 8946 lung, northern flying squirrel (*Glaucomys sabrinus*) Lac La Biche, Alta. J. Csotonyi 8 Feb 1997 /R.S. Currah A24[F8/33-1BT/1c]1c.
- Blastomyces dermatitidis** see **Ajellomyces dermatitidis**
- Blastoschizomyces capitatus** see **Geotrichum capitatum**
- Blastoschizomyces pseudotriconosporon** see **Geotrichum capitatum**
- Boletus piperatus** see **Chalciporus piperatus**
- Bothrodiscus an. Ascocalyx tenuisporus** Groves
- 4317 *Abies lasiocarpa* Jasper, Alta. A. Tsuneda /A. Tsuneda C-726 [=CFB 20990 =IMI 247159]. Pigment: yellow.
- Botryoderma lateritium** Papendorf & Upadhyay
- 3588 dung S. California R.K. Benjamin (RKB 426) /G.F. Orr 0-3446.
- 4555 (T *Botryoderma lateritium*) soil Transvaal, S. Africa H.P. Upadhyay 1969 /IMI 158956.
- Botryoderma nigrum** Lopez
- 8351 S.E. Lopez 762.H5.c.
- 8352 S.E. Lopez 778.H5.
- Botryodiplodia theobromae** see **Lasiodiplodia theobromae**

Botryomonilia scheeleae Goos & Pirozynski

3958 (T *Botryomonilia scheeleae*) rotted fruits ex *Scheelea zonensis* R.D. Goos /R.D. Goos RDG 442 [=ATCC 26506 =CBS H-6788 herbarium =CBS 589.80].

Botryomyces caespitosus de Hoog & Rubio

4340 (T *Botryomyces caespitosus*) chromomycosis-like skin infection ex forearm, male 54 yr Zaragoza, Spain C. Rubio 1979 /DAOM [=CBS 177.80 =NCMH 1595 =CDC B3705 =GenBank Y18695 SSU]. Coenzyme Q-10(H2) (Yamada et al., *Antonie van Leeuwenhoek* 56:349-356, 1989).

Botryosphaeria populi see ***Botryosphaeria dothidea****Botryosphaeria rhodina* see ***Lasiodiplodia theobromae*****Botryosporium longibrachiatum** (Oud.) Maire

1402 *Botryosporium pulchrum* Corda strain CBS 1961 /DAOM 75829.

Botryotinia fuckeliana (de Bary) Whetzel (syn. *Sclerotinia fuckeliana*; morph *Botrytis cinerea*)

- 16 Bean (53-47) /Bean (53-47). Culture conditions: sclerotia produced (fide UAMH 2011).
- 264 skin ex axilla Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
- 413 hair & skin ex neck Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Cellulolytic.
- 1784 soft rot of plum Edmonton, Alta. J.W. Carmichael 14 Sep 1963 /J.W. Carmichael. Cellulolytic // application: cruciferous phytoalexins camalexin, brassinin, cyclobrassinin, and brassilexin (Pedras MSC, Hossain S, Snitynsky RB, *Phytochemistry Epub* 20 Dec 2010).
- 1785 soft rot on plum Edmonton, Alta. J.W. Carmichael 14 Sep 1963 /J.W. Carmichael. Cellulolytic.
- 1809 dogwood leaf Edmonton, Alta. J.W. Carmichael 9 Oct 1963 /J.W. Carmichael. Cellulolytic // application: cruciferous phytoalexins camalexin, brassinin, cyclobrassinin, and brassilexin (Pedras MSC, Hossain S, Snitynsky RB, *Phytochemistry Epub* 20 Dec 2010).
- 4156 contaminant ex culture (UAMH 2338) UAMH, Edmonton L. Sigler 18 Sep 1978 /L. Sigler.
- 4412 pleural fluid specimen Rhode Island /CDC 81-048165.
- 6986 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 544) Aug 1990 /D. Inglis (MR 544).
- 7950 indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Beaverlodge, Alta. S.P. Abbott (OHS 287) 4 Jun 1995 /S.P. Abbott (OHS 287). Culture conditions: degenerate poorly sporulating at deposit.
- 8373 tissue, left thumb Hamilton, Ont. Hamilton General Hospital 24 Nov 1994 /R.C. Summerbell FR 3732. Benomyl: sensitive (fide R.C. Summerbell).

Botryotrichum atrogriseum van Beyma

- 1107 soil, Warcup isol. England /G.F. Orr UCLAB 439.
- 1440 (T *Botryotrichum atrogriseum*) ex CBS as strain van Beyma /DAOM 75864.
- 1529 G.L. Barron 9712.

Botryotrichum piluliferum see ***Chaetomium piluliferum*****Botryotrichum sp.**

- 1056 sheep dung Kern County G.F. Orr /G.F. Orr 0-2046.
- 4356 Antarctic soil near Casey, Antarctica /E. Kerry 2.

Botrytis allii Munn.

- 1563 C.L. Kramer K4.

4030 onion Edmonton, Alta. J.W. Carmichael 26 Jan 1977 /J.W. Carmichael.

Botrytis cinerea see ***Botryotinia fuckeliana*****Botrytis elliptica** (Berk.) Cooke

- 10453 cause of lily blight on martagon lily Spruce Grove, Alta. (C) I. Evans 11-5-04 /I. Evans. Culture conditions: conidia observed on host, not produced in culture.
- 10454 cause of lily blight on martagon lily Spruce Grove, Alta. (C) I. Evans 11-5-04 /I. Evans. Culture conditions: conidia observed on host, not produced in culture.

Brettanomyces anomalus Custers (syn. *Trichosporonoides australiense*; morph *Dekkera anomala*)

- 6791 (T *Trichosporonoides australiense*) orange/mango drink Brisbane, Australia W. Daengsubha 1984 /W. Daengsubha TISTR 5242. Culture conditions: physiological reactions (Inglis et al., *Mycologia* 84:555-570, 1992) // systematics/taxonomy: redetermined as *Brettanomyces anomalus* (Inglis et al., *Mycologia* 84:555-570, 1992).

Brunchorstia pinea see ***Gremmeniella abietina****Brunneospora reticulata* see ***Uncinocarpus queenslandicum*****Bulbillomyces farinosus** (Bres.) Julich (syn. *Peniophora candida*; morph *Aegerita candida*)

- 8470 unidentified rotten twig submerged in stream Cantalops, Alt Emporda, Catalonia, Spain S.K. Abdullah Nov 1995 /J. Guarro FMR 5586.

Bullera alba (Hanna) Derx

- 1749 air in dairy plant B.W. Hammer 1937 /R.J. Bandoni [=CBS 501].

Bullera sp.

- 6255 airborne contaminant mixed with *Cryptococcus laurentii* OMH, Toronto R.C. Summerbell 11 Sep 1987 /R.C. Summerbell SF 5309.87.

Burgoa verzuoliana Goidanich

- 4674 dead *Betula* Devon, Alta. L.Sigler (C) 17 Sep 1982 /L.Sigler (C).

Byssosascus striatosporus see ***Myxotrichum striatosporum*****Byssochlamys fulva** Olliver & Smith (morph *Paecilomyces fulvus*)

- 3094 (T *Byssochlamys fulva*) bottled fruit T. Rendle 1933 /IMI 40021 [=ATCC 10099 =CBS 146.48 =NRRL 1125]. Byssochlamic acid & mannitol (*Biochem. J.* 27:1814-1819, 1933); byssochlamyopeptidase A (*Appl. Microbiol.* 25:163-168, 1973); polygalacturonase & pectate lyase.
- 9624 decayed *Picea glauca* wood (stage II), 2 year post-fire site Mariana Lake, AB T. Lumley (F953-04-S1C) 16 Mar 1999 /R.S. Currah. Pigment: red-brown // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000) // culture conditions: produces anamorph only.
- 11636 vineyard soil D.F. Splittstoesser 1977 /J. Vederas H-25 [=ATCC 36841 =NRRL 32567 =GenBank FJ389942 =GenBank DQ459372 ITS]. Patulin; extracellular glucoamylase (Hang YD, Woodams EE, *Lett Appl Microbiol* 18: 77-78, 1994); patulin, clavacin, clavatin, claviformin (*Rice SL, J Food Sci* 45: 485-495, 1980).

Biodeteriogen/biodegradation: heat resistant ascospores (Splittstoesser DG, Splittstoesser CM, J Food Sci 42:685-688, 1977); antifungal peptides active against *Byssoschlamys fulva* (Lee H, Churey J, Worobo R, Journal of Applied Microbiology 105: 663-673, 2008); antifungal protein active against *Byssoschlamys fulva* and other fungi (Manns DC, Churey JJ, Worobo RW, Appl Env Microbiol 2012 epub, doi: 10.1128/AEM.07727-11).

Byssoschlamys nivea Westling (morph *Paecilomyces niveus*)

- 1108 soil /G.F. Orr WY1.
1378 soil India S.A. Lodhi 1960 /DAOM 71989.
2707 bovine skin & hair Alberta J.W. Carmichael Jan 1967 /S. Ravluk.
3059 R.K. Benjamin RSA 410 [=NRRL 1678 =Thom Coll. no. 5070.1].
3528 (T Arachniotus trisporus) cow's milk J.W. Hotson /CBS 133.37 [=ATCC 24101].
9260 forest soil Rumania O. Constantinescu /CBS 174.82. Benomyl: sensitive (NG 2 ppm).

Byssoschygia ceratinophila Guarro, Punsola & Cano (morph *Malbranchea an. Byssoschygia ceratinophila*)

- 5669 (T *Byssoschygia ceratinophila*) garden soil Olot, Garrotxa, Catalonia, Spain J. Guarro May 1980 /J. Guarro FMR 785 [=ATCC 64724 =GenBank AB075353 LSU partial =IMI 316057 =GenBank AJ315176 SSU]. Molecular systematics: ITS sequence (fide UAMH 2011).
8387 soil Tenerife, Canary Islands, Spain J. Cano Jul 1992 /J. Guarro FMR 5043. Pigment: brown.

Cadophora fastigiata Lagerb. & Melin (syn. *Phialophora fastigiata*)

- 1221 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael. Molecular systematics: phialide arrangement in helotialean genera *Cadophora* and *Phialocephala* (Day M, Hall JC, Currah RS, Mycologia 104:371-381, 2012).
1234 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
1236 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
1239 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
1368 Pinus strobus Ottawa Aug 1929 /DAOM 70171 [=IMI 96747].
1420 Pinus banksiana Ottawa Kendrick (CAD 16) 28 Jul 1962 /DAOM 75292.
6347 contaminant ex DAOM 75265 /DAOM 75265.
6768 CCA-treated Douglas Fir pole Candor, NY /C.J.K. Wang ED-132 [=ATCC 66716].

Cadophora finlandica (C.J.K. Wang & H.E. Wilcox) T.C. Harr. & McNew (syn. *Phialophora finlandica*)

- 7454 (T *Phialophora finlandica*) ex roots Pinus sylvestris seedling Finland C.J.K. Wang /CBS 444.86 [=FAG 15 =GenBank AF011327 =GenBank AF486119 =GenBank AY249074]. Molecular systematics: dark root endophytes (Harney et al., Mycol. Res. 101:1397-1404, 1997); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); relationship with Piceirhiza bicolorata ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002).
8322 mycorrhizal root tips of 2-3 yr old Pinus strobus (Eastern White Pine) seedlings in tree nursery Ontario Ministry of Natural Resources Nursery, St. Williams, Ont. M. Kronick-Ursic (MRA 1) Sep 1994 /R.L. Peterson MRA 1 [=GenBank AF056373 SSU short]. Mycorrhizae: comparison with sterile isolates (Jumponnen & Trappe, New Phytol. 140:295-310, 1998); ectendomycorrhizal on Pinus strobus in

field & pot culture (Ursic, Peterson & Husband, Can. J. For. Res. 27:54-62, 1997) // culture conditions: phialidic conidia observed in culture.

Cadophora gregata (Allington & D.W. Chamb.) T.C. Harr. & McNew 2003

- 11045 (T *Cephalosporium gregatum*) roots and stems of soybean, Glycine max Missouri, USA D.W. Chamberlain /CBS 132.51 [=CBS H-19968 (holotype) =ATCC 11073 =DSM 3716 =MUCL 9703]. Plant pathogen: brown stem rot of soybean (Allington WB, Chamberlain DW, Phytopathology 38: 793-802, 1948; Chen W, et al., Phytopathology 90: 875-883, 2000) // molecular systematics: phylogeny of *Cadophora* and *Phialocephala* (Harrington TC, McNew DL, Mycotaxon 87:141-151, 2003).

Cadophora hiberna Bills

- 11050 (T *Cadophora hiberna*) ex decorticated wood of Robinia pseudoacacia (black locust) Northhampton Co., intersection of Durham Rd. & Stout's valley Rd., Pennsylvania, USA G.F. Bills 5-Jan-1997 /CBS 110521 [=GenBank AF530462 ITS =CBS H-19959 (Holotype)]. Pigment: yellow // systematics/taxonomy: description (Bills, G.F., Mem. N. Y. Bot. Gard. 89:113-123, 2004).

Cadophora lagerbergii see *Phialocephala lagerbergii*

Cadophora luteo-olivacea (J.F.H. Beyma) T.C. Harr. & McNew

- 11053 (T *Phialophora luteo-olivacea*) waste water of Schleiferei Byske Munksund, Sweden Munksunds Sulfatfabrik Jun-1939 /CBS 141.41 [=CBS H-7584 (Holotype) =GenBank AY249066 ITS =GenBank AY249081 LSU =CBS H-7586 (Isotype)]. Molecular systematics: phylogeny of *Cadophora* and *Phialocephala* (Harrington TC, McNew DL, Mycotaxon 87:141-151, 2003).

Cadophora malorum (Kidd & Beaumont) W. Gams (syn. *Phialophora malorum*)

- 11047 (T Isotype Sporotrichum carpogenum) G.D. Ruehle; (C) F.D. Heald Jan 1931 /CBS 266.31 [=GenBank AY249057 =CBS H-7585]. Molecular systematics: phylogeny of *Cadophora* and *Phialocephala* (Harrington TC, McNew DL, Mycotaxon 87:141-151, 2003).

Cadophora melinii Nannf.

- 1354 Fagus Mangenot /DAOM 60520.
6349 home furnace humidifier drum Edmonton, Alta. L. Sigler Feb 1989 /W. Kyle.
6770 creosote-treated southern pine pole Chester, NJ /C.J.K. Wang P-913 [=ATCC 66757]. Biodeteriogen/biodegradation: soft rot Type 2 in ponderosa pine sapwood (Wang & Zabel, Fungi from utility poles, 1990) // pigment: brown.
7047 R.C. Summerbell BB 904.
7452 ex Populus tremuloides (aspen poplar) Hinton, Alta. C. Myrholm (CF-90-1c-2a) 28 Sep 1990 /L. Hutchison NOF 1511. Pigment: bright yellow.
8289 gel of freezer pack at room temp UAMH S.P. Abbott (SA-M69) 23-Feb-1994 /S.P. Abbott (SA-M69). Pigment: grey.
10077 submerged cat tail stalk (*Typha latifolia*) Alberta M. Schulz 2001 /R.S. Currah TSAB #A. Biodeteriogen/biodegradation: decomposition of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).
10182 aspen root with wound; root sectioned and surface sterilized nr Drayton Valley, Alta J. Pankuch 2001 /P. Blenis BL 26-9A(1)-1b-1. Culture conditions: slow growing.
11046 (T Isotype *Cadophora melinii*) Sweden J.A. Nannfeldt (No. 389:10) /CBS 268.33 [=IMI 059445 =CBS H-7587].

Molecular systematics: phylogeny of Cadophora and Phialocephala (Harrington TC, McNew DL, Mycotaxon 87:141-151, 2003).

Calcarisporium arbuscula Preuss

- 1171 wood /DAOM 63074.
1235 soft rot of cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
1237 soft rot of cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
4683 litter under old Pinus Devon, Alta. L. Sigler Oct 1982 /L. Sigler.
5165 parasite ex Cortinarius sp. Edson Forest, Alta. L. Sigler (Cort. 11) Sep 1985 /L. Sigler (Cort. 11). Hyperparasite: on Cortinarius.
6366 on mushroom basidiocarp Peel Co. Ont. B. Friel (C) J. Kerr Oct 1988 /L. Hutchison. Hyperparasite.

***Calcarisporium* sp.**

- 686 DAOM 54782.

Caldariomyces fumago see ***Leptoxyphium fumago***

***Caliciopsis* sp.**

- 8484 stems of Cirsium spinosissimum (thistle) Gornesgrat, Zermatt, Switzerland B. Ing Jun 1994 /B. Spooner KC 554. Benomyl: sensitive (NG 2 ppm).

Calloria fusarioides see ***Cylindrocolla urticae***

Calonectria clavata see ***Cylindrocladium flexuosum***

Calonectria rigidiuscula see ***Fusarium rigidiusculum***

***Calonectria* sp.**

- 7192 ex substrate roots of epiphytic orchid Campylocentrum micranthum La Selva, Heredia Prov., Costa Rica K. Richardson 25 Oct 1991 /R.S. Currah K384c. Mycorrhizae: root endophyte epiphytic orchid Campylocentrum micranthum.

Calonectria variabilis see ***Cylindrocladium variabile***

Camarosporium propinquum (Sacc.) Sacc.

- 7052 pollen ex Megachile rotundata (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 415) Aug 1990 /D. Inglis (MR 415).
7054 provisions for Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 83) Aug 1990 /D. Inglis (MR 83).

Canariomyces notabilis von Arx (morph *Trichosporiella an.*

Canariomyces notabilis)

- 4906 (T *Canariomyces notabilis*) litter Phoenix canariensis Gran Canaria, Maspalomas von Arx 1982 /CBS 548.83.

Candelabrum spinulosum van Beverwijk

- 1475 (T *Candelabrum spinulosum*) decaying vegetable matter in pond Ommen, Holland A.L. van Beverwijk 1940 /IMI 52463 [=CBS 129.51].

Candida albicans (Robin) Berkhout (syn. *Candida*

stellatoidea)

- 19 Michigan /.
20 sputum Edmonton, Alta. J.W. Carmichael 7 Jul 1949 /J.W. Carmichael.
21 S. Dreyfus 118.
22 sputum Mass. Gen. Hosp. J.W. Carmichael Dec 1952 /J.W.

Carmichael.

- 24 S. Dreyfus 377.
793 blood culture Edmonton, Alta. G. Thomas Nov 1959 /G. Thomas.
3468 ex ?jaw Med. Bact. U of A Hospital 28 Feb 1972 /U of A Med. Bact. MU1675.
3469 vagina Edmonton, Alta. /U of A Med. Bact..
4273 A.S. Sekhon PLM 433.
4485 U Alta. Hospital (C-10964) /A.S. Sekhon.
6335 27 Nov 1987 /R. McWhirter.
6626 quality control strain for MicroScan Yeast ID panel /H. Congly ATCC 66027 [=ATCC 66027 =AmMS 225]. Application.
8765 (T *Oidium albicans* (neotype)) skin of man with interdigital mycosis, ATCC Preceptrol culture Uruguay J.E. Mackinnon 1936 /R. Rennie ATCC 18865 [=ATCC 18804 =CBS 562 =IFO 1385 =JCM 1542 =NCYC 597 =NRRL Y-12983]. Application: production of citric acid.
9898 blood Iowa /R. Rennie ATCC 90028. Application: susceptibility testing (Espinel-Ingroff et al., J. Clin. Microbiol. 30: 3138-3145, 1992; Pfaller MA et al., J. Clin. Microbiol. 32: 1650-1653, 1994; Espinel-Ingroff et al., J. Clin. Microbiol. 33: 3154-3158, 1995; Reference method for broth dilution antifungal susceptibility testing of yeasts; approved standard. NCCLS M27-A, 1997; Liao RS et al., Antimicrob. Agents Chemother. 43: 1034-1041, 1999); Effect of amphotericin B on vitality (Liao RS et al., Antimicrob. Agents Chemother. 43: 1034-1041, 1999).
10401 cervix Illinois /ATCC 60193. Application: Preceptrol culture, NCCLS QA strain for media.
10466 nail infection Wasson /ATCC 24433. Application: susceptibility testing (NCCLS. Reference method for broth dilution antifungal susceptibility testing of yeasts; approved standard. Wayne, PA: NCCLS; NCCLS M27-A, 1997; Brenner DJ et al. J. Clin. Microbiol. 32: 1625-1628, 1994); assay of amphotericin B.
10588 ex human blood Bethesda, MD C.W. Emmons /R. Rennie ATCC 14053 [=NIH 3172 =ATCC 14053]. Estrogen-binding protein (Endocrinology 124: 1965-1972, 1989). Application: quality control strain for bioMerieux Vitek products; control strain for identification (J. Clin. Microbiol. 36: 883-886, 1998).

Candida antarctica see ***Pseudozyma antarctica***

Candida bombicola (Spencer et al.) Meyer & Yarrow

- 7073 provisions for Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 654) Aug 1990 /D. Inglis (MR 654).
7074 frass ex Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 694) Aug 1990 /D. Inglis (MR 694).

Candida brumptii see ***Candida catenulata***

Candida catenulata Diddens & Lodder (syn. *Candida brumptii*)

- 23 S. Dreyfus 424.
2779 sputum Whitehorse, Yukon Territory 6 Mar 1967 /S. Dreyfus.
2799 peach juice Edmonton, Alta. J.W. Carmichael Sep 1967 /J.W. Carmichael.

Candida ciferrii see ***Stephanoascus ciferrii***

Candida ernobii (Lodder & Kreger-van Rij) Meyer & Yarrow

- 7443 Populus tremuloides Fort Nelson, B.C. L. Hutchison (CCMC-1-13b) 1 Nov 1993 /L. Hutchison NOF 1943. Culture conditions: physiological reactions (Hutchison & Hiratsuka, Mycologia 86:386-391, 1994).

Candida famata (Harrison) S.A. Meyer & Yarrow (syn.

Torulopsis famata, *Torulopsis candida*; morph
Debaryomyces hansenii)

- 1950 Edmonton, Alta. J.W. Carmichael 10 Dec 1963 /J.W. Carmichael.
1972 ear swab, male 1 yr Edmonton, Alta. J.W. Carmichael 23 Jan 1964 /J.W. Carmichael.
1973 sputum, male adult Edmonton, Alta. J.W. Carmichael 21 Jan 1964 /J.W. Carmichael.
6339 shipping door, brewery Calgary, Alta. L. Sigler 7 Feb 1989 /J. Schulz 2382-11.

Candida famata see *Debaryomyces hansenii*

Candida flavificans see *Trichosporiella flavificans*

Candida gelida see *Leucosporidium gelidum*

Candida glabrata (Anderson) Yarrow & Meyer (syn.

Torulopsis glabrata)

- 1927 pigeon crop Prov. Vet. Lab. J.W. Carmichael 28 Jan 1964 /J.W. Carmichael.
1951 perianal swab Edmonton, Alta. J.W. Carmichael 19 Dec 1963 /J.W. Carmichael.
1971 tongue scrapings, male 50 yr Edmonton, Alta. J.W. Carmichael 24 Feb 1964 /J.W. Carmichael.
2013 vaginal swab, female 33 yr Edmonton, Alta. J.W. Carmichael 8 Apr 1964 /J.W. Carmichael.
3607 vaginal swab, female 48 yr Edmonton, Alta. E. Lacombe 10 Aug 1973 /E. Lacombe.
3608 vaginal swab, female 40 yr Edmonton, Alta. E. Lacombe 10 Aug 1973 /E. Lacombe.
3609 vaginal swab, female 73 yr Edmonton, Alta. E. Lacombe 10 Aug 1973 /E. Lacombe.
7075 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 709) Aug 1990 /D. Inglis (MR 709).
8610 urine, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1413.
8611 blood, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1362.
8612 bronchial washing, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1305.
8613 esophagus, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1304.
8614 urine, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1264.
10403 This material is cited in a U.S. and/or other Patent and may not be used to infringe on patent claims. /ATCC 15126 [=CBS 15126 =NRRL Y-17770]. Application: Preceptrol culture, quality control strain for API identification; Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).

Candida kefyr (Beij.) Uden & H.R. Buckley ex S.A. Mey. & Ahearn (syn. *Candida pseudotropicalis*; morph *Kluyveromyces marxianus*)

- 6627 quality control strain for MicroScan Yeast ID panel /H. Congly ATCC 66028 [=ATCC 66028].

Candida kefyr see *Kluyveromyces marxianus*

Candida krusei (Cast.) Berkhout (morph *Pichia kudriavzevii*)

- 83 sputum Edmonton, Alta. A. Bakerspigel Jul 1952 /A. Bakerspigel.
387 origin unknown /A. Bakerspigel.
4930 A.S. Sekhon PLM 935.
7628 ex milk from cow with mastitis Vermillion, Alta. Apr 1994 /A.

Sheena.

- 5855 (T *Candida krusei*) sputum ex patient with clinical bronchomycosis Sri Lanka A. Castellani /R. Rennie ATCC 6258 [=ATCC 6258 =CBS 573 =IFO 1064 =IFO 1395 =ATCC 749 =JCM 1609 =NRRL Y-7179 =NRRL Y-413 =GenBank M60305 SSU =GenBank EF568018 ITS =GenBank AB305095 ITS =GenBank AM745304 LSU =GenBank DQ660435 RPR1 =GenBank AY497720 RPB2 =GenBank AY497616 RPB2 =GenBank AB044925 cytb]. Esterase activity (J. Clin. Microbiol. 8:756-760, 1978). Application: Preceptrol culture, quality control strain for API identification; Preceptrol culture, quality control strain for antifungal susceptibility testing // molecular systematics: phylogenetic relationships in *Pichia*, *Issatchenkia* and *Williopsis* (Kurtzman CP, Robnett CJ, Basehoar-Powers E, FEMS Yeast Res 8:939-954, 2008).
10404 A. Castellani /ATCC 14243. Application: Preceptrol culture, control strain strain.

Candida palmioleophila Nakase & M. Itoh

- 5626 intravenous catheter tip & blood cultures ex male 34 yrs Quebec G. St.-Germain Sep 1985 /G. St.-Germain MYCO [=LSPQ 0161 =JCM 6896]. Human/animal pathogen: fungemia (St. Germain & Laverdiere, J. Clin. Microbiol. 24:884-885, 1986) // systematics/taxonomy: determined by DNA-DNA reassociation (Sugita et al., Jpn. J. Med. Mycol. 40:21-25, 1999).

Candida paludigena Golubev & Blagodatskaya (syn.

Trichosporiella paludigena)

- 6485 saw dust S.-Finland A.H. Rantio-Lehtimäki Oct 1982 /CBS 212.83 [=IHEM 13246 =JCM 2910]. Thermotolerant: growth equivalent @ 25 & 30C, slower @ 35C.
9292 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 10-5B) T.C. Lumley (EI-01-S1D 5 Oct 1996 /R.S. Currah EI-01-S1D, 10-5B). Benomyl: resistant // molecular systematics: Partial LSU sequence for this strain matched with *Candida paludigena* (fide J. Fell laboratory 1999) // thermotolerant: growth equivalent at 25 & 30C.

Candida parakrusei (Cast. & Chalmers) Langeron & Guerra
390 origin unknown /;***Candida parapsilosis*** (Ashford) Langeron & Talice

- 612 vaginal swab Edmonton, Alta. J.W. Carmichael 1958 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with AY391843 *C. parapsilosis* (CBS 604).
2872 finger nail Edmonton, Alta. 27 Feb 1968 /; .
2977 cultures for *Leishmania* Edmonton, Alta. E. Johnson Jul 1968 /E. Johnson.
8584 (T *Candida parapsilosis*) QC strain for antifungal susceptibility testing /ATCC 22019 [=ATCC 22019 =CBS 604]. Esterase activity (J. Clin. Microbiol. 8:756-759, 1978); lipase (Eur. J. Biochem. 228: 169-175, 1995; J. Am. Oil Chem. Soc. 72: 1367-1373, 1995); (S)-1,3-butanediol dehydrogenase (Biosci. Biotechnol. Biochem. 59: 1769-1770, 1995). Application: antifungal susceptibility QC strain listed in the NCCLS M27-T document; susceptibility testing (J. Clin. Microbiol. 32: 1625-1628, 1994; NCCLS. Reference method for broth dilution antifungal susceptibility testing of yeasts; approved standard. Wayne, PA: NCCLS; NCCLS M27-A, 1997); assay of ketoconazole (J. Clin. Microbiol. 34: 816-817, 1996); assay of itraconazole (J. Clin. Microbiol. 34: 816-817, 1996) // biodeteriogen/biodegradation: degrades phenol (Antoine Leeuwenhoek 62: 181-187, 1992); degrades hydroxybenzoate (Antoine Leeuwenhoek 62: 181-187, 1992) // molecular systematics: control strain for identification (J. Clin. Microbiol. 31: 2021-2030, 1993).

- 10468 blood Virginia A. Espinel-Ingroff (52.493) /ATCC 90018. Application: susceptibility testing for FUNGITEST and broth microdilution methods of *Candida* spp. and *Cryptococcus neoformans* (Davey KG et al., J. Clin. Microbiol. 36: 926-930, 1998); susceptibility testing (NCCLS. Reference method for broth dilution antifungal susceptibility testing of yeasts; approved standard. Wayne, PA: NCCLS; NCCLS M27-A, 1997).
- 10788 ex liquid scintillator containing naphthalene, ethoxylated nonylphenol, mineral oil, diphenyloxazole and benzene University of British Columbia, Vancouver, B.C. A. Zakaryan (AZ 2) 25-Jan-06 /M.L. Berbee AZ 2 [=GenBank DQ981397]. Culture conditions: growing in liquid scintillator and interfering with detection of elementary particles (fide M. Berbee).

Candida pseudotropicalis see *Candida kefyi**Candida pulcherrima* (Lindner) Windisch (morph*Metschnikowia pulcherrima*)

- 1771 J.C. MacDonald.
- 2774 turkey air sac Edmonton, Alta. E.J. Burroughs May 1967 /E.J. Burroughs.
- 2781 sputum Whitehorse, Yukon Territory 29 May 1967 /E.J. Burroughs.

Candida reukaufii see *Metschnikowia reukaufii**Candida robusta* see *Saccharomyces cerevisiae**Candida scottii* Diddens & Lodder (morph *Leucosporidium scottii*)

- 2012 blood clot, probably contaminant Edmonton, Alta. J.W. Carmichael 6 Dec 1963 /J.W. Carmichael.
- 7078 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 691) Aug 1990 /D. Inglis (MR 691).

Candida sp.

- 17 sputum Edmonton, Alta. 29 Aug 1946 /D. Inglis (MR 691).
- 18 plate contaminant Cambridge, MA J.W. Carmichael Aug 1953 /J.W. Carmichael.
- 254 rotting stump Boston, MA J.W. Carmichael 1953 /J.W. Carmichael.
- 304 R.W. Benham V 2614.
- 305 sputum Mass. Gen. Hosp., Boston, Mass. J.W. Carmichael Dec 1952 /J.W. Carmichael.
- 307 stool Mass. Gen. Hosp., Boston, Mass. J.W. Carmichael Dec 1952 /J.W. Carmichael.
- 308 sputum Mass. Gen. Hosp., Boston, Mass. J.W. Carmichael Feb 1953 /J.W. Carmichael.
- 312 stool Mass. Gen. Hosp., Boston, Mass. J.W. Carmichael Dec 1952 /J.W. Carmichael.
- 313 stool Mass. Gen. Hosp., Boston, Mass. J.W. Carmichael Dec 1952 /J.W. Carmichael.
- 314 sputum Mass. Gen. Hosp., Boston, Mass. J.W. Carmichael Feb 1953 /J.W. Carmichael.
- 316 sputum Mass. Gen. Hosp., Boston, Mass. J.W. Carmichael Feb 1953 /J.W. Carmichael.
- 597 sputum Edmonton, Alta. J.W. Carmichael Jan 1958 /J.W. Carmichael.
- 861 refrigerated Jello Edmonton, Alta. J.W. Carmichael 20 Dec 1960 /J.W. Carmichael.
- 862 sputum Edmonton, Alta. J.W. Carmichael 23 Dec 1960 /J.W. Carmichael.
- 867 sputum Edmonton, Alta. J.W. Carmichael 4 Jan 1961 /J.W. Carmichael.
- 1090 frozen pie fillings New Jersey H.H. Kuehn Aug 1961 /H.H. Kuehn.

- 2563 blood, male 2 yr Edmonton, Alta. J.W. Carmichael 10 Dec 1965 /J.W. Carmichael.

Candida stellatoidea see *Candida albicans**Candida subhashii* M. Groenewald, Sigler & Richardson

- 10744 (T *Candida subhashii*) ex peritoneal dialysis fluid, male 69 yr Toronto, ON /R. Rennie MY 6551 [=OMH FR 392 =Treebase SN3981 =Mycobank MB 512099 =GenBank EU836707 ITS =GenBank EU836708 28S =CBS 10753]. Molecular systematics: BLAST match no sequence match with ITS & D1D2 sequences (fide UAMH); mitochondrial genome features (Fricova D, Valach M, Farkas Z, Pfeiffer I, Kucsera J, Tomaska, L, Nosek J, Microbiology 156:2153-2163, 2010) // human/animal pathogen: peritonitis in patient on CAPD (Adam H, Groenewald M, Mohan M, Richardson S, et al, Med Mycol 2008).

Candida tropicalis (Cast.) Berkhout

- 389 origin unknown /; .
- 6628 H. Congly ATCC 66029 [=ATCC 66029 =AmMS 227]. Application: quality control strain for MicroScan Yeast ID panel.
- 7257 ex peat piles Seba Beach, Alta. A. Jones Nov 1992 /T. Cable.
- 7258 ex peat piles Seba Beach, Alta. A. Jones Nov 1992 /T. Cable.
- 8605 wound, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1319.
- 8606 blood in drainage tube, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1209.
- 8607 subhepatic fluid, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1208.
- 8608 chest wound, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1193.
- 8609 blood, fluconazole resistant Texas 1996 /M.G. Rinaldi UTHSC 96-1168.
- 10402 ATCC 13803. Application: Preceptrol culture, control strain for identification.
- 10467 (T *Monilia tropicalis*) patient with bronchomycosis A. Castellani /ATCC 750 [=NRRL Y-607 =NRRL Y-12968 =NRRL Y-12699 =JCM 1541 =IFO 1400 = IFO 1070 =CBS 94 =ATCC 7349 =ATCC 4563]. Application: susceptibility testing (NCCLS. Reference method for broth dilution antifungal susceptibility testing of yeasts; approved standard. Wayne, PA: NCCLS; NCCLS M27-A, 1997; Brenner DJ et al. J. Clin. Microbiol. 32: 1625-1628, 1994) // fungus resistance testing: ASTM Standard Test Method D4783-89. Resistance of adhesive preparations in container to attack by bacteria, yeast, and fungi. West Conshohocken, PA. // culture conditions: poor recovery from water stocks (fide UAMH 2011).

Cantharellula umbonata (Gmel ex Fr.) Singer

- 5600 gregarious in *Pleurozium* moss under *Pinus banksiana*, Kalmia sp & *Vaccinium* sp Gross Twp., Timiskaming Dist., Ont. L. Hutchison 26 Aug 1986 /L. Hutchison LH-72-86 [=TRTC LH-72-86].

Capnobotryella renispora Sugiyama & Amano

- 9870 sphagnum, originally mixed with *Chlorella* sp. Perryvale, AB A. Tsuneda 20 Sep 1999 /A. Tsuneda [=GenBank AY220611 (ITS)]. Molecular systematics: phylogenetic placement in Capnodiales (Hambleton, Tsuneda & Currah, Mycologia 95:959-975, 2003); phylogeny and conidiogenesis (Tsuneda, Hambleton & Currah, Rep. Tottori Mycol. Inst. 41:1-12, 2003) // biodiversity: cohabitants green alga (UAMH 9871) and *Scleroconidioma sphagnicola* (UAMH 9731) (Tsuneda, Hambleton & Currah, Rep. Tottori Mycol. Inst. 41:1-12, 2003).

Capronia mansonii (Schol-Schwarz) Mueller, Petrini, Fischer, Samuels & Rossman (morph *Exophiala an. Capronia mansonii*)

- 8414 (T *Capronia mansonii*) *Populus tremula* Sweden F. Mangelot /W. Untereiner CBS 101.67 [=IMI 134456 =ATCC 18659 =NRRL Y-7857 =CBS 101.67 =GenBank L35282 =GenBank AF050247] homothallic fide Untereiner. Molecular systematics: comparison of partial LS rRNA sequences (Masclaux et al., J. Med. Vet. Mycol. 33:327-338, 1995); Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995) // systematics/taxonomy: genus *Capronia* (Untereiner, Mycologia 89:120-131, 1997; Untereiner, Mycologia 86:290-295, 1994).
- 8415 gall of *Cynips kollari* on *Quercus pedunculata* France /W. Untereiner CBS 528.86 [=CBS 528.86] teleomorph unknown fide Untereiner. Systematics/taxonomy: genus *Capronia* (Untereiner, Mycologia 89:120-131, 1997).

Capronia parasitica Ellis & Everhart

- 8416 ex *Hypoxyton cohaerens* v. *microsporon* France O. Petrini /W. Untereiner CBS 123.88 [=ETH 9190 =CBS 123.88 =GenBank L35297]. Pigment: brown // molecular systematics: Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995).
- 8417 *Diatrype disciformis* Germany H. Besl /W. Untereiner CBS 164.92 [=CBS 164.92]. Pigment: brown.

Capronia peltigerae (Fuckel) D. Hawksw.

- 11090 mass ascospore isolate ex thalli of *Peltigera rufescens* on the ground Lorrain District, between Dudelage and Kayl, Luxembourg (C) P. Diederich (16353) 22 Dec-2006 /W. Untereiner WUC 670 [=GenBank HQ709322 ITS =GenBank HQ613814 mitSSU =GenBank HQ613815 SSU =GenBank HQ613813 LSU =GenBank HQ625027 RPB1]. Molecular systematics: phylogenetic position of the lichenicolous ascomycete *Capronia peltigerae* (Untereiner WA, Gueidan C, Orr M, Diederich P, Fungal Diversity 49:225-223, 2011) // culture conditions: lacks a conidial anamorph.
- 11091 Lorrain District, between Dudelage & Kayl, Luxembourg (C) P. Diederich (16353) 22-Dec-2006 /W. Untereiner WUC 671. Molecular systematics: phylogenetic position of the lichenicolous ascomycete *Capronia peltigerae* (Untereiner WA, Gueidan C, Orr M, Diederich P, Fungal Diversity 49:225-223, 2011) // culture conditions: lacks a conidial anamorph.

Capronia pilosella Karsten (morph *Exophiala an. Capronia pilosella*)

- 8418 decayed wood Switzerland O. Petrini /W. Untereiner CBS 125.88 [=ETH 9189 =CBS 125.88]. Molecular systematics: comparison of partial LS rRNA sequences (Masclaux et al., J. Med. Vet. Mycol. 33:327-338, 1995) // systematics/taxonomy: genus *Capronia* (Untereiner, Mycologia 89:120-131, 1997).

Capronia pinicola see ***Tyrannosorus pinicola***

Capronia semi-immersa (Cand. & Sulmont) Unter. & F.A. Naveau (syn. *Capronia svrcekiana*; morph *Phialophora americana*)

- 10872 wood of unknown deciduous species (voucher lost); det. as *Capronia svrcekiana* Reblova Devin Mountain, Southern Moravia, Czech Republic (C) M. Reblova (MR 1504/99) 01-Oct-1999 /W. Untereiner WUC 330 [=GenBank EU514691 LSU =GenBank EU514704 beta-tubulin =GenBank JN941209 SSU]. Molecular systematics: systematics of the *Phialophora verrucosa* complex (Untereiner WA, Angus A, Reblova M, Orr M-J, Botany 86:742-750, 2008).
- 10873 ex decayed wood (*Tilia cordata*); det. as *Capronia svrcekiana*

Reblova Devin Mountain, Southern Moravia, Czech Republic (C) M. Reblova MR 1505/99 01-Oct-1999 /W. Untereiner WUC 331 [=CUP 67655 =GenBank EU514692 LSU =GenBank EU514705 beta-tubulin]. Molecular systematics: systematics of the *Phialophora verrucosa* complex (Untereiner WA, Angus A, Reblova M, Orr M-J, Botany 86:742-750, 2008).

- 10874 ex decayed wood (*Tilia cordata*); det. as *Capronia svrcekiana* Reblova Devin mountain, Southern Moravia, Czech Republic (C) M. Reblova MR 1507/99 01-Oct-1999 /W. Untereiner WUC 332 [=CUP 67656 =GenBank EU514693 LSU =GenBank EU514706 beta-tubulin]. Molecular systematics: systematics of the *Phialophora verrucosa* complex (Untereiner WA, Angus A, Reblova M, Orr M-J, Botany 86:742-750, 2008).
- 11485 rotten decorticated wood of *Acer* sp. Hemlock Swamp Trail, Frost Valley YMCA, Forstmann Conference Center, Ulster Co., NY W. Untereiner Sept-1989 /W. Untereiner WUC 16ms [=WUC 312ms =DAOM 226195 =MUCL 39979 =BPI 744425].
- 11486 surface of *Funalia trogii* on wood of *Populus* sp. Ile de Sauveterre de Bearn, France F. Candoussau (FC 399); (I) W. Untereiner Jan-1995 /W. Untereiner WUC 244 ms [=WUC 313ms =DAOM 226196 =MUCL 40572 =FC 399 =AFTOL 658].

***Capronia* sp.**

- 10104 ericoid mycorrhizae ex *Gaultheria shallon* (salal) N Vancouver Is., B.C. T.R. Allen /T.R. Allen UBCtra 1046 [=GenBank AF300734]. Mycorrhizae: ericoid (Berch S, Allen TR, Berbee ML, Plant and Soil 244:55-66, 2002) // molecular systematics: placed within the Herpotrichiellaceae based on partial sequence 5.8S, ITS2, 28S rRNA gene sequences (Berch S, Allen TR, Berbee ML, Plant and Soil 244:55-66, 2002); DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, New Phytologist 160:255-272, 2003) // culture conditions: very slow growing; better on CER than PDA.
- 10360 roots of *Vaccinium* sp. N. Vancouver Is., B.C. T.R. Allen Oct. 1998 /M.L. Berbee UBCtra 1232. Culture conditions: very slow growing; better on CER than PDA; non sporulating // molecular systematics: DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, New Phytologist 160:255-272, 2003).
- 10361 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Oct. 1998 /M.L. Berbee UBCtra 1077C. Culture conditions: non sporulating; very slow growing; better on CER than PDA // mycorrhizae: ericoid endophyte (salal).
- 10362 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Oct. 1998 /M.L. Berbee UBCtra 1049C. Culture conditions: very slow growing; better on CER than PDA; non sporulating // mycorrhizae: ericoid endophyte (salal).
- 10363 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Oct. 1998 /M.L. Berbee UBCtra 1051C. Culture conditions: very slow growing; better on CER than PDA; non sporulating // mycorrhizae: ericoid endophyte (salal).

Capronia svrcekiana see ***Capronia semi-immersa***

Castanedomyces australiensis Cano, Pitarch & Guarro

- 8386 (T *Castanedomyces australiensis*) soil Mt. Lofty, Australia J. Guarro Mar 1994 /J. Guarro FMR 5484 [=IMI 370015 Holotype =GenBank AJ131786 SSU]. Molecular systematics: description and comparison with *Aphanoascus* and *onygenalean* fungi (Cano J, Sole M, Pitarch LB, Guarro J, Stud Mycol 47:165-172, 2002).

Catenulifera rhodogena (F. Mangenot) Hosoya (syn.)*Phialophora rhodogena*; morph *Hypodiscus hymeniophilus*

- 953 (T Scopulariopsis rhodogena) presumed isotype strain of Scopulariopsis rhodogena, Betula sp. France F. Mangenot (No. 1087) 1953 /G. Smith Sc. 7A [=MUCL 9042 =GenBank DQ227266 (beta tubulin) =GenBank DQ227259 (ITS-LSU)]. Systematics/taxonomy: connection to Hypodiscus hymeniophilus (Hosoya T, Mycoscience 43:47-57, 2002; Untereiner W, Naveau FA, Bachewich J, Angus A, Can J Bot 84:243-253, 2006).

Catenulostroma germanicum Crous & U. Braun

- 11562 on paint chips near Old Bushmills Distillery, County Antrim, Ireland (I) J. O. Ewaze; (C) M. Warnock (Bushmill) Aug-2007 /J. Scott 2488463.

***Catenulostroma* sp.**

- 11559 on paint chips peeled from a metal lamp standard Hennessy Distillery, Cognac, France (I) J. O. Ewaze; (C) J. A. Scott (110A) May-2003 /J. Scott 2488179-A.
11560 stone and wood Lakeshore, near Pike Creek, Ont. (I) J. O. Ewaze; (C) J. A. Scott (122) 12-Mar-2002 /J. Scott 2488181.
11561 on branches of unidentified tree Near Remy Martin Distillery, Merpins, France (I) J. O. Ewaze; (C) R.C. Summerbell (F18A) Jul-2006 /J. Scott 2488451.

Catenuloxyphium semiovatum (Berkely & Broome) Hughes

- 4384 branch ex Querus macrophylla Central Experimental Farm, Ottawa S. Hughes 17 Feb 1981 /S. Hughes.

Catinella olivacea (Batsch ex Pers.) Boudier

- 10679 ex single ascospore of fruiting body from cavities of fallen poplar log Elk Island National Park, Alta. M. Greif August 2005 /R.S. Currah [=GenBank DQ915483 ITS =GenBank DQ915484 SSU =GenBank EF622212 LSU]. Molecular systematics: phylogeny and ascoma development (Greif MD, Gibas CFC, Tsuneda A, Currah RS, Am J Bot 94:1890-1899, 2007).

Celosporium larixicolum Tsuneda & Davey

- 11008 (T Celosporium larixicolum) ex black subiculum on twig of larch (Larix lyallii) Larch Valley, Banff National Park, Alta. A. Tsuneda 5-Aug-2008 /A. Tsuneda L3-1 [=GenBank FJ997287 ITS =GenBank FJ997288 LSU]. Biodiversity: endoconidial black meristematic fungi (BMF) on larch (Tsuneda A; Davey ML; Tsuneda I; Currah RS, Botany 88:471-487, 2010) // plant pathogen: associated with declining and dead larch trees.
11009 ex black subiculum formed on twig of larch (Larix lyallii) Larch Valley, Banff National Park, Alberta A. Tsuneda. 23-Sep-2008 /A. Tsuneda L3-2. Plant pathogen: associated with declining and dead larch trees // biodiversity: endoconidial black meristematic fungi (BMF) on larch (Tsuneda A; Davey ML; Tsuneda I; Currah RS, Botany 88:471-487, 2010).

Cenococcum geophilum Fr.

- 5314 R. Molina A-145. Mycorrhizae.
5512 surface sterilized sclerotium ex jackpine-lichen stand Richardson's Fire Tower, Ft. McMurray, Alta. R. Danielson (R-26) /DAOM 193121 [=CCFC 5199]. Mycorrhizae // application: assessment of fungal hydrophobicity properties (Chau HW, Si BC, Goh YK, Vujanovic V, Mycological Research 113:1046-1052, 2009).
6080 ex roots Picea mariana Burt Lake Burt Twp., Timiskaming Dist., Ont. (C) R. Summerbell 10 Sep 1982 /L. Hutchison DM419 [=TRTC DM419]. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989).

- 6145 mycorrhizal root of Picea mariana Quebec (C) J. Fortin (XX-50) 1967 /L. Hutchison DM30 [=TRTC DM30]. Mycorrhizae.
6146 mycorrhizal root of Pinus banksiana Burt Lake Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie Aug 1980 /L. Hutchison DM94 [=TRTC Lahaie 80122]. Mycorrhizae.
11206 ex Cenococcum geophilum mycorrhizae of white spruce (Picea glauca) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan /G. Kernaghan ARSL 220507.51*. Mycorrhizae: ectomycorrhizae.
11226 Cenococcum geophilum mycorrhizae of White spruce (Picea glauca) Duparquet Lake (FERLD), Quebec (C) G. Patriquin G. Kernaghan 22-May-2007 /G. Kernaghan ARSL 220507.45.

Cephalophora irregularis Thaxter

- 2755 rat dung Austin, TX 1966 /C. Alexopoulos.

Cephalophora tropica Thaxter

- 1362 Japanese beetle larvae in soil Peoria C.W. Hesseltine (149770) /DAOM 65221.
1539 G.L. Barron 3201.
10327 back of paper, bulk sample indoor environment Camrose, Alta. C. Sand 2003 /R. Rennie AQ 589.

Cephaloascus albidus Kurtzman (morph *Hyalorhinoctadiella* an. *Cephaloascus albidus*)

- 6757 penta-and oil-treated Douglas Fir pole Syracuse, NY /C.J.K. Wang ED-48 [=ATCC 66658]. Biodeteriogen/biodegradation: no soft rot of Douglas fir sapwood after 6 mo (Wang & Zabel, Fungi from utility poles, 1990).
6761 penta-and oil-treated Douglas Fir pole Syracuse, NY /C.J.K. Wang ED-44 [=ATCC 66692].

Cephaloascus fragrans Hanawa

- 354 (T Ascocybe grovesii) dressed lumber Pinus strobus Braeside, Ont. 1952 /DAOM 33766 [=ATCC 12091 =CBS 150.61 =IMI 46868].

Cephalotheca foveolata Yaguchi, Nishimura & Udagawa (morph *Phialemonium*)

- 10400 endocarditis, patient from Singapore Singapore 2003 /M.G. Rinaldi UTHSC 03-2653 [=GenBank FR745941 D1D2]. Thermotolerant: grows better @ 35C than @ 30C // pigment: red // molecular systematics: Determined as Cephalotheca foveolata based on LSU rDNA sequence analysis (Perdomo H, Sutton DA, Garcia D, Fothergill AW, Gené J, Cano J, Summerbell RC, Rinaldi MG, Guarro J, J Clin Microbiol 49:1209-16, 2011); Blast match 98% ITS similarity to Cephalotheca foveolata AB278171 NBRC 100905 (fide UAMH).
10952 ex lymph node, canine, Hungarian Vizsla breed Texas 2008 /D.A. Sutton UTHSC 07-2087 [=CBS 124640 =GenBank FR745942 D1D2 =UTHSC R-4030]. Human/animal pathogen: disseminated infection in canine (fide D.A. Sutton) // molecular systematics: Blast match 99% ITS and D1D2 similarity to Cephalotheca foveolata (fide D.A. Sutton); Determined as Cephalotheca foveolata based on LSU rDNA sequence analysis (Perdomo H, Sutton DA, Garcia D, Fothergill AW, Gené J, Cano J, Summerbell RC, Rinaldi MG, Guarro J, J Clin Microbiol 49:1209-16, 2011) // culture conditions: no ascospores formed on any medium.
11631 (T Cephalotheca foveolata) isolated from 5 skin biopsies from right foot of Korean male farmer, 67 yr, with 10-year history of verrucous erythematous plaques; histopathology + Gyeongju Hospital of Dongguk University, Seokjang-dong, Gyeongju, South Korea 2005 /K. Suzuki NBRC 100905 [=GenBank AB278171 ITS =IFM 53377 =IFM 53377H =GenBank AB178269 D1D2]. Human/animal pathogen: subcutaneous fungal infection in an immunocompetent farmer (Suh MK,

Lim JW, Lee YH, Ha GY, Kim H, Kim JR, Yaguchi T, Nishimura K, Br J Dermatol 154:1184-1189, 2006) // systematics/taxonomy: identification of the causative agent (Yaguchi T, Sano A, Yaritha K, Suh MK, Nishimura K, Udagawa S-I, Mycotaxon 96:309 - 322, 2006) // cycloheximide: sensitive (growth strongly inhibited).

Cephalotrichum album (Costantin) Seifert

- 637 shavings ex rabbit cages Edmonton, Alta. J.W. Carmichael May 1959 /J.W. Carmichael.
 1145 soil, cougar pen Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
 1290 soil nursery paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1301 soil Guanaco's paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael. Culture conditions: produced fertile ascomata of the Kernia type (fide S.P. Abbott).
 1318 soil cougar pen Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1321 soil under falcon roost Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1331 straw under bird roosts Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1332 straw under bird roosts Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 3238 soil chicken pens, poultry ranch Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.
 5623 coyote (*Canis latrans*) dung Alberta R. Currah (D-7) /R. Currah (D-7).
 5739 ex air, mold-contaminated building North York, Ont. R.C. Summerbell 30 Jul 1986 /R.C. Summerbell FR 1395.86.
 8849 decaying higher fungus (*Macrolepiota procera*) Sugadaira, Sanada-machi, Chiisagata-gun, Nagano Pref., Japan S. Udagawa (NHL 2440) 2-Oct-1969 /T. Ito IFO 9384. Benomyl: resistant (2 ppm) // cycloheximide: sensitive (no growth MYC).
 8891 culture contaminant Innsbruck, Austria W. Gams 1960 /W. Untereiner MUCL 4039 [=IMI 86950 =LSHB Sc. 152 =CBS 192.61 =GenBank HM152556 tricarboxylate transport protein =GenBank HM152542 ITS =MUCL 4039]. Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microasceae, Ph.D. dissertation, 2000).
 8990 wood treated with fungicide USA D.T. Wicklow 16 May 1995 /NRRL 25172. Benomyl: resistant (2 ppm).
 9028 dung of striped skunk (*Mephitis mephitis*) on ground in farm yard 10 km south of Leduc, Alta S.P. Abbott (SA-M185) 10 Jun 1997 /S.P. Abbott (SA-M185) [=IFO 33046 =MUCL 40745 =NBRC 33046]. Molecular systematics.

Cephalotrichum microsporum P.M. Kirk (syn. *Doratomyces microsporus*, *Graphium graminum*)

- 247 contaminant ex culture Edmonton, Alta J.W. Carmichael 1954 /J.W. Carmichael.
 2791 manure pile Cardston, Alta. D. Remington Jun 1967 /D. Remington.
 4019 contaminant ex culture UAMH Dec 1976 /D. Remington.
 6751 soil Edmonton, Alta L. Rosmus Sep 1990 /L. Rosmus. Benomyl: resistant (2 ppm).
 8295 bronchial wash, male 50 yr Alberta Provincial Laboratory for Southern Alberta 29 Jun 1995 /R. Rennie MY 2217.
 8625 bronchial washings, male, 59 yr Edmonton, Alta G. Man/N. Brown 27-May-1996 /R. Rennie MY 2296.
 8789 potato (*Solanum tuberosum*) Mt. Albert, AK, New Zealand F.J. Morton (H97) Jan 1962 /J. Young ICMP 1054.
 8845 decaying higher fungus (*Coriolus hirsutus*) Otoienu, Nakagawa-gun, Hokkaido, Japan S. Udagawa (NHL 2446) 6-Sep-1969 /T. Ito IFO 9383. Cycloheximide: resistant (MYC).

- 9003 right heel, female 35 y Edmonton, Alta C. Sand (MY 148) 12 Jan 1995 /R. Rennie MY 148. Benomyl: resistant (2 ppm).
 9143 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-12A) T. Lumley (EI-01-S2A 12 Feb 1997 /R.S. Currah EI-01-S2A, 2-12A).
 9365 indoor air of home ex chemical assessment filter near Peace River, Alta S.P. Abbott (SA-M270) 9 Sep 1998 /S.P. Abbott (SA-M270). Benomyl: resistant (2 ppm).
 9456 dung of coyote (*Canis latrans*) in birch/pine woods (*Betula papyrifera*/ *Pinus banksiana*) North Buck Lake near Lac La Biche, Alta S.P. Abbott (SA-M277) 8 Jan 1999 /S.P. Abbott (SA-M277). Cycloheximide: resistant (MYC).
 9741 contaminant in manufacturing plant Saskatoon, SK 2000 /PhilomBios.

Cephalotrichum nanum (Ehrenb.) Hughes (syn.

Doratomyces nanus)

- 4758 dung Michel Reservoir, S. Alta. R. Currah Mar 1983 /R.S. Currah.
 7755 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 181) 31 Jan 1994 /S.P. Abbott (OHS 181). Cellulolytic: weak.
 8485 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. T. Lumley (EI-01-S2E) 14 Sep 1995 /R.S. Currah EI-01-S2E.
 8486 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. T. Lumley (EI-01-S3G) 04 Sep 1995 /R.S. Currah EI-01-S3G.
 8620 deer (*Odocoileus* sp.) dung in spruce (*Picea glauca*) forest Fish Lake near Nordegg, Alta S.P. Abbott (SA-M134) 14-Jun-1996 /S.P. Abbott (SA-M134).
 8621 Marten (*Martes americana*) dung Astoria River valley, Jasper National Park, Alta S.P. Abbott (SA-M140) 28-Aug-1996 /S.P. Abbott (SA-M140).
 8622 hoary marmot (*Marmota caligata*) dung near Moraine Lake, Jasper National Park, Alta S.P. Abbott (SA-M141) 28-Aug-1996 /S.P. Abbott (SA-M141). Cycloheximide: resistant.
 8740 dung of snowshoe hare (*Lepus americanus*) in spruce/larch (*Picea mariana*/*Larix laricina*) forest Wagner Natural Area near Spruce Grove, Alta S.P. Abbott (SA-M168) 16-Dec-1996 /S.P. Abbott (SA-M168).
 8741 soil of northern pocket gopher (*Thomomys talpoides*) mound in hay field Wagner Natural Area near Spruce Grove, Alta S.P. Abbott (SA-M167) 16-Dec-1996 /S.P. Abbott (SA-M167) [=IFO 33044].
 8742 dung of porcupine (*Erethizon dorsatum*) Devonian Botanic Garden near Devon, Alta S.P. Abbott (SA-M166) 17-Dec-1996 /S.P. Abbott (SA-M166).
 8854 deer dung England, UK J. Hawkins 1956 /T. Ito IFO 8180 [=IMI 68394 =LSHB Sc. 142 =CBS 119.61]. Cycloheximide: resistant (MYC) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microasceae, Ph.D. dissertation, 2000).
 8855 soil Japan T. Yokoyama (R-1607-21) 1985 /T. Ito IFO 31957. Cycloheximide: resistant (MYC) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microasceae, Ph.D. dissertation, 2000).
 9126 dung of bison (*Bison bison*) in white spruce (*Picea glauca*) and poplar (*Populus tremuloides* & *P. balsamifera*) forest Elk Island National Park, Alta S.P. Abbott (SA-M198) 18 Aug 1997. Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microasceae, Ph.D. dissertation, 2000).
 9128 sand dune soil; as *Doratomyces asperulus* Netherlands /CBS 187.78. Benomyl: resistant (2 ppm) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microasceae, Ph.D. dissertation, 2000) // culture conditions: species concept of *Doratomyces*

asperulatus based on aberrant isolate of *C. nanum* (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).

Cephalotrichum purpureofuscum (Schw.) Hughes (syn.

Doratomyces purpureofuscus, *Doratomyces asperulus*)

- 989 lung Richardson's ground squirrel (*Spermophilus richardsonii*) Bittern Lake, Alta J.W. Carmichael May 1959 /J.W. Carmichael.
- 1299 soil, Guanaco paddock Alberta Game Farm, Edmonton, Alta. J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
- 1416 soil UCLA, San Diego G.F. Orr (217) /DAOM 84432 [=O 217].
- 1767 C.J. Anastasiou S55 (A20).
- 2771 hair of Richardson's Ground Squirrel (*Spermophilus richardsonii*) Cardston, Alta D. Remington (1) 7 Jun 1967 /D. Remington (1). Benomyl: resistant (2 ppm).
- 2775 hair of Richardson's Ground Squirrel (*Spermophilus richardsonii*) Cardston, Alta. D. Remington (1) 6 Jun 1967 /D. Remington (1).
- 4455 soil Spain /J. Guarro FFBA 217. Application.
- 7303 ex nail, male 59 yr; DE + Edmonton, Alta. C. Sand 11 Jan 1993 /R. Rennie MY 5858b.
- 7743 ex fingernail, female 35 yr Calgary, Alta. 8 Nov 1994 /R. Rennie MY 3483.
- 8237 bronchial wash, male 65 yr Alberta Provincial Laboratory for Southern Alberta 29 Jun 1995 /R. Rennie MY 2216. Benomyl: resistant (2 ppm) // systematics/taxonomy: synonymy of *Doratomyces asperulus* with *Cephalotrichum purpureofuscum* (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 8739 soil, banyan rhizosphere Lord Howe Island, Australia A.D. Hocking 1977 /A. Hocking FRR 1903. Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 8788 cave wall Mt. Albert, AK, New Zealand F.J. Morton (H56) Nov 1961 /J. Young ICMP 1165. Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 8790 leaf of swede (*Brassica napus* var. *napobrassica*) Mt. Albert, AK, New Zealand F.J. Morton (H286) July 1963 /J. Young ICMP 1094. Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 8844 leaves of needle-leaved tree Japan T. Ito (ISR 47-1) 1986 /T. Ito IFO 32040. Cycloheximide: resistant (MYC) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 8853 wheat field soil Germany K. Domsch 1963 /T. Ito IFO 31240 [=CBS 523.63 =ATCC 16224]. Cycloheximide: resistant (MYC) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 8892 wood of decaying furniture in underground laboratory cave Han-sur-Lesse, Belgium G.L. Hennebert (882-18) Sep 1959 /W. Untereiner MUCL 536. Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 8910 soil under primary Atlantic forest Peruibe, SP, Brazil A.B. Garlipp Oct 1994 /C.Y. Umino CCT 4299. Benomyl: resistant (2 ppm) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 9002 plate contaminant in walk-in cooler (5 C) UAMH S.P. Abbott (SA-M3) 28 Apr 1993 /S.P. Abbott (SA-M3) [=IFO 33045]. Benomyl: resistant (2 ppm) // systematics/taxonomy:

Cephalotrichum and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).

- 9127 (T *Doratomyces asperulus*) humus-rich soil Arroyo Las Viboras, Tordillo, Buenos Aires, Argentina A.M. Godeas 1970 /CBS 582.71 [=ATCC 26885]. Benomyl: resistant (2 ppm) // systematics/taxonomy: synonymy of *Doratomyces asperulus* with *Cephalotrichum purpureofuscum* (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 9158 bronchial wash, male 16 yr Alberta Prov. Lab for Southern Alberta 1997 /R. Rennie MY 6111.
- 9209 indoor air of school library ex Anderson sampler Pemberton, BC S.P. Abbott (SA-M209) 18 Feb 1998 /S.P. Abbott (SA-M209). Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
- 11588 indoor air ex Andersen air sampler, bedroom of home Carson City, Nevada S.P. Abbott 6-Nov-2003 /S.P. Abbott SA1464. Biodiversity: indoor air fungi.

Cephalotrichum stemonitis (Persoon) Link (syn.

Doratomyces stemonitis; morph *Echinobotryum atrum*)

- 1532 G.L. Barron /G.L. Barron 9503.
- 4834 coyote (*Canis latrans*) dung Slave Lake, Alberta L. Sigler Sep 1983 /L. Sigler.
- 7754 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 182) 30 Jan 1994 /S.P. Abbott (OHS 182). Cellulolytic.
- 8502 rat dung Fallbrook, California, USA G.F. Orr (O-714) 09 Aug 1960 /NRRL A-10079.
- 8623 cone of white spruce (*Picea glauca*) Fish Lake near Nordegg, Alta S.P. Abbott (SA-M135) 14-Jun-1996 /S.P. Abbott (SA-M135).
- 8624 sandy soil with hair at entrance of woodchuck (*Marmota monax*) burrow in jack pine (*Pinus banksiana*) forest North Buck Lake, Alta S.P. Abbott (SA-M138) 16-Aug-1996 /S.P. Abbott (SA-M138).
- 8913 soil of elm (*Ulmus americanus*) woods near Guelph, Ontario G.L. Barron (9504) 11 Dec 1961 /NRRL A-11326. Benomyl: resistant (2 ppm).
- 8914 agricultural soil Iceland NRRL isolate (ss-831) 26 Oct 1966 /NRRL A-14847. Benomyl: resistant (2 ppm).
- 9142 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 4-15G) T. Lumley (EI-02-S6H 15 Apr 1996 /R.S. Currah EI-02-S6H, 4-15G).
- 11604 swab ex fur of living bat Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 1 C.1 fur [=Untereiner WUC C01]. Biodiversity: mycobiota of bat caves // culture conditions: produced *Echinobotryum synanamorph*.
- 11605 swab ex fur of bat Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 18 S fur [=Untereiner WUC C18]. Culture conditions: produced *Echinobotryum synanamorph* // biodiversity: mycobiota of bat caves.
- 11812 swab ex skin of bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf /K.J. Vanderwolf Bat 56 C.1 skin ox [=Untereiner WUC S56]. Biodiversity: mycobiota of bat caves.

***Ceratobasidiaceae* sp.**

- 5437 ex orchid *Piperia unalascensis* Castle River, Alta. R. Currah (35a) 19-Jun-1985 [=GenBank AF345558]. Mycorrhizae: endophyte with *Piperia unalascensis* identified originally as *Sistotrema* sp. (Currah & Sherburne, Mycol. Res. 96:583-587, 1992; Currah RS, Smreciu EA, Hambleton S, Can J Bot 68:1171-1181, 1990) // molecular systematics: orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093,

- 2001; Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008); placed within the Ceratobasidium-Thanatephorus complex (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008); allied with the Ceratobasidiaceae rather than with other Sistotrema species (fide Taylor & McCormick 2008) // culture conditions: clamp connections.
- 6090 ex blunt-leaved orchid *Platanthera obtusata* mycorrhizae Deer Creek Flats, Alta. S. Hambleton (RC 227a) 25 May 1987 /S. Hambleton (RC 227a). Mycorrhizae: orchid endophyte *Platanthera obtusata* identified originally as *Sistotrema* sp. // culture conditions: clamp connections.
- 6091 ex blunt-leaved orchid *Platanthera obtusata* mycorrhizae Deer Creek Flats, Alta. S. Hambleton (RC 228a) 25 May 1987 /S. Hambleton (RC 228a). Mycorrhizae: orchid endophyte *Platanthera obtusata* identified originally as *Sistotrema* sp. // culture conditions: clamp connections.
- 6092 ex blunt-leaved orchid *Platanthera obtusata* mycorrhizae Deer Creek Flats, Alta. S. Hambleton (RC 231a) 25 May 1987. Mycorrhizae: orchid endophyte *Platanthera obtusata* identified originally as *Sistotrema* sp. // culture conditions: clamp connections.
- 6098 endophyte ex orchid *Orchis morio* Netherlands E. Dijk /E. Dijk OMR11 [=GenBank KF266979 SSU =GenBank KF267090 LSU =GenBank KF267016 ITS1 =GenBank KF267053 ITS2]. Molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010) // mycorrhizae: orchid endophyte *Orchis morio* identified originally as *Moniliopsis solani*.

Ceratobasidium cereale Murray & Burpee (morph *Rhizoctonia cerealis*)

- 6401 ex grass (*Agrostis palustris*) leaf Pennsylvania, USA P. Sanders /L. Burpee BN1/T [=ATCC 44233]. Plant pathogen: yellow patch of Turf grass (Pl. Dis. 64:1114-1116, 1980).

Ceratobasidium cornigerum see ***Ceratorhiza goodyerae-repentis***

***Ceratobasidium* sp.**

- 5443 ex orchid *Orchis rotundifolia* River Valley Rd., Edmonton, Alta. R. Currah (12a4) 7 Jun 1986 [=ATCC 90460 =IMI 318092 =GenBank KF266976 SSU =GenBank KF267087 LSU =GenBank EU218894 ITS =GenBank KF267013 ITS1 =GenBank KF267050 ITS2 =GenBank AY243526 LSU]. Mycorrhizae: septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992) // molecular systematics: orchid mycorrhizal fungi (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008; Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010); sequence placed in *Ceratobasidium* possibly within *C. cornigerum* complex (fide Taylor & McCormick 2008) // systematics/taxonomy: isolate identified originally as *Ceratobasidium obscurum* (Currah RS, Can J Bot 65:1957-1960, 1987).
- 6440 endophyte of blunt-leaved orchid *Platanthera obtusata* Cypress Hills, Alta. R. Currah (192a) 6 May 1987 [=ATCC 90459 =CBS 188.90 =GenBank AF345556 =GenBank AY243523 LSU =GenBank EU218895 ITS]. Mycorrhizae: with orchid *Platanthera obtusata* // molecular systematics: orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093, 2001; Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008); ITS sequence distantly related to *Ceratobasidium cornigerum* (*Ceratorhiza goodyerae-repentis*) (fide Taylor & McCormick 2008) // systematics/taxonomy: described originally as *Ceratorhiza goodyerae-repentis* (Currah RS, Smreciu EA, Hambleton S, Can J Bot 68:1171-1181,

1990).

- 11787 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-11. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (94.8%) to uncultured *Ceratobasidiaceae* FJ788724 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU cer4.

Ceratocystiopsis falcata see ***Cornuvesica falcata***

Ceratocystiopsis manitobensis (J. Reid & Hausner) Zipfel, Z.W. de Beer & MJ Wingfl. (morph *Hyalorhinoctadiella an. of Ceratocystiopsis manitobensis*)

- 9813 (T *Ophiostoma manitobense*) red pine (*Pinus resinosa*) Sandilands Forest Reserve, Manitoba J. Reid (85-1) Jun 1985 /J. Reid UM 237 [=WIN(M) 237 =GenBank HQ634850 SSU]. Systematics/taxonomy: description (Hausner, Eijolfsson & Reid, Can. J. Bot 81:40-48, 2003); listed as *Ceratocystiopsis* sp. III (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993) // molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012) // cycloheximide: sensitive (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993) // culture conditions: no ascomata formed on any medium.
- 10655 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 3PG2P-Om [=GenBank DQ268610 SSU =GenBank DQ268640 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
- 10703 ex *Ips perturbatus* (northern spruce engraver) Haines Junction, Yukon S. Alamouti /C. Breuil 3YT3P-Om [=GenBank DQ268641 B-tubulin =GenBank DQ268609 SSU]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).

Ceratocystiopsis minima (Olchow. & J. Reid) H.P.

Upadhyay (syn. *Ophiostoma minimum*; morph *Hyalorhinoctadiella an. Ceratocystiopsis minima*)

- 9961 (T *Ceratocystis minima*) jack pine (*Pinus banksiana*) Sandilands Forest Reserve, Manitoba A. Olchowecki 6 Jun 1969 /J. Reid UM 61 [=JR 69-37 =WIN(M) 61 =GenBank HQ634852 SSU intron =GenBank L05938 =WIN(M) 69-37 =GenBank L05937 =GenBank L05936]. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012) // cycloheximide: sensitive (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993) // systematics/taxonomy: descriptions & relationships of *Ceratocystis* spp. In Manitoba (Olchowecki & Reid, Can. J. Bot. 52:1675-1711 plus plates, 1974) // culture conditions: no ascomata produced.

Ceratocystiopsis minuta (Siemaszko) H.P. Upadhyay & W.B. Kendr. (syn. *Ophiostoma minutum*; morph *Hyalorhinoctadiella-like*)

- 11217 ex ascospores from perithecia in galleries of the bark beetle *Ips*

- typographus Bialowieza, Poland T. Kirisits (BIAL/2) 25-Jun-2002 /J. Reid WIN(M) 1511 [=CBS 116795 =GenBank EU913647 LSU =GenBank EU913688 ITS =GenBank EU913727 beta tubulin]. Systematics/taxonomy: epitypification of *Ceratocystiopsis minuta* (Reid J, Hausner G, Mycotaxon 113:463-474, 2010) // culture conditions: produced perithecia in culture after 4 mo (fide Plattner et al 2009); produced perithecia in culture after 4 mo and ascospores after 8 mo (fide UAMH 2011) // molecular systematics: Clade E of *Ceratocystiopsis minuta* complex (Plattner et al. 2009); phylogeny of *Ceratocystiopsis minuta* (Plattner A, Kim JJ, Reid J, Hausner G, Lim YW, Yamaoka Y, Breuil C, Mycologia 101:878-887, 2009); Molecularly distinct from UAMH 11218 Epitype (Clade D) (Reid J, Hausner G, Mycotaxon 113:463-474, 2010).
- 11218 perithecia in galleries of *Ips typographus* (bark beetle) in *Picea abies* Biebrzanski National Park, Werklye Protection Range, Poland R. Jankowiak (RJ 705) /J. Reid WIN (M) 1532 [=GenBank HQ634827 SSU intron =GenBank EU913656 LSU =GenBank EU913697 ITS =GenBank EU913736 beta tubulin]. Systematics/taxonomy: epitypification of *Ceratocystiopsis minuta* (Reid J, Hausner G, Mycotaxon 113:463-474, 2010); *Ceratocystiopsis minuta* appears to represent two populations (Reid J, Hausner G, Mycotaxon 113:463-474, 2010) // culture conditions: produces perithecia on pine wood chips impregnated with malt extract+yeast extract+ 0.02 g thiamine (Reid J, Hausner G, Mycotaxon 113:463-474, 2010) // molecular systematics: Clade D of *Ceratocystiopsis minuta* complex; molecularly distinct from UAMH 11217 (Clade E) (Plattner et al. 2009); phylogeny of *Ceratocystiopsis minuta* (Plattner A, Kim JJ, Reid J, Hausner G, Lim YW, Yamaoka Y, Breuil C, Mycologia 101:878-887, 2009); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012).
- Ceratocystiopsis minuta-bicolor*** (R.W. Davidson) H.P. Upadhyay & W.B. Kendr. (syn. *Ceratocystis minuta-bicolor*, *Ceratocystis pallida*, *Ophiostoma minuta-bicolor*; morph *Hyalorhinocladiella minuta-bicolor*)
- 9551 lodgepole pine (*Pinus contorta*) Taylor Lake Hiking Trail, Banff National Park, AB J. & B. Reid (87-6) 23 Sep 1987 /J. Reid UM 479 [=GenBank L05798 =GenBank L05796 =GenBank L05795]. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); target specific PCR primers (Khadempour L, Massoumi Alamouti S, Hamelin R, Bohlmann J, Breuil C, Fungal Biol 114(10):825-833, 2010) // cycloheximide: sensitive (growth strongly inhibited) (Hausner, Reid & Klassen, Can. J. Bot. 71:52-63, 1993).
- 9552 lodgepole pine (*Pinus contorta*) Taylor Lake Hiking Trail, Banff National Park, AB J. & B. Reid (87-6b) 1987 /J. Reid UM 480. Cycloheximide: sensitive (growth strongly inhibited) (Hausner, Reid & Klassen, Can. J. Bot. 71:52-63, 1993) // molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012).
- Ceratocystiopsis parva*** (Olchow. & J. Reid) Zipfel, Z.W. de Beer, M.J. Wingf. (syn. *Ophiostoma parvum*; morph *Hyalorhinocladiella an. Ophiostoma parvum*)
- 9650 (T *Ceratocystis parva*) balsam fir (*Abies balsamea*) Sandilands Forest Reserve, Manitoba A. Olchowecki (71-21) 8 May 1971 /J. Reid UM 59 [=WIN(M)59 =GenBank HQ595735 SSU intron =GenBank L05805 =GenBank L05807 =GenBank L05806]. Benomyl: resistant // cycloheximide: slightly resistant // molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012) // culture conditions: no ascomata produced.
- Ceratocystiopsis rollhanseniiana*** (J. Reid, Eyjolfssd. & Hausner) Zipfel, Z.W. de Beer, M.J. Wingf. (morph *Hyalorhinocladiella an. Ceratocystiopsis rollhanseniiana*)
- 9774 (T *Ophiostoma rollhanseniianum*) beetle galleries in Scots pine (*Pinus sylvestris*) Kongsvinger, Hedmark, Norway J. Reid (73-20) Oct 1973 /J. Reid UM 113 [=WIN(M)113 =GenBank HQ595736 SSU intron]. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012) // cycloheximide: sensitive (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993) // systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot 81:40-48, 2003).
- 9797 standing Scots pine (*Pinus sylvestris*) with bark beetle (*Ips typographus*) galleries Hwy 2, Kongsvinger, Hedmark, Norway J Reid (74-10) Oct 1973 /J. Reid UM 110 [=GenBank HQ634834 SSU =WIN(M)110]. Systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot 81:40-48, 2003) // molecular systematics: identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012).
- 9798 bark beetle galleries in fallen Scots pine (*Pinus sylvestris*) Hwy 2, Kongsvinger, Hedmark, Norway J. Reid (74-18) Oct 1973 /J. Reid UM 723.
- Ceratocystiopsis sp. I***
- 10945 ex lodgepole pine (*Pinus contorta*) logs infested with mountain pine beetle, *Dendroctonus ponderosae* Williams Lake, B.C. J-J Kim 18-Jan-2003 /C. Breuil WY21Bx2-2 [=GenBank EU913669 LSU =GenBank EU913709 ITS =GenBank EU913746 beta tubulin]. Culture conditions: no ascomata formed on any medium (fide A. Plattner) // biodiversity: relative abundance of mountain pine beetle fungal associates through the beetle life cycle in pine trees (Khadempour L, LeMay V, Jack K, Bohlmann J, Breuil C, Microb Ecol 64:909-917, 2012).
- 10946 ex lodgepole pine (*Pinus contorta*) logs infested with mountain pine beetle, *Dendroctonus ponderosae* Williams Lake, B.C. J-J Kim 18-Jan-2003 /C. Breuil WY21Bx1-2 [=GenBank EU913668 LSU =GenBank EU913708 ITS =GenBank EU913747 beta tubulin]. Molecular systematics: target specific PCR primers (Khadempour L, Massoumi Alamouti S, Hamelin R, Bohlmann J, Breuil C, Fungal Biol 114(10):825-833, 2010) // culture conditions: no ascomata formed on any medium (fide A. Plattner) // biodiversity: relative abundance of mountain pine beetle fungal associates through the beetle life cycle in pine trees (Khadempour L, LeMay V, Jack K, Bohlmann J, Breuil C, Microb Ecol 64:909-917, 2012).
- 10947 ex lodgepole pine (*Pinus contorta*) logs infested with mountain pine beetle, *Dendroctonus ponderosae* Williams Lake, B.C. J-J Kim 18-Jan-2003 /C. Breuil WY13Tx1-3 [=GenBank EU913667 LSU =GenBank EU913707 ITS =GenBank EU913746 beta tubulin]. Molecular systematics: target specific PCR primers (Khadempour L, Massoumi Alamouti S, Hamelin R, Bohlmann J, Breuil C, Fungal Biol 114(10):825-833, 2010)

// culture conditions: no ascomata formed on any medium (fide A. Plattner) // biodiversity: relative abundance of mountain pine beetle fungal associates through the beetle life cycle in pine trees (Khadempour L, LeMay V, Jack K, Bohlmann J, Breuil C, *Microb Ecol* 64:909-917, 2012).

Ceratocystis adiposa (Butl.) C. Moreau (morph *Chalara an.*

Ceratocystis adiposa)

- 6973 *Picea* sp. sapwood lumber St. Pamphile, PQ B. Grylls & K. Seifert 14 Aug 1990 /K. Seifert A21 [=DAOM 212707]. Odor: aromatic.
- 6974 *Picea* sp. sapwood lumber St. Therese, PQ B. Grylls & K. Seifert 7 Sep 1990 /K. Seifert A21 [=DAOM 212726].
- 6975 *Pinus strobus* sapwood lumber Davidson, PQ B. Grylls & K. Seifert 10 Jul 1990 /K. Seifert [=DAOM 212728].
- 8644 sputum, male 80 yr Ontario 26 Apr 1996 /R.C. Summerbell FR 943. Crystals: abundant.

Ceratocystis autographa Bakshi (morph *Chalara an.*

Ceratocystis autographa, *Hyalorhinocladiella an.*

Ceratocystis autographa)

- 4934 decaying needles ex *Juniperus communis* Lheedorp, Netherlands Nov 1975 /CBS 670.75.
- 11465 swab ex fur of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 11 C.7 CC1. Biodiversity: mycobiota of bat caves // culture conditions: good sporulation on DPYA, poorly sporulating on other media (fide Malloch 2011) // mesophilic: grows better at 22C than at 25C.

Ceratocystis bicolor see *Ophiostoma bicolor*

Ceratocystis brevicollis see *Ophiostoma brevicolle*

Ceratocystis cana see *Ophiostoma canum*

Ceratocystis clavigera see *Grosmannia clavigera*

Ceratocystis coronata A. Olchowecki & J. Reid (morph

Sporothrix an. Ceratocystis coronata)

- 9685 (T *Ceratocystis coronata*) jack pine (*Pinus banksiana*) Sandilands Forest Reserve, Manitoba A. Olchowecki (71-26) 8 May 1971 /J. Reid UM 43. Systematics/taxonomy: descriptions & relationships of *Ceratocystis* spp. In Manitoba (Olchowecki & Reid, *Can. J. Bot.* 52:1675-1711 plus plates, 1974); should be transferred to *Ophiostoma* (Wingfield MJ, Seifert KA, Webber JA, *Ceratocystis* and *Ophiostoma*, 1993).

Ceratocystis crassivaginata see *Grosmannia*

crassivaginata

Ceratocystis falcata see *Cornuvesica falcata*

Ceratocystis introcitrina see *Ophiostoma introcitrinum*

Ceratocystis ips see *Ophiostoma ips*

Ceratocystis minor see *Ophiostoma minus*

Ceratocystis minuta-bicolor see *Ceratocystiopsis*

minuta-bicolor

Ceratocystis multiannulata see *Ophiostoma*

multiannulatum

Ceratocystis nigrocarpa see *Ophiostoma nigrocarpum*

Ceratocystis norvegica J. Reid & Hausner

9778 (T *Ceratocystis norvegica*) ascospores on perithecium in gallery of *Ips typographus* in Norway spruce (*Picea abies*) Hwy 21, Sandem, Ostfold, Norway J. Reid (74-76) Sept 1973 /J. Reid UM 87 [=UAMH 11187 =WIN(M) 87]. Pigment: black // culture conditions: produced perithecia on OAT cello @ 22C; opt. 20C; no anamorph observed // mesophilic: opt. 20C // plant pathogen: Norway spruce (*Picea abies*) // systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* 88:971-983, 2010).

11187 (T *Ceratocystis norvegica*) perithecial spore drop at apex of perithecium in gallery of beetle *Ips typographus* on slash of Norway spruce (*Picea abies*) Hwy. 21, near Sandem, Ostfold, Norway J. Reid (74-76) Sept 1973 /J. Reid WIN(M) 87 [=UAMH 9778 =GenBank DQ318194 SSU =GenBank DQ318209 ITS]. Systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* 88:971-983, 2010) // culture conditions: opt. 20C; convergent ostiolar hyphae, temp opt 20C, absence of conidial state, ascospores germinating to produce self-fertile or self-sterile strains (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* in press 2010).

11188 second perithecium ex gallery of beetle *Ips typographus* on second piece of slash of Norway spruce (*Picea abies*) Hwy 21, near Sandem, Ostfold, Norway J. Reid (74-83) Sept 1973 /J. Reid WIN(M) 196 [=GenBank DQ318209 =GenBank DQ318194]. Systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* 88:971-983, 2010) // culture conditions: opt. 20C.

11189 stained sapwood adjacent to beetle gallery in a third piece of Norway spruce (*Picea abies*) Hwy 21, near Sandem, Ostfold, Norway J. Reid (7-83A) Sept 1973 /J. Reid WIN(M) 197 [=GenBank DQ318209 =GenBank DQ318194]. Systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* 88:971-983, 2010) // culture conditions: opt. 20C.

11190 ex perithecia spore drop from same piece of slash as type collection Hwy 21, Sandem, Ostfold, Norway J. Reid Sept 1973 /J. Reid WIN(M) 224 [=GenBank DQ318209]. Culture conditions: opt. 20C; fertile perithecia abundant on OAT and CER @ 18C (fide UAMH 2010); perithecia abundant on MEA+thiamine in replacement culture but devoid of ascospores // systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* 88:971-983, 2010).

11191 ex perithecia spore drop from same piece of slash as type collection Hwy 21, Sandem, Ostfold, Norway J. Reid Sept 1973 /J. Reid WIN(M) 225 [=GenBank DQ318209].

Systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* 88:971-983, 2010) // culture conditions: opt. 20C.

11192 ex perithecia spore drop from same piece of slash as type collection Hwy 21, Sandem, Ostfold, Norway J. Reid Sept 1973 /J. Reid WIN(M) 226 [=GenBank DQ318209]. Culture conditions: opt. 20C; fertile perithecia abundant on OAT and CER @ 18C (fide UAMH 2010); perithecia abundant on MEA+thiamine in replacement culture but devoid of ascospores // systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany* 88:971-983, 2010).

11193 ex perithecia spore drop from same piece of slash as type collection Hwy 21, Sandem, Ostfold, Norway J. Reid Sept

1973 /J. Reid WIN(M) 227 [=GenBank DQ318209].
Systematics/taxonomy: conifer-inhabiting species from Norway associated with *Ips typographus* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, Botany 88:971-983, 2010) // culture conditions: opt. 20C.

Ceratocystis novae-zelandiae see *Ophiostoma novae-zelandiae*

Ceratocystis pallida see *Ceratocystiopsis minuta-bicolor*

Ceratocystis paradoxa (Dade) Moreau (morph *Chalara paradoxa*)

1382 (T Hughesiella euricoi) air Salvador, Brazil /DAOM 75211 [=IMI 96739 =IMUR 640 =MUCL 1887 =CBS H-9771 =CBS 893.70].

3314 W.B. Kendrick UW 173.

8784 infected coconut (*Cocos nucifera*) Kingston, Jamaica Kingston Coconut Industry Board /P. Reese [=IMI 374529]. Steroid biotransformations (dehydroisoandrosterone, progesterone, testosterone, cortisone, estrone) (Porter et al, Steroids 64:770-779, 1999); redox reactions on alcohols & ketones (Porter et al, ibid.). Application: hydroxylation of steroids (Peart PC, McCook KP, Russell FA, Reynolds WF, Reese PB, Steroids 76:1317-1330, 2011).

Ceratocystis penicillata see *Grosmannia penicillata*

Ceratocystis piceae see *Ophiostoma piceae*

Ceratocystis pilifera see *Ophiostoma piliferum*

Ceratocystis pinicola T.C. Harr. & M.J. Wingf.

9550 Norway spruce (*Picea abies*) Hwy. 120, Ask, Akershus, Norway /J. Reid Sep 1974 /J. Reid UM 98 [=GenBank DQ318185 ITS =WIN(M) 98]. Pigment: dark brown-green // benomyl: sensitive // cycloheximide: sensitive // molecular systematics: relationships between the genera *Ceratocystis* & *Ophiostoma* (Hausner, Reid & Klassen, Can. J. Bot. 71:52-63, 1993); relationship with *Ceratocystis norvegica* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, Botany 88:971-983, 2010).

Ceratocystis polonica (Siemaszko) C. Moreau (syn.

Ophiostoma polonicum; morph *Chalara an. Ceratocystis polonica*)

9586 Norway spruce (*Picea abies*) As, Akershus, Norway H. Soldheim /J. Reid UM 450 [=NFRI 80-53/7 =WIN(M) 450 =GenBank DQ318199 ITS]. Culture conditions: nonsporulating // systematics/taxonomy: growth and cycloheximide sensitivity studies (Visser et al., System. Appl. Microbiol. 18:403-409, 1995) // plant pathogen: Norway spruce (*Picea abies*) (Krokene P, Solheim H, Can. J. Bot. 75:618-625, 1997) // biodiversity: most important blue stain fungus associated with *Ips typographus* (Krokene P, Solheim H, Can. J. Bot. 75:618-625, 1997) // molecular systematics: relationship with *Ceratocystis norvegica* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, Botany 88:971-983, 2010).

9779 Norway spruce (*Picea abies*) Hwy. 21, Tornby, Ostfold, Norway /J. Reid (73-64) Sep 1973 /J. Reid UM 153 [=WIN(M) 153]. Culture conditions: nonsporulating // plant pathogen: Norway spruce (*Picea abies*) // molecular systematics: relationship with *Ceratocystis norvegica* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, Botany 88:971-983, 2010).

9783 Norway spruce (*Picea abies*) Hwy. 21, Tangen, Akershus, Norway /J. Reid (73-52) Oct 1973 /J. Reid UM 325 [=GenBank

DQ318200 ITS =WIN(M) 325]. Odor: fruity // culture conditions: nonsporulating // plant pathogen: Norway spruce (*Picea abies*) // molecular systematics: ITS sequencing confirms identity as *C. polonica* (fide G. Hausner 2010); relationship with *Ceratocystis norvegica* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, Botany 88:971-983, 2010).

Ceratocystis populina see *Ophiostoma populinum*

Ceratocystis pseudominor see *Ophiostoma pseudominus*

Ceratocystis resinifera T.C. Harr. & M.J. Wingf.

9644 wounded stem, Norway spruce (*Picea abies*) Hurdal, Akershus, Norway 1966 /J. Reid UM 79 [=NFRI 66-157/21 =ATCC 44993 =WIN(M) 79 =GenBank DQ318197 ITS].

Cycloheximide: sensitive // plant pathogen: experimental infection (Eur. J. For. Pathol. 10: 396-410, 1980; Eur. J. For. Pathol. 10: 321-339, 1980) // molecular systematics: *Ceratocystis* species on conifers (Harrington TC, Wingfield MJ, Can J Bot 76:1446-1457, 1998); relationship with *Ceratocystis norvegica* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, Botany 88:971-983, 2010).

9645 Norway spruce log (*Picea abies*) Nannestad, Akershus, Norway 1958 /J. Reid UM 81 [=NFRI 1750/2 =WIN(M) 81 =GenBank GU084160 ITS]. Cycloheximide: sensitive // benomyl: sensitive // molecular systematics: *Ceratocystis* species on conifers (Harrington TC, Wingfield MJ, Can J Bot 76:1446-1457, 1998); relationship with *Ceratocystis norvegica* (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, Botany 88:971-983, 2010).

Ceratocystis stenoceras see *Ophiostoma stenoceras*

Ceratocystis tetropii see *Ophiostoma tetropii*

Ceratocystis tubicollis A. Olchowecki & J. Reid (morph *Hyalorhinocladia an. Ceratocystis tubicollis*)

9686 (T *Ceratocystis tubicollis*) jack pine (*Pinus banksiana*) Sandilands Forest Reserve, Manitoba A. Olchowecki (71-10) 10 Apr 1971 /J. Reid UM 57. Systematics/taxonomy: descriptions & relationships of *Ceratocystis* spp. In Manitoba (Olchowecki & Reid, Can. J. Bot. 52:1675-1711 plus plates, 1974); should be transferred to *Ophiostoma* (Wingfield MJ, Seifert KA, Webber JA, *Ceratocystis* and *Ophiostoma*, 1993).

Ceratopycnis sp.

7928 ex burn, Rt. arm San Antonio, Texas D. McGough 14 Dec 1994 /M.G. Rinaldi UTHSC 94-2693. Pigment: brown.

Ceratohiza goodyerae-repentis (Costantin & Dufour)

Moore (syn. *Rhizoctonia goodyerae-repentis*; morph *Ceratobasidium cornigerum*)

6443 endophyte of blunt-leaved orchid *Platanthera obtusata* Bow-Crow Forest, Alta. R. Currah (219a) 25 May 1987. Mycorrhizae: with orchid *Platanthera obtusata*.

6446 endophyte of blunt-leaved orchid *Platanthera obtusata* Edson Forest, Alta. R. Currah (254b) 3 Jun 1987 [=CBS 190.90]. Mycorrhizae: with orchid *Platanthera obtusata*; assessed in hybridization assays (Gronberg H, Paulin L, Sen R, Mycol. Res. 107:428-438, 2003).

6452 endophyte of blunt-leaved orchid *Platanthera obtusata* Edson Forest, Alta. R. Currah (307b) 16 Jul 1987 [=CBS 194.90]. Mycorrhizae: with orchid *Platanthera obtusata*.

6464 endophyte of long-bracted green orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (290a) 14 Jul 1987. Mycorrhizae: with orchid *Coeloglossum viride*.

6465 endophyte of orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (299a) 14 Jul 1987 [=CBS 196.90]. Mycorrhizae: with

- Coeloglossum viride (Currah et al., Can. J. Bot. 68:1171-1181, 1990).
- 7150 ex aerial roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov., Costa Rica K. Richardson 4 Nov 1991 /R.S. Currah K460e. Mycorrhizae: with epiphytic orchid *Campylocentrum micranthum*.
- 10687 ex hyphal tip from peloton extracted from root of Eatons ladies tresses orchid *Spiranthes eatonii* Levy County, FL. W. Kutosky 26-Nov-2005 /L. Zettler 338. Mycorrhizae: orchid endophyte *Spiranthes eatonii*.
- Ceratorhiza pernacatena* Zelmer & Currah**
- 7595 ex root cortical cells of Western prairie fringed orchid *Platanthera praeclara* growing in tall grass prairie Tolstoi, Man. C. Zelmer 10 Jul 1992 /R.S. Currah Z131-or-a. Mycorrhizae: with orchid *Platanthera praeclara* // cellulolytic.
- 7786 ex roots of Western prairie rringed orchid *Platanthera praeclara* Tolstoi, Man. C. Zelmer 14 Aug 1991 /R.S. Currah Z67-or-2a(1). Mycorrhizae: with orchid *Platanthera praeclara*.
- 7787 ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992 /R.S. Currah Z134-or-a. Mycorrhizae: with orchid *Platanthera praeclara* // cellulolytic.
- 7788 ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992 /R.S. Currah Z135-or-a. Mycorrhizae: with orchid *Platanthera praeclara* // cellulolytic.
- 7789 ex roots of Western prairie rringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992 /R.S. Currah Z136-or-a. Mycorrhizae: with orchid *Platanthera praeclara*.
- 7790 (T *Ceratorhiza pernacatena*) ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992 /R.S. Currah Z137-or-c. Mycorrhizae: with orchid *Platanthera praeclara*.
- 7791 ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992 /R.S. Currah Z140-or-c. Mycorrhizae: with orchid *Platanthera praeclara*.
- 7871 ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992 /R.S. Currah Z132-or-a. Mycorrhizae: with orchid *Platanthera praeclara*; effects of orchid mycorrhizal fungi on non-orchid hosts in dual culture (Zelmer et al., Mycoscience 37:439-448, 1996) // cellulolytic: produces cellulase but not phenol oxidase.
- 9610 ex peloton in lateral branch roots of Eastern prairie fringed orchid (*Platanthera leucophaea*) Lake Co., Illinois 24 Jun 1998 /L. Zettler Pleu-257. Mycorrhizae: symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Stewart SL, Bowles ML, Jacobs KA, Am. Midl. Nat. 145:168-175, 2001; Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005); orchid endophyte *Platanthera leucophaea*.
- 9611 ex peloton in lateral branch roots of Eastern prairie fringed orchid (*Platanthera leucophaea*) Monroe Co., Michigan 4 Oct 1998 /L. Zettler Pleu-264. Mycorrhizae: symbiotic germination of orchid seed (*Platanthera leucophaea*, a US federally threatened orchid); orchid endophyte *Platanthera leucophaea*.
- Ceratorhiza* sp.**
- 6093 endophyte ex roots orchid *Dactylorhiza incarnata* Netherlands E. Dijk /E. Dijk DIN01. Mycorrhizae: orchid endophyte *Dactylorhiza incarnata*.
- 6094 orchid endophyte Netherlands E. Dijk /E. Dijk DMR20. Mycorrhizae: orchid endophyte.
- 7151 ex roots of epiphytic orchid *Rodriguezia compacta* growing on *Socratea exorrhiza* La Selva, Heredia Prov., Costa Rica K. Richardson 28 Mar 1991 /R.S. Currah K172a. Mycorrhizae: with orchid *Rodriguezia compacta*.
- 7152 ex roots of epiphytic orchid *Campylocentrum micranthum* growing on *Erythrina* in cacao plantation La Selva, Heredia Prov., Costa Rica K. Richardson 29 Apr 1991 /R.S. Currah K301b. Mycorrhizae: with epiphytic orchid *Campylocentrum micranthum*.
- 7153 ex aerial roots of epiphytic orchid *Campylocentrum micranthum* growing on *Hamelia patens* La Selva, Heredia Prov., Costa Rica K. Richardson 17 Oct 1991 /R.S. Currah K366f. Mycorrhizae: with epiphytic orchid *Campylocentrum micranthum*.
- 7154 ex aerial roots of epiphytic orchid *Campylocentrum micranthum* growing on *Hamelia patens* La Selva, Heredia Prov., Costa Rica K. Richardson 4 Nov 1991 /R.S. Currah K450e. Mycorrhizae: with epiphytic orchid *Campylocentrum micranthum*.
- 7155 ex substrate roots of epiphytic orchid *Campylocentrum micranthum* growing on *Hamelia patens* La Selva, Heredia Prov., Costa Rica K. Richardson 4 Nov 1991 /R.S. Currah K451b. Mycorrhizae: with epiphytic orchid *Campylocentrum micranthum*.
- 7156 ex roots of epiphytic orchid *Rodriguezia compacta* growing on *Citrus* sp. La Selva, Heredia Prov., Costa Rica K. Richardson 4 Nov 1991 /R.S. Currah K455a. Mycorrhizae: with orchid *Rodriguezia compacta*.
- 7157 ex substrate roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov., Costa Rica K. Richardson 4 Nov 1991 /R.S. Currah K461g. Mycorrhizae: with epiphytic orchid *Campylocentrum micranthum*.
- 7158 ex aerial roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov., Costa Rica K. Richardson 25 Oct 1991 /R.S. Currah K385g. Mycorrhizae: with orchid *Campylocentrum micranthum* (Richardson et al, Lindleyana 8:127-137, 1993).
- 8557 ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991 /R.S. Currah Z63-nr-1a(1). Mycorrhizae: naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera* // cellulolytic: by tube test // culture conditions: phenol oxidase (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- 8558 ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991 /R.S. Currah Z63-nr-2a(1). Mycorrhizae: naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera* // cellulolytic: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997) // culture conditions: polyphenol oxidase (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- 8559 ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Fort McMurray, Alta. C. Zelmer July 1994 /R.S. Currah Z196-rh-a. Mycorrhizae: naturally occurring root endophyte of orchid *Spiranthes lacera* // cellulolytic: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997) // culture conditions: polyphenol oxidase (Zelmer & Currah, Lindleyana 12:142-148, 1997) // crystals.
- 8560 ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Fort McMurray, Alta. C. Zelmer July 1994 /R.S. Currah Z196-rh-b. Mycorrhizae: naturally occurring root endophyte of orchid *Spiranthes lacera*.
- 8561 protocorms of Northern slender ladies tresses orchid *Spiranthes lacera* after incubation of seeds in packets in field Whiteshell Provincial Forest, Manitoba C. Zelmer 1991 /R.S. Currah s16.04. Mycorrhizae: field-incubated seeds; symbiotic seed germination of orchid *Spiranthes lacera* // cellulolytic: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997) // culture conditions: polyphenol oxidase (Zelmer & Currah, Lindleyana 12:142-148, 1997).

- 9847 protocorm of one year old Western prairie fringed orchid *Platanthera praeclara* seedling Bicentennial Prairie, Clay County, Minnesota J. Sharma /J. Sharma Bic 70. Mycorrhizae: symbiotic seed germination in orchid *Platanthera praeclara*, initiated germination, higher stage protocorms and some leaf-bearing seedlings (Sharma J, Zettler LW, Van Sambeek JW, Ellersieck MR, C.J. Starbuck CJ, Am Midl Nat 149:104-120, 2003); survey of mycobionts of federally threatened orchid *Platanthera praeclara* (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003).
- 9848 new lateral root, 1-2 year old Western prairie fringed orchid *Platanthera praeclara* seedling Blustem Prairie, Clay County, Minnesota J. Sharma /J. Sharma Blu 86. Mycorrhizae: symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara* (Sharma J, Zettler LW, Van Sambeek JW, Ellersieck MR, C.J. Starbuck CJ, Am Midl Nat 149:104-120, 2003); survey of mycobionts of federally threatened orchid *Platanthera praeclara* (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003); septum ultrastructure (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003).
- 9849 old lateral root, 1-2 year old Western prairie fringed orchid *Platanthera praeclara* seedling LeRoy, Mower County, Minnesota J. Sharma /J. Sharma Ler 94. Mycorrhizae: symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara* (Sharma J, Zettler LW, Van Sambeek JW, Ellersieck MR, C.J. Starbuck CJ, Am Midl Nat 149:104-120, 2003); survey of mycobionts of federally threatened orchid *Platanthera praeclara* (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003).
- 9858 peloton ex root-like organs in seedling of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999 /L. Zettler Pleu-273. Mycorrhizae: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005); orchid endophyte *Platanthera leucophaea*.
- 9859 peloton ex root-like organs in seedling of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999 /L. Zettler Pleu-274. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 9860 peloton ex root-like organs in seedling of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999 /L. Zettler Pleu-275. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 9861 peloton ex root-like organs in seedling of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999 /L. Zettler Pleu-276. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 10208 ex peloton in root of green-fringed orchid *Platanthera lacera* undisturbed Anderson Prairie, Christian Co., central Illinois L. Zettler & K. Piskin 7-6-02 /L. Zettler III-Plac 297 [=Illinois College Herbarium LWZ 861]. Culture conditions: grow on cornmeal agar // mycorrhizae: orchid endophyte *Platanthera lacera*.
- 10209 ex peloton in root of green-fringed orchid *Platanthera lacera* undisturbed Anderson Prairie, Christian Co., central Illinois L. Zettler & K. Piskin 7-6-02 /L. Zettler III-Plac 298 [=Illinois College Herbarium LWZ 861]. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 10215 ex roots of adult green-fringed orchid (*Platanthera lacera*) Denby Prairie, Macoupin Co., IL L. Zettler & K. Piskin 16-6-02 /L. Zettler III-Plac 299 [=Illinois College Herbarium LWZ 864]. Pigment: yellow on PDA // mycorrhizae: orchid endophyte *Platanthera lacera*.
- 10216 ex roots of adult green-fringed orchid *Platanthera lacera* Denby Prairie, Macoupin Co., IL L. Zettler & K. Piskin 16-6-02 /L. Zettler III-Plac 300 [=Illinois College Herbarium LWZ 864]. Pigment: yellow on PDA // mycorrhizae: orchid endophyte *Platanthera lacera*.
- 10217 ex protocorm of eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02 /L. Zettler III-Pleu 305. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 10218 ex protocorm of eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02 /L. Zettler III-Pleu 306. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 10457 peloton of orchid *Platanthera leucophaea* protocorm (Stage 4) recovered from seed bait packet Anderson Prairie, Christian County Illinois L.W. Zettler Jun22, 2004 /L. Zettler ILL-Pleu-313. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10498 hyphal tips ex peloton; protocorm of eastern prairie fringed orchid *Platanthera leucophaea* acquired via seed packets sowed Jul 2002 Denby Prairie (state owned), Macoupin Co., Illinois L. Zettler 21-7-04 /L. Zettler 314. Mycorrhizae: isolate from lateral (branch) root of a Stage 5 seedling (shoot-bearing) of orchid *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011); orchid endophyte.
- 10499 hyphal tips ex peloton in protocorm of eastern prairie fringed orchid *Platanthera leucophaea* acquired via seed packets sowed Jul 2002 Denby Prairie (state owned), Macoupin Co., Illinois L. Zettler 21-7-04 /L. Zettler 315. Mycorrhizae: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011); isolated from lateral (branch) root of a Stage 5 seedling (shoot-bearing) of *Platanthera leucophaea*; orchid endophyte *Platanthera leucophaea*.
- 10500 hyphal tips ex peloton; Stage 4 protocorm of eastern prairie fringed orchid *Platanthera leucophaea* acquired via seed packets sowed Jul 2002 Denby Prairie (state owned), Macoupin Co., Illinois L. Zettler 21-JUL-2004 /L. Zettler 316. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10755 ex hyphal tip from peloton in lateral root tip of Eatons ladytress orchid *Spiranthes eatonii* Levy County, FL W. Kutosky & L.W. Zettler 26-Nov-2005 /L. Zettler 335. Mycorrhizae: orchid endophyte *Spiranthes eatonii*.

- 10756 ex hyphal tip from peloton in lateral root tip of Eatons ladies tresses orchid *Spiranthes eatonii* Site 22, Clay Co., FL W. Kutosky & L.W. Zettler 26-Nov-2005 /L. Zettler 336. Mycorrhizae: orchid endophyte *Spiranthes eatonii*.
- 10757 ex hyphal tip from peloton in lateral root tip of Eatons ladies tresses orchid *Spiranthes eatonii* Levy County, FL W. Kutosky & L.W. Zettler 26-Nov-2005 /L. Zettler 337. Mycorrhizae: orchid endophyte *Spiranthes eatonii*.
- 10791 ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Bradford Co., FL S.L. Stewart 28-Apr-2003 /S.L. Stewart FL-Sflo-305. Mycorrhizae: symbiotic seed germination of orchid *Spiranthes floridana*; orchid endophyte *Spiranthes floridana*.
- 10792 ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Bradford Co., FL S.L. Stewart 28/04/2003 /S.L. Stewart FL-Sflo-306. Mycorrhizae: symbiotic seed germination of orchid *Spiranthes floridana*; orchid endophyte *Spiranthes floridana*.
- 10793 ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Bradford Co., FL S.L. Stewart 25-Apr-03 /S.L. Stewart FL-Sflo-308. Mycorrhizae: symbiotic seed germination of orchid *Spiranthes floridana*; orchid endophyte *Spiranthes floridana*.
- 10794 ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 02-Jul-04 /S.L. Stewart FL-Hmac-315. Pigment: dark brown // mycorrhizae: orchid endophyte *Habenaria macroceratitis*.
- 10795 ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 02-Jul-04 /S.L. Stewart FL-Hmac-316. Pigment: dark brown // mycorrhizae: orchid endophyte *Habenaria macroceratitis*.
- 10796 ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 02-Jul-04 /S.L. Stewart FL-Hmac-317. Pigment: dark brown // mycorrhizae: orchid endophyte *Habenaria macroceratitis*.
- 10797 ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co., FL S.L. Stewart 02-Apr-06 /S.L. Stewart FL-Sflo-398. Mycorrhizae: orchid endophyte *Spiranthes floridana*.
- 10798 ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co., FL S.L. Stewart 02-Apr-06 /S.L. Stewart FL-Sflo-399. Mycorrhizae: orchid endophyte *Spiranthes floridana*.
- 10799 ex seedling Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co., FL S.L. Stewart 02-Apr-06 /S.L. Stewart FL-Sflo-400. Mycorrhizae: orchid endophyte *Spiranthes floridana*.
- 10800 ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co., FL S.L. Stewart 02-Apr-06 /S.L. Stewart FL-Sflo-401. Mycorrhizae: symbiotic seed germination of *Habenaria macroceratitis*; orchid endophyte *Spiranthes floridana*.
- 10974 ex hyphal tip of single peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007 /L. Zettler NG-002. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011) // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978) // biodiversity: prairie grasslands (fide L.W. Zettler).
- 10975 ex hyphal tip of single peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007 /L. Zettler NG-003. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011) // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978) // biodiversity: prairie grasslands (fide L.W. Zettler).
- 10976 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007 /L. Zettler NG-004. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10977 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007 /L. Zettler NG-005. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978) // mycorrhizae: orchid endophyte *Platanthera leucophaea* (fide L.W. Zettler); study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10978 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 26-Nov-2007 /L. Zettler NG-006. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10979 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* in area dominated by sedges and cattails Grant Creek Prairie, Will Co., IL K. Piskin 26-Nov-2007 /L. Zettler GC-007. Biodiversity: // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10980 ex hyphal tip of peloton in root of mature Eastern prairie fringed orchid *Platanthera leucophaea* in area dominated by sedges and cattails Grant Creek Prairie, Will Co., IL K. Piskin 21-Aug-2007 /L. Zettler GC-008. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980) // mycorrhizae: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980); study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10981 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Nov-2007 /L. Zettler SG-009. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10982 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Nov-2007 /L. Zettler SG-010. Biodiversity: prairie grasslands // culture conditions: isolated

- from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10983 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 19-Dec-2007 /L. Zettler SG-011. Culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // biodiversity: prairie grasslands // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10984 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 19-Dec-2007 /L. Zettler SG-012. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10985 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Feb-2008 /L. Zettler SG-013. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10986 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Feb-2008 /L. Zettler SG-014. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10987 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Feb-2008 /L. Zettler SG-015. Biodiversity: prairie grasslands (fide L.W. Zettler) // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10988 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 27-Feb-2008 /L. Zettler SG-016. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10989 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 27-Feb-2008 /L. Zettler SG-017. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 10990 ex root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 27-Feb-2008 /L. Zettler SG-018. Biodiversity: prairie grasslands // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990) // mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 11011 ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007 /L. Zettler NG-001. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011) // culture conditions: isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978) // biodiversity: prairie grasslands (fide L.W. Zettler).
- 11544 ex cortical region of root (not peloton) of mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5588) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011 /L. Zettler 356. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11545 ex peloton in root from mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5509) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011 /L. Zettler 357. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11546 ex peloton in root from mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5291) that had flowered Swift Prairie, DuPage Co., IL L.W. Zettler with C. Pollack (USFWS) 5-Aug-2011 /L. Zettler 358. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11547 ex different peloton in root of same mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5291) that had flowered Swift Prairie, DuPage Co., IL L.W. Zettler with C. Pollack (USFWS) 5-Aug-2011 /L. Zettler 359. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11548 ex peloton in root of mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5568) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011 /L. Zettler 360. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11549 ex peloton in root of mature Eastern prairie fringed orchid *Platanthera leucophaea* specimen (#5568) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011 /L. Zettler 361. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11572 ex peloton in root of necrotic mature orchid *Platanthera leucophaea* Chiwaukee Prairie, Sign Site, Kenosha Co., WI (C) L.W. Zettler & L. Artiomow 21 Aug-2011 /L. Zettler 362. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11573 ex peloton in root of necrotic mature orchid *Platanthera leucophaea* Chiwaukee Prairie, Sign Site, Kenosha Co., WI (C) L.W. Zettler & L. Artiomow 21 Aug-2011 /L. Zettler 363. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11574 ex cortical region of root from orchid *Platanthera leucophaea*

- (specimen #11087) Lyons Woods, Lake Co., IL D. Maurer, N. Huber (C) L.W. Zettler 22-Aug-2011 /L. Zettler 364. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11575 ex cortical region of root from orchid *Platanthera leucophaea* (specimen #11087) Lyons Woods, Lake Co., IL D. Maurer, N. Huber (C) L.W. Zettler 22-Aug-2011 /L. Zettler 365. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11576 ex cortical region of root from orchid *Platanthera leucophaea* (specimen #11126) Lyons Woods, Lake Co., IL D. Maurer, N. Huber (C) L.W. Zettler 22-Aug-2011 /L. Zettler 366. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11577 ex cortical region of root from orchid *Platanthera leucophaea* (specimen #11126) Lyons Woods, Lake Co., IL D. Maurer, N. Huber (C) L.W. Zettler 22-Aug-2011 /L. Zettler 367. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11578 ex peloton in root of orchid *Platanthera leucophaea* Unionville (USFWS area), Tuscola Co., MI (C) K.R. Kucher & Z.M. Gilna 29-Aug-2011 /L. Zettler 370. Mycorrhizae: orchid endophyte *Platanthera leucophaea* // culture conditions: from same root sample as 11579 but differs slightly in cultural appearance (fide L.W. Zettler).
- 11579 ex peloton in root of orchid *Platanthera leucophaea* Unionville (USFWS area), Tuscola Co., MI (C) K.R. Kucher & Z.M. Gilna 29-Aug-2011 /L. Zettler 371. Mycorrhizae: orchid endophyte *Platanthera leucophaea* // culture conditions: from same root sample as 11578 but differs slightly in cultural appearance (fide L.W. Zettler).
- 11673 ex tuberoid region of mature *Platanthera leucophaea* (Eastern prairie fringed orchid) (specimen #7804) growing in shallow ditch on compact soil Bystricky Prairie, McHenry Co., Illinois (C) L.W. Zettler & L. Ryan 23-Jul-2012 /L. Zettler 373. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11738 ex lateral roots of mature flowering Florida terrestrial orchid *Spiranthes vernalis* (spring lady's tresses), (voucher LWZ # 885 C) Florida Panther National Wildlife Refuge, Collier Co., FL (C) A. L. Stice; (I) E. Radcliffe 10-Mar-2013 /L. Zettler 375. Mycorrhizae: orchid endophyte *Spiranthes vernalis*.
- 11739 ex lateral roots of mature flowering Florida terrestrial orchid *Spiranthes vernalis* (spring lady's tresses), (voucher LWZ # 885 B) Florida Panther National Wildlife Refuge, Collier Co., FL (C) A. L. Stice; (I) E. Radcliffe 10-Mar-2013 /L. Zettler 376. Mycorrhizae: orchid endophyte *Spiranthes vernalis*.
- 11740 ex lateral roots of mature flowering Florida terrestrial orchid *Spiranthes vernalis* (spring lady's tresses), (voucher LWZ # 885 A) Florida Panther National Wildlife Refuge, Collier Co., FL (C) A. L. Stice; (I) E. Radcliffe 10-Mar-2013 /L. Zettler 377. Mycorrhizae: orchid endophyte *Spiranthes vernalis*.
- 11750 ex root of mature ghost orchid *Dendrophylax lindenii* Florida Panther National Wildlife Refuge, West Henson location, Collier Co., FL K. Edwards & K. Patel 19-Jun-2013 /L. Zettler 379. Mycorrhizae: orchid endophyte *Dendrophylax lindenii*.
- 11751 ex root of epiphytic orchid *Epidendrum rigidum* Florida Panther National Wildlife Refuge, by east helipad, Collier Co., FL K. Edwards & K. Patel 18-Jun-2013 /L. Zettler 380. Mycorrhizae: orchid endophyte *Epidendrum rigidum*.
- 11798 ex terrestrial orchid *Platanthera leucophaea* seedling in hotspot, in vicinity of plant Bystricky Prairie, McHenry Co., Illinois (C) L.W. Zettler and L. Ryan 03-May-2013 /L. Zettler 387. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11799 ex terrestrial juvenile orchid *Platanthera leucophaea* Bystricky Prairie, McHenry Co., Illinois (C) L.W. Zettler and L. Ryan 15-Aug-2013 /L. Zettler 388. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- activities (Whyte et al., J. Nat. Prod. 59:765-769, 1996; Gloer, Chpt 16, The Mycota IV, p 262, 1997); trichothecene mycotoxin roridin; isocoumarins decarboxy-citrinone, 4-acetyl-8-hydroxy-6-methoxy-5-methylisocoumarin (Whyte et al., J. Nat. Prod. 59:765-769, 1996).
- Cercophora sordarioides* (Speg.) Lundqvist**
9301 cow dung [NOTE: listed in Whyte et al., 1997, as UAMH 7495 (UAMH 7495 = *Cercophora areolata*)] Issy L'Eveque, France B. Koster Aug 1994 /J.B. Gloer JS 271. Arthrinone, 1-dehydroxyarthrinone, 3a, 9a-deoxy-3a-hydroxyl-1-dehydroxyarthrinone & cerdarin (Whyte et al., Can. J. Chem. 75:768-772, 1997). Pigment: black.
- Cercospora* sp.**
11095 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB01. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // molecular systematics: Blast match 99% ITS similarity with several *Cercospora* species (fide UAMH 2010) // culture conditions: no conidia observed.
- Chaetomidium fimeti* (Fuckel) Saccardo**
7776 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (EW2-2-2A) 24 Jan 1994 /S.P. Abbott (EW2-2-2A). Pigment: slightly yellow (@ OAT) // cellulolytic.
- Chaetomidium spirotrichum* see *Emilmuelleria spirotricha***
- Chaetomium atrobrunneum* Ames**
2684 D. Westlake [=PRL 2287].
3048 R.K. Benjamin RSA 1669 [=QM 626].
6862 soil P.C.S.I.R. Labs Experimental Farm, Karachi, Pakistan R. Khan 9 Sep 1987 /R. Khan TRTC 51004.
7305 ex cerebral phaeohyphomycosis, diabetic male with renal transplant, 32 yr Vellore, India T. J. John (M 614/86) /CDC B-4561 [=ATCC 64497 =UAMH 7760]. Pigment: yellow // human/animal pathogen: fatal brain abscess (Anandi et al., J. Clin. Microbiol. 27:2226-2229, 1989); comparison with *C. strumarium* (Abbott, Sigler, McAleer, et al., J. Clin. Microbiol. 33: 2692-2698, 1995).
7372 fatal disseminated infection in female, 15 yr, with acute lymphoblastic leukemia 1990 /M.G. Rinaldi UTHSC 90-849. Human/animal pathogen: comparison with *C. strumarium* (Abbott, Sigler, McAleer, et al., J. Clin. Microbiol. 33: 2692-2698, 1995).
7760 Fatal brain lesion in male diabetic renal transplant patient Vellore, India T. J. John (M 614/86) /ATCC 64497 [=CDC B-4561 =UAMH 7305]. Human/animal pathogen: comparison with *C. strumarium* (Abbott, Sigler, McAleer, et al., J. Clin. Microbiol. 33: 2692-2698, 1995); fatal brain abscess (Anandi et al., J. Clin. Microbiol. 27:2226-2229, 1989).
7761 (T *Chaetomium atrobrunneum*) ex mattress cover Solomon Island G. W. Martin /ATCC 58409 [=QM 626]. Systematics/taxonomy: comparison with human isolates.
8754 fatal cerebral abscesses, male 31 yr with multiple myeloma; also isolated from lung; Maywood, Illinois Loyola University Medical Center 1996 /P. Kammeyer M 36671. Pigment: brown // human/animal pathogen: fatal brain infection (Thomas et al., Human Pathology 30:874-879, 1999; Guppy et al., Neurosurgery 43:1463-1469, 1998).
- Chaetomium aureum* Chivers**
2683 D. Westlake [=PRL 2280].
2691 D. Westlake [=PRL 2288].
3032 R.K. Benjamin RSA 1685.
7193 ex roots of epiphytic orchid *Trigonidium riopalenquense* La
- Ceratostomella cana* see *Ophiostoma canum***
- Cercophora areolata* Lundqvist**
7495 porcupine dung under rock nr Bird Lake, Muskoka Dist., ON J. Scott 21 Feb 1991 /D. Malloch JS 166. Cercophorins A-C, isocoumarin derivatives, metabolites with cytotoxic & antifungal

Selva, Heredia Prov., Costa Rica K. Richardson 31 Oct 1991 /R.S. Currah K438e. Pigment: wine red // mycorrhizae: root endophyte epiphytic orchid *Trigonidium riopalenquense*.

Chaetomium biporatum Cano & Guarro

5630 (T *Chaetomium biporatum*) arable soil Betera, Valencia, Spain J. Cano Aug 1985 /J. Guarro FMR 854 [=ATCC 62831].

Chaetomium bostrychodes Zopf

599 contaminant Edmonton, Alta. J.W. Carmichael Jan 1958 /J.W. Carmichael.
6010 goat dung Gandhi Gdn., Karachi, Pakistan (C)T. Wasif Nov 1962 /R. Khan TRTC 38824.
8573 soil Sydney, Australia J. Guarro Mar 1994 /J. Guarro FMR 5548.

Chaetomium brasiliense Batista & Pontual

2685 D. Westlake [=PRL 2289].
3042 tent canvas Papua, New Guinea /R.K. Benjamin RSA 1675 [=QM 623 =ATCC 45557].

Chaetomium brevipilium Ames

4775 dung Michel Reservoir, S. Alta. L. Sigler Apr 1983 /L. Sigler.

Chaetomium caprinum Bainier

1922 soil Tokyo, Japan Feb 1962 /S.-I. Udagawa NHL 2275.
2669 D. Westlake [=PRL 2290].
3037 R.K. Benjamin RSA 1680 [=QM 6695].

Chaetomium circinatum Chivers

6011 rodent dung Nipissing Dist. Algonquin Prov. Pk. Ont. (C) J. Reynolds Oct 1980 /R. Khan TRTC 48724.

Chaetomium convolutum Chivers

3038 R.K. Benjamin RSA 1679 [=QM 6704].

Chaetomium cupreum Ames

5607 soil of *Vitis vinifera* Conca de Barbera, Catalonia, Spain J. Guarro 14 Jan 1979 /J. Guarro FMR 46 [=CBS 340.80]. Pigment: purple.
6863 ex soil, dry woodland of *Eucalyptus* & *Melaleuca* Iron Range National Park, Cape York, Australia N. Dengler 20 Feb 1990 /R. Khan TRTC 51331 [=TRTC 51335]. Pigment: brown.

Chaetomium cymbiforme Lodha

7246 ex swab of air supply vent in office building Regina, Saskatchewan S.P. Abbott (SA-M265) 18 Nov 1992 /S.P. Abbott (SA-M265).
8901 soil Delhi, India J. Guarro 27 Oct 1995 /J. Guarro FMR 5846.

Chaetomium deceptivum Malloch & Benny

3980 (T *Chaetomium deceptivum*) dung ex wood rat (*Neotomatis*) Lake Hemet, Riverside Co., Calif. R.K. Benjamin 10 Nov 1968 /R.K. Benjamin RSA 1993 [=TRTC 46369 =CBS H-6861].

Chaetomium dolichotrichum Ames

2667 D. Westlake [=PRL 2291].
3041 R.K. Benjamin RSA 1676 [=QM 6708].

Chaetomium elatum Kunze ex Fries

2672 D. Westlake [=PRL 2279].
2682 D. Westlake [=PRL 2279].

Chaetomium erectum Skolko & Groves

2686 D. Westlake [=PRL 2292].
2687 D. Westlake [=PRL 2294].

Chaetomium funicola Cooke

2689 D. Westlake [=PRL 2309].
2690 D. Westlake [=PRL 2184].
3034 R.K. Benjamin RSA 1683 [=QM 6697 =ATCC 42779]. Cellulolytic.
7194 ex roots of epiphytic orchid *Pleurothallis* sp. La Selva, Heredia Prov., Costa Rica K. Richardson 5 Apr 1991 /R.S. Currah K208b. Mycorrhizae: root endophyte epiphytic orchid *Pleurothallis* sp.
9370 dry, rotted wood (stage II decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 1-22B) T. Lumley (EI-13-S3E 22 Jan 1996 /R.S. Currah EI-13-S3E, 1-22B. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Chaetomium fusiforme Chivers

5988 wood chips Halton Co., Hiltin Falls, Ont. A. Carter Jul 1979 /R. Khan TRTC 48916. Pigment: red.

Chaetomium fusisporum Smith

3049 (T *Chaetomium fusisporum*) soil Adelaide, Australia G. Smith-J. Warcup 1952 /R.K. Benjamin RSA 1668 [=QM 7960 =CBS 166.61 =IMI 86560 =LSH BB382 =UC 4591]. Pigment: yellow on OAT.

Chaetomium globosum Kunze ex Fries (syn. *Chaetomium olivaceum*)

841 mouse dung Edmonton, Alta. J.W. Carmichael 4 Aug 1960 /J.W. Carmichael.
2675 D. Westlake [=PRL 2200].
3033 R.K. Benjamin RSA 1684. Cellulolytic.
7142 indoor air ex RCS strip Edmonton, Alta. L. Sigler (18b) 16 Oct 1989 /S. Poznanski 18 [=GenBank AY625061 ITS =GenBank JX130366 ITS]. *Chaetoglobosin* A, F, C, *chaetomugilin* D, *chaetoviridin* A (McMullin DR, Sumarah MW, Miller JD, Mycotoxin Res 2012 DOI 10.1007/s12550-012-0144-9). Systematics/taxonomy: comparison with *C. strumarium* (Abbott, Sigler, McAleer, et al, J. Clin. Microbiol. 33: 2692-2698, 1995) // application: metabolites *chaetoglobosins* and *azaphilones* produced by strains from the indoor environment (McMullin DR, Sumarah MW, Miller JD, Mycotoxin Res 2012 DOI 10.1007/s12550-012-0144-9); antigenic chitosanases having potential as biomarkers for detecting *C. globosum* in indoor environment (Provost NB, Shi C, She Y-M, Cyr TD, Miller JD, Med Mycol 2012 DOI:10.3109/13693786.2012.715246); highest immunoblot response among human polyclonal antibodies tested (Provost et al 2012).
7407 canvas in butterfly chrysalis incubation chamber Butterfly House, Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 804) 6 Jul 1993 /S.P. Abbott (SA 804).
7578 ex stored cotton District of Columbia, USA /NRRL 1870 [=ATCC 6205 =CBS 148.51 =IFO 6347 =IMI 45550 =NZ_AAFU01000000 as CBS 148.51]. Cellulase, beta-1,4-glucan-4-glucanohydrolase (Mater. Org. (Berl.) 7:27-43, 1972). Biodeteriogen/biodegradation: testing of aerosols (J. Pharm. Sci. 55:1471-1472, 1966) // fungus resistance testing: paper & paperboard (ASTM Std.D2020-76); polymers (ASTM Std. G21-80); slimicide evaluation (ANSI/ASTM Std. E599-77); ATCC 6205 listed on Environment Canada Domestic Substances List (<http://www.ec.gc.ca/subsnouvelles-news/subs/default.asp?lang=En&n=C4E09AE7-1>); Environmental test methods and engineering guidelines, Washington DC (Military Standard MIL-STD-810F, 2000) // molecular systematics: genome sequence (BioProject PRJNA16821).
7762 ex lesion on human forearm Brazil C. S. Lacaz /ATCC 66562. Pigment: reddish-brown // systematics/taxonomy: comparison with *C. strumarium* (Abbott, Sigler, McAleer, et al, J. Clin.

- Microbiol. 33: 2692-2698, 1995).
- 7763 ex human fingernail Brazil C. S. Lacaz /ATCC 66563. Pigment: brown (yellowish) // systematics/taxonomy: received as *C. perpulchrum*; comparison with *C. strumarium* (Abbott, Sigler, McAleer, et al, J. Clin. Microbiol. 33: 2692-2698, 1995) // human/animal pathogen: unguinal phaeohyphomycosis (Med. Vet. Mycol. 26: 261-268, 1988).
- 7773 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 177) 30 Jan 1994 /S.P. Abbott (OHS 177) [=GenBank JX130367 ITS]. *Chaetoglobosin* A, F, C, *chaetomugilin* D, *chaetoviridin* A (McMullin DR, Sumarah MW, Miller JD, Mycotoxin Res 2012 DOI 10.1007/s12550-012-0144-9). Cellulolytic // application: metabolites *chaetoglobosins* and *azaphilones* produced by strains from the indoor environment (McMullin DR, Sumarah MW, Miller JD, Mycotoxin Res 2012 DOI 10.1007/s12550-012-0144-9); antigenic chitosanases having potential as biomarkers for detecting *C. globosum* in indoor environment (Provost NB, Shi C, She Y-M, Cyr TD, Miller JD, Med Mycol 2012 DOI:10.3109/13693786.2012.715246).
- 9452 decayed wood (stage 3 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-06-S1C) 29 Jan 1999 /R.S. Currah EI-06-S1C.
- 9683 leaves & stems of *Cannabis sativa* Edmonton, Alberta H. Bennypaul 7 Dec 1999 /H. Bennypaul.
- 9945 shed skin ex panther chameleon (*Furcifer pardalis*), male 2yr Lakeside Animal Hospital, Milwaukee WI UAMH (UW035B-A) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- Chaetomium globosum* var. *rectum*** Dreyfuss
5995 farm soil with manure Experimental Farm, P.C.S.I.R. Labs. Karachi, Pakistan R. Khan 9 Sep 1987 /R. Khan TRTC 51000.
6009 stems of Pea Lincoln Co., Vineland Res. Stn. Ont. 22 Sep 1959 /R. Khan TRTC 35600.
- Chaetomium gracile*** Udagawa
5987 (T *Chaetomium gracile*) soil Tsu Japan /R. Khan [=ATCC 16153 =CBS 146.60 =IMI 86456 =NHL 2251]. Non mycotoxin producer (Udagawa et al, Can. J. Microbiol. 25:170-177, 1979). Pigment: green.
6415 moist soil nr cave E. of Kasamba, Goa Lawah, Bali, Indonesia (C) J. Krug 17 Dec 1987 /R. Khan IB-14a. Pigment: green.
- Chaetomium heterosporum*** Rikhy & Mukerji
5985 field soil Mt. Kenya 13000ft Timau Track, Kenya Griffin & Krug (C) Cain 14 Jul 1966 /R. Khan 66.620a.
- Chaetomium hispanicum*** Guarro & von Arx
5610 (T *Chaetomium hispanicum*) soil Catalonia, Spain J. Guarro Feb 1982 /J. Guarro FMR 313 [=CBS 243.82].
- Chaetomium homopilatum*** Omvik (morph *Humicola an. Chaetomium homopilatum*)
7195 ex roots of *Anthurium* sp. La Selva, Heredia Prov., Costa Rica K. Richardson 4 Mar 1991 /R.S. Currah K44a. Mycorrhizae: root endophyte *Anthurium* sp..
7196 ex roots of epiphytic orchid (*Dryadella pusiola*) La Selva, Heredia Prov., Costa Rica K. Richardson 5 Apr 1991 /R.S. Currah K288c. Mycorrhizae: root endophyte epiphytic orchid *Dryadella pusiola*.
9453 dry, rotted wood (stage II decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 1-181) T. Lumley (EI-03-S1H 18 Jan 1999 /R.S. Currah EI-03-S1H, 1-181. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- Chaetomium indicum*** Corda
711 ex finger nails Edmonton, Alta. J.W. Carmichael 1960 /J.W. Carmichael. Non mycotoxin producer (Udagawa et al, Can. J. Microbiol. 25:170-177, 1979).
2674 D. Westlake [=PRL 2293].
3035 R.K. Benjamin RSA 1682 [=QM 8064].
3051 R.K. Benjamin RSA 1666 [=QM 606].
7031 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 243) Aug 1990 /D. Inglis (HD 243). Pigment: yellow/orange // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
9996 shed mid body skin ex corn snake (*Elaphe guttata guttata*), male Topeka Zoological Park, Topeka, KS J. Pare Jan 2001 /J. Pare UW056A-A. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- Chaetomium irregulare*** Soregel
8902 soil Palencia, Spain O.V. Rocca Sep 1996 /J. Guarro FMR 5826. Cellulolytic.
- Chaetomium jabalpurensense*** Tiwari, Agrawal & Lodh
8471 garden soil Delhi, India J. Guarro Mar 1994 /J. Guarro FMR 5512.
8822 soil Pascua Island, Chile L. Zaror Sep 1995 /J. Guarro FMR 5830.
- Chaetomium longicolleum*** Krzem. & Badura (syn. *Farrowia longicollea*, *Chaetomium longirostre*)
3057 lizard dung Villa Ahumada, Chihuahua, Mexico R.K. Benjamin 4 Jul 1964 /R.K. Benjamin RSA 1465.
- Chaetomium longirostre* see ***Chaetomium longicolleum***
- Chaetomium madrasense*** Natarajan
5631 sandy soil Cullera, Valencia, Spain J. Cano Aug 1985 /J. Guarro [=ATCC 62832].
- Chaetomium microascooides*** Guarro
5608 (T *Chaetomium microascooides*) soil Prades, Catalonia, Spain J. Guarro 19 Mar 1979 /J. Guarro FMR 141-2.
- Chaetomium microcephalum*** Ames
3050 R.K. Benjamin RSA 1667 [=QM 6710].
- Chaetomium mollipilium*** Ames
3039 R.K. Benjamin RSA 1678 [=QM 1007].
- Chaetomium muelleri*** von Arx
7030 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 242) Aug 1990 /D. Inglis (HD 242).
- Chaetomium murorum*** Corda
3040 R.K. Benjamin RSA 1677 [=QM 6709].
4868 coyote (*Canis latrans*) dung Slave Lake, Alta. L. Sigler Oct 1983 /L. Sigler. Pigment: yellow.
5986 elephant dung Ngurdota Crater 3000 ft Tanzania Griffin & Krug (C) Cain 10 Aug 1966 /R. Khan 66.1093q.
9539 sandy soil under jack pine (*Pinus banksiana*) North Buck Lake near Lac La Biche, Alta S.P. Abbott (SA-M287) 11 Jan 1999 /S.P. Abbott (SA-M287).
- Chaetomium nigricolor*** Ames
5992 soil base of Ebony tree (*Diospyros mespiliformis*) Okavango Delta, Island Forest area, Botswana (C) J. Krug 26 Oct 1986

/R. Khan TRTC 50996. Pigment: green.

Chaetomium novae-caledonicum Udagawa, Uchiyama & Kamiya

8328 (T *Chaetomium novae-caledonicum*) forest soil between Noumea and Yate, Prov. Sud, New Caledonia S. Uchiyama and S. Kamiya 21 Jun 1993 /S.-I. Udagawa BF 47541. Cellulolytic.

Chaetomium ochraceum Tschudy

3044 R.K. Benjamin RSA 1673 [=QM 6707].

Chaetomium olivaceum see ***Chaetomium globosum***

Chaetomium pachypodiodes Ames

3047 R.K. Benjamin RSA 1670 [=QM 6705].

Chaetomium perlucidum Sergejeva

5615 forest soil Valencia, Spain J. Cano Aug 1985 /J. Guarro FMR 810.

7775 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 240) 24 Jan 1994 /S.P. Abbott (OHS 240). Pigment: brown // thermotolerant: good growth @ 35 C.

9705 autopsy lung tissue ex female 45 yr 45-year-old female with acute myelogenous leukemia; following bone marrow transplant recipient; histopathology + for hyphae Denver, CO 1999 /M.G. Rinaldi UTHSC 99-1994. Human/animal pathogen: disseminated infection involving the brain in immunocompromised patient (Barron, Sutton, Veve, Guarro et al., J. Clin. Microbiol. 41:5302-5307, 2003) // thermotolerant.

9706 lung mass ex rt. middle lobe, female 78 yr with history of asthma and chronic bronchiectasis; biopsy lung wedge negative for hyphae by GMS Denver, CO 1999 /M.G. Rinaldi UTHSC 98-2214. Human/animal pathogen: pulmonary infection (Barron, Sutton, Veve, Guarro et al., J. Clin. Microbiol. 41:5302-5307, 2003) // thermotolerant.

Chaetomium piluliferoides Udagawa & Y. Horie (morph *Botryotrichum an. Chaetomium piluliferoides*)

5620 soil Catalonia, Spain J. Guarro Oct 1982 /J. Guarro FMR 323 [=CBS 262.82].

Chaetomium piluliferum Daniels (morph *Botryotrichum piluliferum*)

35 contaminant ex rat spleen culture Knoxville, Tenn. L. Ajello (442) 1 Nov 1948 /W.L. White Farlow Herb. 231.

423 skin ex forearm Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.

457 hair ex neck Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.

646 skin Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael.

899 'Yellow Mold' disease in mushrooms /L.R. Kneebone.

1086 spleen ex rodent Edmonton, Alta. J.W. Carmichael 6 Jun 1960 /J.W. Carmichael.

1109 ex cold storage products H.H. Kuehn /G.F. Orr K 200.

1110 coyote dung San Joaquin, Calif. /G.F. Orr O-4.

1147 soil & quills ex porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.

1387 lungs ex Richardson's ground squirrel Edmonton, Alta. J.W. Carmichael Sep 1962 /J.W. Carmichael [=IFO 8198]. Non mycotoxin producer (Udagawa et al, Can. J. Microbiol. 25:170-177, 1979).

1612 old wood flooring /M.A. Gordon.

1633 CDC A-0939.

1944 non surface-sterilized wheat seed /H. Wallace 64-5.

2305 soil Maryland C.W. Emmons (5120) /C.C. Campbell Y-19. Culture conditions: phialidic conidia also produced.

2308 India C.W. Emmons (5129) /C.C. Campbell Y-22.

2654 soil India /H.C. Gughani 481.

2680 D. Westlake [=PRL 1451].

2758 garden soil Edmonton, Alta. J.W. Carmichael May 1967 /J.W. Carmichael.

2926 poultry Bangalore, India R.F. Patil 1968 /R.F. Patil.

3236 turkey corrals Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.

5589 coyote dung R. Currah (D10) /R. Currah (D10).

7521 midstream urine, 49 yr old male Edmonton, Alta. C. Sand 3 Nov 1993 /R. Rennie MY 4628.

7718 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 424) 21 Mar 1994 /S.P. Abbott (OHS 424). Culture conditions: phialidic conidia also present.

9371 dry, rotted wood (stage II decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 10-27A) T. Lumley (EI-13-S3G 27 Oct 1996 /R.S. Currah EI-13-S3G, 10-27A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

9669 sinus ex female with chronic sinusitis Fort Collins, CO Poudre Valley Hospital 1999 /M.G. Rinaldi UTHSC 99-984. Cycloheximide: sensitive // benomyl: sensitive.

Chaetomium quadrangulatum Chivers

8574 soil Cairns, Australia J. Guarro Mar 1994 /J. Guarro FMR 5549.

Chaetomium reflexum Skolko & Groves

2699 D. Westlake [=PRL 2005].

Chaetomium repens Guarro & Figueras

5609 (T *Chaetomium repens*) soil Montblanc, Tarragona, Spain J. Guarro Feb 1982 /J. Guarro FMR 310 [=ATCC 62835 =CBS 233.82].

Chaetomium retardatum Carter & Khan

6021 (T *Chaetomium retardatum*) herbivore dung Lake Amboseli, Kenya Griffin & Krug (C) Cain 18 Aug 1966 /R. Khan 66.1778b.

Chaetomium semen-citrulli Sergejeva

6008 (T *Chaetomium semen-citrulli*) fox dung Turkoman, USSR 26 Jun 1986 /R. Khan A-152.

Chaetomium seminudum Ames

2644 soil ex mixed wood Guelph, Ont. G. Barron Aug 1964 /G.L. Barron OAC 10275.

Chaetomium sp.

10916 biopsy ex lung, patient with chronic granulomatous disease Bethesda, MD Y. Shea Apr 2008 /Y. Shea B1252040. Molecular systematics: BLAST search closest match to species in Chaetomiaceae // culture conditions: ascomata not produced // thermophilic: grows better @ 35C than @ 30C; slow growth @ 25C.

11670 ex vitreous fluid, left eye in patient with multiple brain abscesses, sudden loss of vision and history of chronic sinusitis Edmonton, Alta. 6-Nov-2012 /DynaLife Diagnostic Lab Services 68152 [=MY10236]. Molecular systematics: Blast match 99-100% ITS similarity with *Chaetomium* species (fide UAMH 2012); Close to *Chaetomium globosum* but cultural features suggest possible affinity to heterothallic *Chaetomium subaffine* // culture conditions: grows better @ 30C than @ 35C (fide UAMH 2012); Phialidic conidia in chains and infertile ascomata with straight hairs produced.

11717 specimen ex inflamed nasal passage, male 64 yr, with chronic infection Edmonton, Alta. 15-Mar-2013 /J. Fuller MY 2077 [=M13MY002077]. Molecular systematics: Blast match 99-100% ITS similarity with *Chaetomium* species; Close to

Chaetomium globosum but cultural features suggest possible affinity to heterothallic *Chaetomium angustispirale* or *C. subaffine* // culture conditions: produces phialides bearing conidia in long chains; no ascospores produced // thermotolerant: NG @ 42C (fide submitting lab); grows @ 35C but much slower than @ 30C (fide UAMH) // cycloheximide: sensitive (growth strongly inhibited) (fide submitting lab).

***Chaetomium spinosum* Chivers**

5994 soil with manure Experimental Farm, P.C.S.I.R. Labs., Karachi Pakistan R. Khan 9 Sep 1987 /R. Khan TRTC 50999 [=CBS 162.88 =ATCC 64641].

***Chaetomium spirale* Zopf**

3046 R.K. Benjamin RSA 1671 [=QM 622 =JQMD 135].

***Chaetomium spiralostrichum* Lodha**

8823 soil Pascua Island, Chile L. Zaror Sep 1995 /J. Guarro FMR 5828.

***Chaetomium strumarium* (Rai & al.) Cannon (syn.**

Achaetomium strumarium, *Achaetomium cristalliferum*)

5407 (T *Achaetomium cristalliferum*) arid, somewhat saline soil Nouvelle Vallée south of Kharga-Beris oasis, Egypt L. Faurel 1969 /CBS 781.84 [=ATCC 58164]. Achaetolide (lactone) (Bodo et al., *Phytochemistry* 22:447-451, 1983; Turner & Aldridge, *Fungal Metabolites* p 172, 1983).

Systematics/taxonomy: comparison with human isolates (Abbott, Sigler, McAleer, et al, *J. Clin. Microbiol.* 33: 2692-2698, 1995).

5523 (T *Achaetomium strumarium*) soil Uttar Pradesh, Lucknow, India J. Rai /J. Vederas [=ATCC 58165 =CBS 333.67 =IMI 82624 =NRRL A-10898]. Achaetolide (Bodo et al., *Phytochemistry* 22:447-451, 1983; Turner & Aldridge, *Fungal Metabolites* p 172, 1983); non mycotoxin producer (Udagawa et al, *Can. J. Microbiol.* 25:170-177, 1979).

Systematics/taxonomy: comparison with human isolates (Abbott, Sigler, McAleer, et al, *J. Clin. Microbiol.* 33: 2692-2698, 1995).

7135 ex fatal brain biopsy, male 28 yr, IV drug abuser, fungus seen in histopathology & gross morphology at autopsy San Antonio, Texas Medical Center Hospital (F3224) 1992 /M.G. Rinaldi UTHSC 92-32. Human/animal pathogen: fatal cerebral mycosis (Abbott, Sigler, McAleer, et al, *J. Clin. Microbiol.* 33: 2692-2698, 1995; Aribandi M, Bazan C, Rinaldi MG, *Australasian Radiol* 49:166-169, 2005) // pigment: black on CER; rose/burgundy @ CMA & PYE // benomyl: sensitive // cycloheximide: sensitive // thermotolerant: grows @ 37C.

7758 ex antelope dung Kenya J. Krug /ATCC 58406. Systematics/taxonomy: comparison with human isolates (Abbott, Sigler, McAleer, et al, *J. Clin. Microbiol.* 33: 2692-2698, 1995).

7797 fatal brain abscess, biopsy, homosexual male 25 yr, in prison, history of IV drug use Western Australia R. McAleer 1987 /IMI 313435. Human/animal pathogen: fatal cerebral mycosis (Abbott, Sigler, McAleer, et al, *J. Clin. Microbiol.* 33: 2692-2698, 1995).

7804 fatal brain abscess of occipital cortex, male 20 yr, in prison, history of IV drug use; DE + Albuquerque, NM 11 Oct 1994 /M.G. Rinaldi UTHSC 94-2399. Pigment: brown // human/animal pathogen: fatal cerebral mycosis (Abbott, Sigler, McAleer, et al, *J. Clin. Microbiol.* 33: 2692-2698, 1995).

***Chaetomium subspirale* Chivers**

7197 ex roots of epiphytic orchid *Maxillaria neglecta* on *Pentaclethra macroloba* La Selva, Heredia Prov., Costa Rica K. Richardson 2 Apr 1991 /R.S. Currah K190c. Mycorrhizae:

root endophyte epiphytic orchid *Maxillaria neglecta*.

7198 ex roots of epiphytic orchid *Oncidium stenotis* growing on *Pentaclethra macroloba* La Selva, Heredia Prov., Costa Rica K. Richardson 2 Apr 1991 /R.S. Currah K191c. Mycorrhizae: root endophyte epiphytic orchid *Oncidium stenotis*.

7199 ex roots of epiphytic orchid *Pleurothallis periodica* La Selva, Heredia Prov., Costa Rica K. Richardson 24 Apr 1991 /R.S. Currah K293b.

***Chaetomium succineum* Ames**

3036 R.K. Benjamin RSA 1681 [=QM 1044]. Cellulolytic. 5990 cow dung Mono Co., Mono Lake, Calif. (C) R. Cain (1820) 22 Aug 1957 /R. Khan TRTC 50931.

***Chaetomium tenuissimum* Sergejeva**

3043 R.K. Benjamin RSA 1674 [=QM 8178]. Cellulolytic.

***Chaetomium thermophilum* La Touche**

2024 mushroom compost during peak heating Gossau-Zurich, Switzerland C.L. Fergus Sep 1962 /C.L. Fergus 14 [=CBS 141.64]. Thermophilic: opt. 45C // cellulolytic.

3198 rec'd as *Humicola grisea* var. *thermoidea*, but isolate produced perithecia characteristic of *Chaetomium thermophilum* [ex elephant dung] San Francisco, Calif. R. Emerson 1948 /IMI 126329. Thermophilic: opt. 45C // culture conditions: produced ascospores.

***Chaetomium tortile* Bainier**

3045 R.K. Benjamin RSA 1672 [=QM 895 =West Virginia U 1632].

***Chaetopsina fulva* Rambelli**

1516 (T *Chaetopsina fulva*) needle, *Cedrus deodara* (Himalayan cedar) Italy A. Rambelli 1956 /IMI 62199 [=CBS 142.56 =JCM 9754 =GenBank AB003786 SSU].

***Chaetopsis grisea* (Ehrenb.) Saccardo**

2582 (T *Acrotheca campiniae*) rotten wood *Abies alba* Italy Rambelli 7 Mar 1966 /CBS 100.57.

Chaetosphaeria myriocarpa* see *Chloridium clavaeforme

***Chaetosphaeria* sp.**

11124 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 6-Sept-2007 /G. Kernaghan ARSL 060907.80 [=GenBank HQ157859 ITS]. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).

Chaetothyriales

4571 originally identified as *Sclerococcum sphaerale*, a lichenicolous fungus /IMI 247000. Psychrophilic: opt. 18C // culture conditions: grows well on CER and OAT, very poorly on PDA; very slow growing // molecular systematics: phylogenetic position of *Sclerococcum sphaerale* in Eurotiomycetes (Diederich P, Ertz D, Lawrey JD, Sikaroodi A, Untereiner WA, *Fungal Diversity* 2012 epub DOI 10.1007/s13225-012-0179-4); UAMH 4571 sequences do not match those of *Sclerococcum sphaerale* and are either basal to or outside the *Chaetothyriales* (fide J.D. Lawrey and M. Davey 2012 pers. comm.).

Chalara an. Ceratocystis adiposa* see *Ceratocystis adiposa

Chalara an. Ceratocystis autographa* see *Ceratocystis autographa

Chalara an. Cornuvesica falcata see *Cornuvesica falcata*

Chalara an. Cryptendoxyla hypophloia see
Cryptendoxyla hypophloia

Chalara crassipes (G. Preuss) Saccardo

9555 ex Podocarpus sp. Minginui, Urewera National Park, Taupo, NZ J. Reid & S. Reid 1982 /J. Reid UM 632. Culture conditions: non sporulating on deposit; no conidia obtained.

Chalara ellisii Nag Raj & Kendrick

1548 (T *Chalara ellisii*) soil Guelph, Ontario G.L. Barron /G.L. Barron 13601.

Chalara microchona Gams

4108 wood chips & bark Westlock area L. Sigler 1978 /L. Sigler.
4847 'purple dust' ex lodgepole pine Lamont Creek, near Princeton, B.C. L. Sigler Sep 1983 /H.S. Whitney.
4933 (T *Chalara microchona*) decaying wood *Pinus sylvestris* Netherlands Feb 1974 /CBS 175.74 [=GenBank HQ609486 SSU =GenBank HQ609479 LSU].
9230 wood tissue ex freshly exposed longitudinal cut in felled *Tsuga heterophylla* log, about 90 yr, after 4.5 mo storage in forest at felling site Washlawis Creek at Rupert Inlet, west of Port McNeill, BC J. Clark 1996 /J. Clark X70K2.
9553 Monterey pine (*Pinus radiata*) Whangapoua State Forest, Coromandel, New Zealand J. & S. Reid (82-99b) 19 May 1982 /J. Reid UM 630.
9554 Monterey pine (*Pinus radiata*) Whangapoua State Forest, Coromandel, New Zealand J. & S. Reid (82-99c) 19 May 1982 /J. Reid UM 631.

Chalara paradoxa see *Ceratocystis paradoxa*

Chalara thielavioides (Peyr.) Nag Raj & Kendrick

10221 pit of peach (*Prunus persicolor*) UAMH L. Sigler 21-08-02 /L. Sigler. Odor: fruity.

Chalastospora gossypii (Jacz.) U. Braun & Crous

11181 leaves of *Saxifraga oppositifolia* (purple saxifrage) forefield of Saskatchewan Glacier, Banff National Park, Alta. M. Day 2009 /R.S. Currah SE26 [=GenBank HM101094 ITS]. Biodeteriogen/biodegradation: in vitro decomposition of the moss *Hylocomium splendens* (Day MJ, Currah RS, Can J Microbiol 57:389-391, 2011).

Chalciporus piperatus (Bull.:Fr.) Bat. (syn. *Boletus piperatus*)

6057 singly in coniferous forest (*Picea* & *Pinus*) Palgrave, Adjala Twp., Simcoe Co. Ont. (C) M. Silvera 11 Oct 1987 /L. Hutchison LH-60-87 [=TRTC LH-60-87]. Mycorrhizae.

Chamaeleomyces granulomatis Sigler

11028 (T *Chamaeleomyces granulomatis*) ex liver from male veiled chameleon (*Chamaeleo calypttratus*) with disseminated mycosis; histopathology + for hyphae and occasional conidia Copenhagen Zoo, Frederiksberg, Denmark B. Kokotovic 20-Mar-2009 /B. Kokotovic 2009-10-975 liver [=GenBank HM195304 D1D2 =GenBank HM195305 ITS =GenBank HM635076 SSU =UAMH 11029 from same animal]. Cycloheximide: sensitive (no growth MYC) // benomyl: sensitive (growth strongly inhibited) // mesophilic: NG @ 35C // molecular systematics: phylogeny of *Chamaeleomyces* and placement in the Clavicipitaceae (Sigler et al 2010) // human/animal pathogen: disseminated mycosis in veiled chameleons (*Chamaeleo calypttratus*) caused by *Chamaeleomyces granulomatis*, (Sigler L, Gibas CF, Kokotovic B, Bertelsen MF, J Clin Microbiol 48:3182-3192,

2010).

- 11029 ex joint from male veiled chameleon (*Chamaeleo calypttratus*) with disseminated mycosis; histopathology + for hyphae and occasional conidia Copenhagen Zoo, Frederiksberg, Denmark B. Kokotovic 20-Mar-2009 /B. Kokotovic 2009-10-975 joint [=UAMH 11028 from same animal]. Human/animal pathogen: disseminated mycosis in veiled chameleons (*Chamaeleo calypttratus*) caused by *Chamaeleomyces granulomatis*, (Sigler L, Gibas CF, Kokotovic B, Bertelsen MF, J Clin Microbiol 48:3182-3192, 2010).
- 11176 ex liver of female veiled chameleon (*Chamaeleo calypttratus*) with multifocal granulomata Copenhagen Zoo, Frederiksberg, Denmark B. Kokotovic May 2009 /B. Kokotovic SV34 [=GenBank HM195306 ITS =GenBank HM635078 D1D2]. Human/animal pathogen: disseminated mycosis in veiled chameleons (*Chamaeleo calypttratus*) caused by *Chamaeleomyces granulomatis*, (Sigler L, Gibas CF, Kokotovic B, Bertelsen MF, J Clin Microbiol 48:3182-3192, 2010) // molecular systematics: phylogeny of *Chamaeleomyces* and placement in the Clavicipitaceae (Sigler et al 2010).
- 11177 ex liver of female chameleon (*Chamaeleo calypttratus*) with multifocal granulomata Copenhagen Zoo, Frederiksberg, Denmark B. Kokotovic Sep 2009 /B. Kokotovic SV44 (Kam1 22-09-09). Molecular systematics: phylogeny of *Chamaeleomyces* and placement in the Clavicipitaceae (Sigler et al 2010) // human/animal pathogen: disseminated mycosis in veiled chameleons (*Chamaeleo calypttratus*) caused by *Chamaeleomyces granulomatis*, (Sigler L, Gibas CF, Kokotovic B, Bertelsen MF, J Clin Microbiol 48:3182-3192, 2010).
- 11178 ex liver of female veiled chameleon (*Chamaeleo calypttratus*) with multifocal granulomata Copenhagen Zoo, Frederiksberg, Denmark B. Kokotovic May 2009 /B. Kokotovic SV31 [=GenBank HM195307 ITS =GenBank HM635077 LSU]. Human/animal pathogen: disseminated mycosis in veiled chameleons (*Chamaeleo calypttratus*) caused by *Chamaeleomyces granulomatis*, (Sigler L, Gibas CF, Kokotovic B, Bertelsen MF, J Clin Microbiol 48:3182-3192, 2010) // molecular systematics: phylogeny of *Chamaeleomyces* and placement in the Clavicipitaceae (Sigler et al 2010).

Chamaeleomyces viridis (Segretain et al. ex Samson) Sigler (syn. *Paecilomyces viridis*)

- 2994 disseminated mycosis in *Chamaeleo lateralis* (carpet chameleon) No. 849 G.L.G. Segretain /Pasteur Institute IP 849 [=GenBank EU553291 ITS =GenBank HM195308 ITS =CBS 659.71 =IP 7682 =CBS 407.96 =ARSEF 2456 =GenBank HM635079 LSU]. Molecular systematics: phylogeny of *Chamaeleomyces* and placement in the Clavicipitaceae (Sigler L, Gibas CF, Kokotovic B, Bertelsen MF, J Clin Microbiol 48:3182-3192, 2010) // human/animal pathogen: fatal mycosis in carpet chameleons (*Furcifer lateralis*) (Segretain G, Fromentin H, Destombes P, Brygoo ER, Dodin A, Compt. Rend. Acad. Sci. (Paris) 259:258-261, 1964).

Cheiromyces inflatus see *Dictyosporium inflatum*

Cheirospora botryospora (Mont.) Hughes

- 1455 *Alnus rubra* Langley 1960 /DAOM 65333-b.
4115 wood chips & bark Westlake, Alta. L. Sigler 27 Feb 1978 /L. Sigler. Psychrophilic: opt. 18C.

Chionosphaera sp.

- 6512 maxilla adult *Dendroctonus ponderosae* Valemout, B.C. Y. Yamaoka 8 Aug 1988 /Y. Yamaoka NOF 1389.

Chlamydomyces palmarum (Cooke) Mason

- 1381 Cocos mucifera Ottawa W.B. Kendrick Mar 1961 /DAOM 75206.
7188 ex 2 yr old moldy hay used as cattle feed resulting in illness & death of calves Saskatchewan H. Congly 1992 /H. Congly 1501M-92.

Chlamydosauromyces punctatus Sigler, Hambleton & Pare

- 9990 (T *Chlamydosauromyces punctatus*) shed back of head skin ex frilled lizard (*Chlamydosaurus kingii*), male >7yr San Diego Zoo, San Diego CA J. Pare Jan 2001 /J. Pare UW076A-D [=GenBank AY177297 (SSU)] homothallic. Mesophilic: NG @ 35C // cycloheximide: resistant // molecular systematics: SSU rDNA sequence comparison with other Onygenales (Sigler L, Hambleton S, Pare JA, Stud. Mycol. 47:123-129, 2002) // culture conditions: single ascospore isolates fruited when grown alone // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Chloridium caudigerum (Hohnel) Hughes

- 4704 black growth on bamboo leaf L. Sigler Nov 1982 /K. Seifert.

Chloridium chlamydosporum see ***Chloridium virescens*** var. ***chlamydosporum******Chloridium claviforme*** (Preuss) Gams &

- Holubova-Jechova (morph *Chaetosphaeria myriocarpa*)
1521 G.L. Barron 11701.

Chloridium virescens var. ***chlamydosporum*** (J.F.H. van Beyma) W. Gams & Holubova-Jechova (syn. *Chloridium chlamydosporum*)

- 1345 soil Wisconsin P. Backus 1956 /DAOM 40749.
7279 ex roots of epiphytic orchid *Stelis* sp. La Selva, Heredia Prov., Costa Rica K. Richardson 22 Oct 1991 /R.S. Currah K383e. Mycorrhizae: root endophyte epiphytic orchid *Stelis* sp..
9249 roots of white spruce (*Picea glauca*) seedling on nurse log Mariana Lake, Alta. 1-30C) T. Lumley (MLS-03-01 30 Jan 1997 /R.S. Currah TCL 056.

Chlorociboria aeruginascens (Nyl.) Kan. ex Ram, Korf & Bat. (morph *Dothiorina tulasnei*)

- 7614 ex single ascospore Lake District, UK G. Fenwick /G. Fenwick 3 [=GenBank JX843714 ITS]. Culture conditions: phialidic conidia in culture (Fenwick, The Mycologist 7:172-175, 1993) // pigment: blue-green on OAT, light brown on PDA (fide UAMH 2011); blue-green (xylindein) (Fenwick, The Mycologist 7:172-175, 1993) // application: stimulating growth and xylindein pigment on malt agar with wood additives (Robinson SC, Tudor D, Snider H, Cooper PA, AMB Express 2:15, 2012).
7615 ex single ascospore Lake District, UK G. Fenwick /G. Fenwick 5 [=GenBank JX843713 ITS]. Culture conditions: phialidic conidia in culture (Fenwick, The Mycologist 7:172-175, 1993) // pigment: black on CER; blue-green (xylindein) (Fenwick, The Mycologist 7:172-175, 1993) // application: stimulating growth and xylindein pigment on malt agar with wood additives (Robinson SC, Tudor D, Snider H, Cooper PA, AMB Express 2:15, 2012).
9083 sporocarp gregarious on rotten poplar log on ground Brown Lowery Park, Alta. R.M. Danielson (RMD 3149) /R.M. Danielson RMD 3149. Benomyl: sensitive // pigment: blue-green (xylindein) // culture conditions: phialidic conidia in culture.
11655 on decaying hardwood log Haliburton Forest, Haliburton, ON D. Tudor Jun-2011 /D Tudor DT8315 [=TRTC 167754 =GenBank JX843711 ITS]. Application: stimulating growth

and xylindein pigment on malt agar with wood additives (Robinson SC, Tudor D, Snider H, Cooper PA, AMB Express 2:15, 2012) // pigment: produces yellow-green pigment at acidic pH and dark green pigment at neutral pH (Tudor D et al 2013); blue-green (xylindein) // culture conditions: colonies dark blue green on 2% MEA; phialidic conidia observed in culture.

- 11656 anamorph on decaying sugar maple twig Haliburton Forest, Haliburton, ON D. Tudor Aug-2011 /D Tudor DT007 [=TRTC 167755 =GenBank JX843712 ITS]. Pigment: blue-green (xylindein) // culture conditions: colonies dark blue green on 2% MEA; phialidic conidia observed in culture.

Chlorociboria aeruginosa (Oeder) Seaver ex C.S.

Ramamurthi, Korf & L.R. Batra

- 11657 on decaying hardwood log Haliburton Forest, Haliburton, ON, Canada D. Tudor Sept-2011 /D Tudor DT008 [=TRTC 167753 =GenBank JX843710 ITS]. Culture conditions: blue green colonies on 2% MEA.

Chondrostereum purpureum (Pers.: Fr.) Pouzar

- 7446 ex *Populus tremuloides* (aspen poplar) Fort Nelson, B.C. Canadian Chopstick Manufacturing Co. 20 Sep 1991 /L. Hutchison NOF 1730. Biodeteriogen/biodegradation: white rot // plant pathogen: causes silver leaf disease; many hosts.
8140 *Populus balsamifera* ssp. *trichocarpa* British Columbia 15 Aug 1949 /S. Davies FC-159 [=NOF 162]. Biodeteriogen/biodegradation: white rot // pigment: grey // plant pathogen: causes silver leaf disease; many hosts.
8141 *Betula* sp. British Columbia 13 Aug 1949 /S. Davies FC-160 [=NOF 165]. Biodeteriogen/biodegradation: white rot // plant pathogen: causes silver leaf disease; many hosts.

Chromelosporium fulvum see ***Peziza ostracoderma******Chromelosporium*** sp.

- 688 DAOM 59269.

Chromocleista cinnabarina Yaguchi & Udagawa (morph *Paecilomyces cinnabarinus*)

- 3652 (T *Chromocleista cinnabarina*) pepper field soil Minamikushiyama-mura, Nagasaki-ken, Japan 1 Sep 1967 /S.-I. Udagawa NHL 2673 [=ATCC 26215 =GenBank AY753348 ITS =GenBank AY526483 SSU =GenBank AB075359 LSU =GenBank AB015788 SSU =CBS 267.72 =GenBank AY753377 Btub]. Pigment: green // culture conditions: ascomata produced on OAT (fide UAMH 2012).
3653 burned forest soil Ohito-machi, Tagata-gun, Shizuoka-ken, Japan 17 Apr 1968 /S.-I. Udagawa NHL 2674. Pigment: green.
3654 (T *Aphanoascus cinnabarinus* v. *macrosporus*) ex soil, nr native market Lae, Morobe Dist., Papua New Guinea S.I. Udagawa 2 Dec 1971 /S.-I. Udagawa NHL 2704 [=ATCC 26694]. Pigment: pink/green // systematics/taxonomy: description (Udagawa et al, Bull. Natn. Sci. Mus. Tokyo 16:503-519, 1973).

Chrysonilia sitophila see ***Neurospora sitophila******Chrysosporium an. Amaurascopsis perforatus*** see ***Amaurascopsis perforatus******Chrysosporium an. Amauroascus aureus*** see ***Amauroascus aureus******Chrysosporium an. Aphanoascus clathratus*** see ***Aphanoascus clathratus******Chrysosporium an. Aphanoascus fulvescens*** see

- Aphanoascus fulvescens*
- Chrysosporium an. Aphanoascus hispanicus* see
Aphanoascus hispanicus
- Chrysosporium an. Aphanoascus saturnoideus* see
Aphanoascus saturnoideus
- Chrysosporium an. Aphanoascus terreus* see
Aphanoascus terreus
- Chrysosporium an. Aphanoascus verrucosus* see
Aphanoascus verrucosus
- Chrysosporium an. Apinisia graminicola* see *Apinisia graminicola*
- Chrysosporium an. Arthroderma crocatum* see
Arthroderma crocatum
- Chrysosporium an. Arthroderma cuniculi* see
Arthroderma cuniculi
- Chrysosporium an. Arthroderma curreyi* see
Arthroderma curreyi
- Chrysosporium an. Arthroderma multifidum* see
Arthroderma multifidum
- Chrysosporium an. Arthroderma silverae* see
Arthroderma silverae
- Chrysosporium an. Arthroderma tuberculatum* see
Arthroderma tuberculatum
- Chrysosporium an. Ascocalvatia alveolata* see
Ascocalvatia alveolata
- Chrysosporium an. Ctenomyces serratus* see *Ctenomyces serratus*
- Chrysosporium an. Gymnoascus uncinatus* see
Gymnoascus uncinatus
- Chrysosporium an. Kuehniella racovitzae* see *Kuehniella racovitzae*
- Chrysosporium an. Nannizziopsis vriesii* see
Nannizziopsis vriesii
- Chrysosporium an. Pectinotrichum llanense* see
Pectinotrichum llanense
- Chrysosporium an. Renispora flavissima* see *Renispora flavissima*
- Chrysosporium articulatum* Scharapov
1309 soil & quills, porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
1595 soil Mason City, Iowa /G.F. Orr McI.
1733 soil, river(side?) Tonasi, Panama G.F. Orr /G.F. Orr O-2548.
2395 sterile horsehair Jardin des Plantes, Montpellier, France /J.A. Rioux 232.
- 2591 quills ex Echidna Australia /M.J. Marples Echidna 3.
2592 quills ex Echidna Australia /M.J. Marples Echidna 1.
3859 human skin lesion San Francisco, California Halde /G.F. Orr O-1208.
4320 (T *Chrysosporium articulatum*) ex wool of Sicistae betulinae Novosibirsk, USSR V.M. (VKM-F 2116) Sharapov 1974 /CBS 662.78 [=GenBank AJ007841]. Molecular systematics: Blast match 99% ITS similarity with *Aphanoascus reticulisporus* JN943434 NBRC 32372 = UAMH 4113 // culture conditions: no ascospores produced.
4724 ex scrapings circular lesion, horse, 5 yr J.W. Carmichael 27 Sep 1982 /G. Moonie MH 82-2.
5915 J. Kane 11565.
7061 scabs with hair from neck region, animal Vet. Services Lab., O.M.A., Guelph, Ont. J. Lynch 21 Mar 1991 /R.C. Summerbell FR 749. Cycloheximide: resistant.
7062 finger, male 12 yr Sault Ste. Marie, Ont. 7 May 1991 /R.C. Summerbell FR 1084.
7702 R.C. Summerbell FR 1151.
- Chrysosporium articulatum var. minus* Scharapov
4709 (T) ex wool of *Apiodemus agaricus* Novosibirsk, USSR V.M. (VKM-F 2117) Scharapov 1974 /CBS 663.78.
- Chrysosporium asperatum* Carm.
560 (T *Chrysosporium asperatum*) soil Edmonton, Alta. J.W. Carmichael 1956 [=CBS 169.62 =IMI 94289 =ATCC 14801 =IFO 7582]. Pigment: yellow.
564 (T *Chrysosporium asperatum*) soil, chicken yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael [=CBS 715.84 =IMI 28939].
835 ex soil, chicken yard Edmonton, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
976 ex garden soil Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
1119 soil Pozo Creek, Calif. /G.F. Orr O-1071.
1270 soil around grass roots, roadside Turrialba, Costa Rica, N.M. McClung Apr 1960 /N.M. McClung.
1473 ex soil of turkey run Edmonton, Alta. J.W. Carmichael 3 Nov 1962 /J.W. Carmichael.
1980 pasture soil Olomouc, Czechoslovakia /J. Kunert. Pigment: yellow-brown.
2330 soil? Rarotonga, Cook Island, New Zealand /M.J. Marples C4.
2453 soil by hair bait Antigua, Guatemala /N.M. McClung 165-B.
2792 flower bed Edmonton, Alta. D. Remington Jun 1967 /D. Remington. Pigment: yellow-brown.
4166 soil by hair bait W. Australia R. McAleer 1978 /R. McAleer.
4167 soil by hair bait technique W. Australia R. McAleer 1978 /R. McAleer DALK 2b.
4237 cattle Northern Japan K. Takatori /K. Takatori 420-5.
5588 soil Edmonton, Alta. L. Sigler Sep 1986 /L. Sigler. Pigment: yellow-brown.
- Chrysosporium barabicum* Scharapov
4946 J. Guarro FMR 649.
- Chrysosporium carmichaelii* van Oorschot
1043 soil Merced County G.F. Orr /G.F. Orr O-264 [=ATCC 42995].
1572 sputum /G.F. Orr 62-7983 [=CBS 639.79 =ATCC 42996].
1715 sputum Kansas City J.W. Brundsberg 1962 /G.F. Orr 62-7983 [=CBS 644.79]. Culture conditions: enhanced by thiamine; DTM slight positive; hair perforation negative; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive // cycloheximide: slightly sensitive // mesophilic: NG @ 37C.
2294 sputum Missouri State San. /H.W. Larsh Durham 5241 [=ATCC 42998 =CBS 641.79].
2490 skin behind ear, female /E.P. Hodges 3524 [=ATCC 42999 =CBS 383.77].

- 2600 soil /Czech. Academy of Sciences 203.
 2618 contaminant ex UAMH 2605 Edmonton, Alta. P. Martin /P. Martin [=ATCC 44000].
 2621 soil /M. Sanyal K41.
 3025 Czechoslovakia /R.S. Pore [=Orr O-2561].
 3026 Czechoslovakia /R.S. Pore [=Orr O-2562].
 3307 nails ex hand /CBS B69-15808. Culture conditions: enhanced by thiamine; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; DTM slight positive; hair perforation negative // cycloheximide: slightly sensitive // mesophilic: NG @ 37C.
 3369 (T *Chrysosporium carmichaelii*) /J.C. Easterling 188 [=ATCC 44001 =CBS 643.79 =GenBank AJ007842 ITS]. Culture conditions: enhanced by thiamine; hair perforation negative; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; DTM slight positive // cycloheximide: slightly sensitive // mesophilic: NG @ 37C; growth restricted @ 30C.
 3571 rabbit pellet Scotland R. Watling /G.F. Orr O-3420 [=ATCC 44002 =CBS 642.79].
 6481 J. Kane FR 579. Culture conditions: enhanced by thiamine.
 6916 ex dust Italian research base, Antarctic Coast R. Mercantini 1987 /R. Mercantini 10/119/A. Cycloheximide: slightly sensitive; DTM slight positive; hair perforation negative; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive // culture conditions: enhanced by thiamine // mesophilic: NG @ 37C.
 8643 human toenail, 53 yr Ontario 18 Dec 1995 /R.C. Summerbell FR 175. Culture conditions: enhanced by thiamine; hair perforation negative; DTM slight positive; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive // cycloheximide: slightly sensitive // mesophilic: NG @ 37C.
 9266 school crawlspace Pemberton, BC S.P. Abbott (SA-M234) 9 Mar 1998 /S.P. Abbott (SA-M234). Cycloheximide: resistant (MYC).
 9670 bronchial aspirate ex male with pulmonary infiltrate Pennsylvania Hershey Medical Center 1999 /M.G. Rinaldi UTHSC 99-755. Mesophilic: NG @ 37C // cycloheximide: resistant // culture conditions: stimulated by thiamine.
- Chrysosporium crassitunicatum* Kushwaha & Agrawal**
 4045 soil survey for keratinophilic fungi /S.C. Agrawal 24.
 4088 (T *Chrysosporium crassitunicatum*) forest soil by hair bait India R. Kushwaha & S. Agrawal /IMI 185320 [=CBS 167.78].
- Chrysosporium europae* Sigler, Guarro & Punsola**
 4587 (T *Chrysosporium europae*) soil Spain /J. Guarro FFBA 298 [=ATCC 62344 =GenBank AJ007843].
 4599 soil Spain /J. Guarro FFBA 300.
 4735 soil? Spain /J. Guarro FFBA 368.
 4767 bottom sediments of polluted river Poland /K. Ulfig 2.
 5386 forest soil La Benifaya, Alicante, Spain J. Guarro Aug 1985 /J. Guarro FMR 880 [=ATCC 62837].
 7191 (T *Chrysosporium baduri*) ex river sediment Llobregat River, Catalonia, Spain K. Ulfig 7 Nov 1991 /J. Guarro FMR 4056. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: brown.
 7887 ex hair-baited soil, municipal landfill site Leszczyny, Poland K. Ulfig 13 Nov 1992 /K. Ulfig IEIA 135. Mesophilic: NG @ 37C.
- Chrysosporium evolceanui* (Randhawa & Sandhu) Garg**
 537 soil, sheep yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 548 soil, cattle pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 550 soil, chicken yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 569 soil, horse yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 581 ringworm cat Edmonton, Alta. J.W. Carmichael 1957 /J.W. Carmichael.
 747 sheep wool, on ground Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
 748 sheep wool, on ground Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
 752 soil, horse pasture Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
 757 soil, pig yard around scratching hole Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
 762 soil ex hair bait, chicken run Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 764 soil ex hair bait, pig yard Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 767 soil, chicken run, baited with turkey feathers Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 771 soil, chicken house, baited with turkey feathers Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 837 soil Edmonton, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
 838 soil, chicken yard Edmonton, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
 846 soil Edmonton, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
 872 soil Tulcea (Rumanian fluvial harbour) R. Evolceanu 1960 /R. Evolceanu.
 1040 soil Rumania R. Evolceanu /G.F. Orr O-965.
 1243 scalp Florida J.W. Carmichael 9 Feb 1962 /CDC 45-78-62.
 1261 hair from Apodemus England /M.J. Marples E 32.
 1275 (T *Trichophyton evolceanui*) soil flower bed Meerut, India H.S. Randhawa Nov 1961 /H.S. Randhawa 2058-4 [=IMI 147545].
 1306 soil & quills, porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1308 soil & quills, porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael 18-6-k Prov. Lab..
 1323 soil & quills, porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael 18-6-o Prov. Lab..
 1489 soil pig yard Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
 1494 soil, pig yard (no vegetation) Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
 1555 soil Kirra beach Queensland, Australia /D. Frey 370.
 1640 soil Oklahoma City J. Hale /E.S. Keeping 2.
 1641 soil Oklahoma City J. Hale /E.S. Keeping 5.
 1661 soil Oklahoma City J. Hale /E.S. Keeping 6.
 1678 soil Rarotonga, Cook Is. /M.J. Marples R14.
 1685 soil, flowerbed Edmonton, Alta. J.W. Carmichael 17 Jun 1963 /J.W. Carmichael.
 1701 airport Tonasi, Panama G.F. Orr /G.F. Orr O-2547.
 1703 airport Tonasi, Panama G.F. Orr /G.F. Orr O-2545.
 1892 soil /M. Otcenosek 2.
 1917 garden soil Bucharest, Rumania /R. Evolceanu.
 2021 soil Berlin, Germany 1963 /M. Bohme 30a-63.
 2022 soil Berlin, Germany 1963 /M. Bohme 19b-63.
 2023 soil Berlin, Germany 1963 /M. Bohme 57a-63.
 2207 soil Rarotonga, Cook Is. /M.J. Marples C6.
 2392 soil vulture cage, on horn zoo, Tunisia /J.A. Rioux 120.
 2406 soil ex hair bait Mombasa, Kenya Y. Al-Doory Dec 1964 /Y. Al-Doory SF 1.
 2413 UCLA.
 2434 soil ex hair bait Japan /N.M. McClung 26-C.
 2435 soil ex hair bait Japan /N.M. McClung 36-B.
 2436 soil ex hair bait Japan /N.M. McClung 49-B.
 2444 soil isol. by hair bait technique Japan /N.M. McClung 76-B.
 2451 soil isol. by hair bait technique Patutul, Guatemala /N.M. McClung 143.
 2537 soil Australia Warcup 1964 /G.F. Orr A288-1.

- 2547 soil Easter Island /CDC 67 E.1.
 2553 domestic fowl Chareville, Queensland May 1965 /R.G. Rees F 104.
 2554 barn owl (*Tyto alba*) Samford, Queensland Jan 1964 /R.G. Rees H 201.
 2556 cormorant (*Phalacrocorax* sp.) Esk, Queensland May 1964 /R.G. Rees H 239.
 2770 rabbit hair Cardston, Alta. D. Remington 7 Jun 1967 /D. Remington.
 3202 sandy loam soil Claremont, Calif. J.W. Carmichael 30 Jan 1969 /J.W. Carmichael.
 3203 muck & leaves, intermittent pond Claremont, Calif. J.W. Carmichael 30 Jan 1969 /J.W. Carmichael.
 3204 leaves & black sandy loam under oak Claremont, Calif. J.W. Carmichael 30 Jan 1969 /J.W. Carmichael.
 3207 soil mole hill Ontario Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
 3210 entrance rodent burrow Ontario Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
 3231 turkey corrals poultry ranch Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.
 3938 soil Tierra del Fuego Cabral (1255) /J.E. Wright BAFC 2579.
 4005 G.F. Orr [=CDC 76-060462].
 4053 soil in flower bed Edmonton, Alta. Sep 1977 /.
 4441 soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-24.
 4588 soil /J. Guarro FFBA 276.
 4598 soil /J. Guarro FFBA 215.
 4736 soil? /J. Guarro FFBA 369.
 4737 soil /J. Guarro FFBA 282.
 4871 anaerobically digested sewage sludge Poland /K. Ulfig Ulfig 6.
 4944 J. Guarro FR 636.
 4945 J. Guarro FMR 647.
 5641 soil Edmonton, Alta. A. Vaughn Sep 1986 /A. Vaughn. Thermotolerant: grows @ 37C.
 7295 ex soil using hair bait Edmonton, Alta. W. Kennedy 6 Nov 1992 /W. Kennedy.
 8592 bronchial wash, heart-lung transplant, male 23 yr, DE-Edmonton, Alta. C. Sand 4 Jun 1996 /R. Rennie MY 2405.
 8906 nail, female Ontario J. Castiglione 16-Oct-1996 /R.C. Summerbell FR 3473.
 8907 leg lesion, male 72 yr Winnipeg, MB 1996 /R.C. Summerbell FR 3940. Pigment: brown.
 8908 abnormal left great toe, male 64 yr in Diabetes study, DE+ London, Ontario 30-Sep-1996 /R.C. Summerbell F 10594.
 9941 shed dorsum, anterior to base of tail skin ex Grand Cayman iguana (*Cyclura nubila lewisi*), male 10yr Burnet Park Zoo, Syracuse NY UAMH (UW059B-D) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
 9997 shed nail ex Grand Cayman iguana (*Cyclura nubila lewisi*), male 10yr Burnet Park Zoo, Syracuse, NY UAMH (UW059B-A1 nail) 31 Jan 2001. Cycloheximide: resistant // pigment: light brown // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Chryso sporium farinicola (Burnside) Skou (morph *Bettisia alvei*)

- 2529 dried prunes /J.I. Pitt 83. Osmophilic: 40% dextrose.
 2530 dried prunes /J.I. Pitt 92. Osmophilic: 40% dextrose.
 4685 dried prunes, unspoiled Sydney, N.S.W., Australia J. Pitt 1969 /J.I. Pitt FRR 377. Osmophilic: 40% dextrose.
 4687 debris on prune processing equipment Young, NSW J. Pitt 1969 /J.I. Pitt FRR 450. Osmophilic: 40% dextrose.
 4688 debris in prune factory Young, NSW A.D. Hocking 1978 /J.I. Pitt FRR 2000. Osmophilic: 40% dextrose.

Chryso sporium farinicola see ***Bettisia alvei***

Chryso sporium fastidium Pitt

- 2369 (T) dried prunes /J.I. Pitt 77 [=ATCC 18053 =CBS 154.67 =IMI 126288]. Osmophilic: 40% dextrose.
 2370 dried prunes 8 Mar 1965 /J.I. Pitt 81. Osmophilic: 40% dextrose.
 4693 dried prune sorting equipment Young, NSW J. Pitt 1970 /J.I. Pitt FRR 446. Osmophilic: 40% dextrose.
 4694 spoiled dried prunes stored under humid cond., 5C for 12 mos. Sydney, NSW 1976 /J.I. Pitt FRR 1698. Osmophilic: 40% dextrose.

Chryso sporium filiforme Sigler, Carmichael & Whitney

- 3587 ex cankers Western gall rust on lodgepole pine California J. Anderson /A. Funk 216-I3.
 4199 phloem nr. mountain pine beetle (*Dendroctonus ponderosae*) brood galleries in lodgepole pine Riske Creeke, B.C. Jul 1977 /A. Funk R 623-1-3. Mesophilic: opt. 18C.
 4401 (T *Chryso sporium filiforme*) dead bark beetle (*Dendroctonus ponderosae*) B.C. 23 Jul 1980 /H.S. Whitney R623 [=ATCC 46902 =CBS 187.82 =DAOM 182909]. Mesophilic: opt. 18C.
 4824 cadaver *Dendroctonus rufipennis* in Engelmann spruce Dry Creek nr. Revelstoke, B.C. L. Sigler Aug 1983 /H.S. Whitney.

Chryso sporium georgiae see ***Arthroderma ciferrii***

Chryso sporium guarroi see ***Nannizziopsis guarroi***

Chryso sporium indicum (Randhawa & Sandhu) Garg (morph *Aphanoascus terreus*)

- 1274 (T *Trichophyton indicum*) soil Bhangali, Kalan, India H.S. Randhawa Apr 1960 /H.S. Randhawa 2058-2 [=ATCC 22401 =CBS 117.63 =IMI 147544 =GenBank AF005369].
 1557 soil, fowl yard Dural NSW Austr. /D. Frey 1-c.
 1559 soil near dwelling Townsville Queensland /D. Frey 442.
 1702 soil? Airport Tonasi, Panama G.F. Orr /G.F. Orr O-2544.
 1711 soil Durban, South Africa D.H. Howard 1963 /G.F. Orr 'Berea Darban'.
 1713 soil Durban, S. Africa D.H. Howard? 1963 /G.F. Orr.
 1870 soil on autoclaved hair of cow Jaipur, India C.V. Subramanian /C.V. Subramanian E19.
 2429 soil isol. by hair bait technique Japan /N.M. McClung 8-B.
 2430 soil isol. by hair bait technique Japan /N.M. McClung 12-B.
 2431 streetside soil isol. by hair bait technique Panama City, Panama /N.M. McClung 21.
 2432 lawn soil isol. by hair bait technique Chorrera Clinic, Panama /N.M. McClung 22.
 2433 soil isol. by hair bait technique Japan /N.M. McClung 24-C.
 2437 pathside soil isol. by hair bait technique Lidice, Panama /N.M. McClung 54-A.
 2438 pathside soil isol. by hair bait technique Lidice, Panama /N.M. McClung 54-B.
 2440 soil isol. by hair bait technique Japan /N.M. McClung 54-HB.
 2441 soil beside hut isol. by hair bait technique Lidice, Panama /N.M. McClung 55 [=GenBank AB050582 (chitin synthase)].
 2443 soil isol. by hair bait technique Punta Arenas, Costa Rica /N.M. McClung 75.
 2445 soil isol. by hair bait technique Punta Arenas, Costa Rica /N.M. McClung 77-A.
 2447 soil isol. by hair bait technique Punta Arenas, Costa Rica /N.M. McClung 82.
 2448 path soil isol. by hair bait technique Children's Park, Salvador /N.M. McClung 92.
 2449 streetside soil isol. by hair bait technique Salvador /N.M. McClung 97.
 2450 soil isol. by hair bait technique Patulal, Guatemala /N.M. McClung 133.
 2452 streetside soil isol. by hair bait technique La Libertad, Salvador /N.M. McClung 143-B.
 2454 soil isol. by hair bait technique Panama /N.M. McClung 26.

- 2455 soil isol. by hair bait technique Salvador /N.M. McClung 96.
 2521 soil India Rhandawa 1963 /G.F. Orr SL289.
 2655 feather Kanpur, India M.D. Mehrota /IMI 116473.
 2733 soil Mozambique /C. Magalhaes 1044 [=ATCC 26360].
 2832 soil Poona, India A. Padhye 1966 /A. Padhye.
 3226 dead bird on bare ground Claremont, Calif. J.W. Carmichael 4 Feb 1969 /J.W. Carmichael.
 3370 skin scales, tinea pedis? /J.T. Sinski 1251.
 3376 culture contaminant Johannesburg, S. Africa /A. Rabson.
 4046 soil survey for keratinophilic fungi India /S.C. Agrawal 26.
 4066 (T Keratinophyton terreum) soil India H.S. Randhawa 1964 /IMI 108689 [=CBS 342.64 =ATCC 16413 =GenBank AB015780 =UAMH 5129 =GenBank AB040694]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
 4475 soil /J. Guarro FFBA 217.
 5129 (T Keratinophyton terreum) ex lawn soil India /CBS 342.64 [=ATCC 16413 =IMI 108689 =CBS 342.64 =UAMH 4066 =GenBank AB015780 18S =GenBank AY176714 28S]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999).
 7706 toe nail Toronto, Ont. Medical Science Lab /R.C. Summerbell F 15636. Cycloheximide: resistant.
 9781 nesting material of crocodile ("Dame Edna") in sanctuary Townsville, Australia 1999 /A. Thomas DE nest B. Pigment: brown.
 9782 outside shell of crocodile egg laid in nesting material of crocodile ("Dame Edna") in sanctuary Townsville, Australia 1999 /A. Thomas DE43 9944246. Pigment: brown.
 10212 tail lesions, pet bearded dragon Pogona vitticeps Madison, WI J. Pare 3-9-02 /J. Pare 1 Adolf [=GenBank KP691483 ITS =GenBank KP691515 IGS]. Cycloheximide: resistant // benomyl: tolerant @ 2 ppm // thermotolerant: good growth @ 35 C // molecular systematics: BLAST match 100% ITS similarity to *Chrysosporium indicum* AJ005369 CBS 117.63 T (fide UAMH 2013); specificity of TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Bleher DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- Chrysosporium inops* Carm.**
 802 (T *Glenosporella dermatitides*) skin lesion Messina, Italy G. Muntarro 1930 /CBS 132.31 [=ATCC 44003 =IMI 96729]. Culture conditions: very slow growing.
 4697 safflower seeds stored at 0.75 aw for 6 mos A.D. Hocking 1980 /J.I. Pitt FRR 2353. Osmophilic.
 4698 moldy powdered nutmeg A.D. Hocking 1980 /J.I. Pitt FRR 2354. Osmophilic.
- Chrysosporium keratinophilum* (Frey) Carmichael (morph *Aphanoascus keratinophilus*)**
 523 farm soil, horse pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 526 soil from pig yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 528 soil from horse pasture Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 529 soil near horse stable Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 532 soil from pig yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 542 soil from chicken yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 555 soil from chicken yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 737 garden soil Edmonton, Alta. J.W. Carmichael 28 Feb 1959 /J.W. Carmichael.
- 742 soil under tree freq. by sparrows Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
 758 chicken run, soil baited with hairs Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 773 pig yard, soil baited with turkey feathers Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 913 soil Mitcham, S. Australia Frey 1959 /D. Frey 527.
 914 (T *Aleurisma keratinophilum*) soil Kavieng, New Guinea D. Frey 1957 /D. Frey 325 [=ATCC 14803 =CBS 104.62 =IMI 91692].
 915 soil New South Wales D. Frey? 1960 /D. Frey 688.
 973 soil, grassy field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
 1047 dog dung Riverside County Orr /G.F. Orr O-615.
 1048 dog dung Riverside County Orr /G.F. Orr 615a.
 1055 dog dung Riverside County Orr /G.F. Orr O-2045.
 1057 coyote dung Los Angeles County Orr /G.F. Orr O-2047.
 1133 garden soil Edmonton, Alta. J.W. Carmichael 13 Sep 1961 /J.W. Carmichael.
 1134 field soil freshly cultivated Edmonton, Alta. J.W. Carmichael 13 Sep 1961 /J.W. Carmichael.
 1153 soil & quills, porcupine paddock Edmonton, Alta. J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
 1296 Sicilian donkey paddock Edmonton, Alta. J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1307 soil & quills, porcupine paddock Edmonton, Alta. J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1503 Yugoslavian soil Ozegetic /D. Frey m.
 1504 Yugoslavian soil Ozegetic /D. Frey.
 1558 soil nr dwelling Walkerville, S. Australia /D. Frey 536.
 1586 soil Hungary Szathmary 1960 /G.F. Orr O-2511.
 1675 soil baited with hairs, old animal habitat Buenos Aires, Argentina /M.E. Reca.
 1817 plate contaminant Edmonton, Alta. J.W. Carmichael 22 Jan 1963 /J.W. Carmichael.
 1891 soil /M. Otčenosek 1.
 1893 soil /M. Otčenosek 3.
 2038 ex UAMH 1977 Edmonton, Alta. J.W. Carmichael Jun 1964 /J.W. Carmichael.
 2043 soil isol. Italy Varsavsky /G.F. Orr EV I-5(1).
 2045 soil isol. Italy Varsavsky /G.F. Orr EV I-9b.
 2046 soil Italy Varsavsky /G.F. Orr EV I-7(1).
 2209 sheepyard soil New Zealand /M.J. Marples 3e.
 2210 sheepyard soil New Zealand /M.J. Marples 10AF(2).
 2255 pads ex dog's foot Veterinary Invest. Center, Leicestershire /G.A. Pepin V3006/2.
 2256 garden or pasture soil Bucharest, Rumania Evolceanu /G.A. Pepin V5026.
 2257 garden or pasture soil Bucharest, Rumania Evolceanu /G.A. Pepin V5028.
 2390 soil sprinkled with sand on horn Camarque, France /J.A. Rioux 61.
 2394 sterile wool on soil in plates exposed to air Montpellier, Fr. /J.A. Rioux 230.
 2613 skin scrapings Johannesburg 1966 /P. Martin 200.
 2622 soil /M. Sanyal K47.
 2652 soil of Azulita cave Venezuelan Andes /D. Borelli 6623.
 3169 sandy soil & dung cattle feeder lot Ontario, Calif. J.W. Carmichael 6 Feb 1969 /J.W. Carmichael.
 3233 turkey corrals Poultry Ranch Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.
 3946 skin scrapings 1975 /L. Kapica 3350.
 4655 ex soil India /S.K. Deshmukh SD-4.
 7951 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 297) 11 Mar 1994 /S.P. Abbott (OHS 297).

Chrysosporium keratinophilum see *Aphanoascus keratinophilus*

Chrysosporium kuzurovianum Scharapov

- 4322 (T *Chrysosporium kuzurovianum*) ex black soil Tomsk, USSR Scharapov (VKMF-2119) 1969 /CBS 667.78.

Chrysosporium lobatum Scharapov

- 796 scrapings, toes Edmonton, Alta. J.W. Carmichael Apr 1960 /J.W. Carmichael.
 1233 ex scrapings Rt upper leg Edmonton, Alta. 1 Jan 1962 /J.W. Carmichael [=CBS 278.77].
 2258 crusted areas ex chicken /I. Alteras [=CBS 624.79].
 2515 soil Italy Varsavsky 1961 /G.F. Orr I-5 [=CBS 274.77].
 3413 post mortem spinal fluid, contaminant Edmonton, Alta. 1971 / [=CBS 275.77].
 3434 ex feather, house sparrow (*Passer domesticus*) Valtice, Czechoslovakia Z. Hubalek 18 Nov 1970 /G.F. Orr O-3278 [=CBS 276.77].
 3670 nail specimen; DE no hyphae Edmonton, Alta. A.S. Sekhon 7 Jun 1974 /A.S. Sekhon MY 2313.
 4321 (T *Chrysosporium lobatum*) ex mouse fur Rostov, USSR Scharapov (VKMF-2120) 1969 /CBS 666.78.
 4481 finger nail scrapings; DE negative U of A Hosp., Edmonton L. Sigler Sep 1981 /L. Tyrrell.
 6504 skin of neck Montreal, P.Q. G. St.-Germain Jul 1989 /R.C. Summerbell FR 1455.89. Pigment: yellow.
 7856 contaminant ex UAMH 135 Edmonton, Alta. L. Sigler 20 Dec 1994 /L. Sigler. Pigment: brown // cycloheximide: resistant.
 8062 ex facial tissue, male 58 yr, DE- Alberta C. Sand 17 Mar 1995 /R. Rennie MY 1048. Pigment: brown // culture conditions: stimulated by thiamine.
 8063 ex skin scraping, female 10 yr, DE- Alberta Fairview Health Complex 3 May 1995 /R. Rennie MY 1566. Culture conditions: stimulated by thiamine // pigment: brown.
 8440 skin scraping, arm, male, DE + hyphae & arthroconidia; same fungus grew from repeated specimens Vegreville, Alta. Vegreville Medical Centre Mar 1996 /R. Rennie MY 1161. Culture conditions: enhanced growth on *Trichophyton* Agars 3 & 4.
 8724 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 8-9A) T. Lumley (EI-09-S1B 08 Aug 1995 /R.S. Currah EI-09-S1B, 8-9A. Pigment.
 9069 male 54 yr; DE unknown Melbourne, Australia A. Woodgyer 1997 /A. Woodgyer 9703269. Pigment: brown.
 9157 bronchial wash Alberta Prov Lab for Southern Alberta 1997 /R. Rennie MY 5293. Cycloheximide: resistant.
 9842 fluid BAL male 46 yr Alberta Jun 2000 /R. Rennie My 3507.
 9971 bronch wash, male 58 yr Providence, TX 2001 /Texas Dept. of Health BY 127.

Chrysosporium lucknowense Garg

- 3415 soil Dugway, Utah Utah /G.F. Orr DPG-96.
 3675 CDC 64995 [=ATCC 44006 =CBS 272.77].
 3821 sputum, human Kansas City /G.F. Orr O-3401 [=NRRL 2883 =Weeks 2338a].
 4039 (T *Chrysosporium lucknowense*) ex soil by hair bait techn. Lucknow, India P.D. Tyagi Jan 1963 /IMI 112798(ii) [=CBS 143.77 =CBS 144.77 =RV 26307 =IMI 014377 =IMI 112798 =IHEM 4419].

Chrysosporium luteum see *Myceliophthora lutea****Chrysosporium mephiticum*** Sigler

- 791 feather on ground near Tupman, California G.F. Orr (O-564) /L.K. Georg. Odor: pungent odor.
 1871 soil, ex hair bait /C.V. Subramanian E251.
 2559 Whistling eagle (*Haliastur spheurnus*) Mitchell River Mission, Queensland Apr 1965 /R.G. Rees H 428. Odor: pungent odor.
 4447 (T *Chrysosporium mephiticum*) soil survey for keratinophilic fungi in animal inhabiting areas India /P.C. Jain CP-31 [=ATCC 62343 =DAOM 196319]. Odor: pungent.

- 7905 ex hair-baited soil, municipal landfill site Sosnowiec, Poland K. Ulfig 11 Oct 1993 /K. Ulfig IEIA 708. Odor: strong // mesophilic: NG @ 37C // culture conditions: restricted growth on phytone yeast extract agar // cycloheximide: resistant.

Chrysosporium merdarium (Link) Carm. (syn.)***Chrysosporium verruculatum***

- 639 ex finger nails Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael.
 649 plate contaminant Edmonton, Alta. J.W. Carmichael May 1959 /J.W. Carmichael [=ATCC 42992 =CBS 112.63 =IMI 78009].
 652 ex rat dung France P. Vuillemin 1903 /CBS 101.10 [=ATCC 42993].
 786 ex soil, pig yard, no vegetation Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
 834 mouse dung (or contaminant) Edmonton, Alta. J.W. Carmichael 1960 /J.W. Carmichael.
 853 soil S.W. Inyokern Mojave Desert /G.F. Orr O-633.
 1042 ex mouse dung Riverside County Orr /G.F. Orr O-746.
 1063 culture contaminant UCLA Inf. Dis. Dept. /G.F. Orr O-2045.
 1093 ex soil Inyokern, Calif. G.F. Orr /NRRL A 10,052.
 1094 ex soil Los Banos, Calif. G.F. Orr /NRRL A 10,699.
 1631 soil /J.A. Meyer 1156.
 1632 soil /J.A. Meyer 1160 [=CBS 268.77].
 1716 ex soil (chickens, horses, & pigs) Tonasi, Panama G.F. Orr /G.F. Orr O-2543.
 1735 ex soil S. California G.F. Orr 1960 /G.F. Orr O-2084.
 1773 chicken nesting area Tonasi, Panama G.F. Orr 1963 /G.F. Orr O-2549.
 1885 G.F. Orr O-808.
 1913 ex Italian soil /E. Varsavsky I67.
 2856 Apinis 1964 /G.F. Orr [=IMI 78009].
 3491 ex bird dung India /G.F. Orr O-816.
 3507 ex soil Chile /L. Zaror T-76.
 3556 Nannizzi isol. probably ex CBS 107.26 /G.F. Orr O-3010.
 4136 G.F. Orr [=NRRL 3205 =ATCC 34649]. Antiviral antibiotic arantotins (*Biochem. Biophys. Res. Comm.* 43:588-594, 1971).
 4363 ex coyote dung Milk River Ridge, Alta Randy Currah /R.S. Currah 118.
 4576 ex hairy grey dung UAMH, Edmonton, Alta. L. Sigler May 1982 /R.S. Currah 82-02.
 4973 K. Ulfig 10.
 5297 J. Guarro FMR 805.
 5298 J. Guarro FMR 806. Pigment: yellow.
 5299 J. Guarro FMR 809.
 5338 (T *Chrysosporium verruculatum*) ex mouse USSR /CBS 665.78 [=VKM F-2121]. Pigment: yellow.
 5690 dung Finse, Norway R. Currah (D21.2) Nov 1986 /R. Currah (D21.2).
 5805 mixed with UAMH 2544 UAMH A. Flis Jun 1987 /A. Flis.
 6317 dung Romania Nov 1984 /O. Constantinescu UPSC 1279. Pigment: yellow.
 7563 right hand male 26 yr Hamilton General Hospital, Ont. 1994 /R.C. Summerbell FR 230. Pigment: black/gold // cycloheximide: resistant.
 7581 ex lingula washing Kingston, Ont. Kingston General Hospital /R.C. Summerbell FR 3591 [=BB 1206]. Pigment: yellow // cycloheximide: resistant.
 7864 indoor air ex RCS strips, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 239) 30 Jan 1994 /S.P. Abbott (OHS 239).
 7865 indoor air ex RCS strips, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 284) 21 Mar 1994 /S.P. Abbott (OHS 284).
 9341 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 4-15D) T. Lumley (EI-02-S4D 15 Apr 1996 /R.S. Currah EI-02-S4D, 4-15D. Cycloheximide: resistant // benomyl: resistant.
 9472 left toenail, male 66 yr; DE ++ conidia Bonnyville, Alta. 10 Jan 1999 /R. Rennie MY 185. Pigment: brown.

- 11309 swab ex fur of living male little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 90 C.6. Biodiversity: mycobiota of bat caves.

Chrysosporium ophioidicola see *Ophidiomyces ophioidicola*

Chrysosporium parvum v. *parvum* see *Emmonsia parva*

Chrysosporium pilosum Gene, Guarro & Ulfing

- 7347 Forest soil Guanajay, Pinar del Rio, Cuba J. Cano 22 Mar 1992 /J. Guarro FMR 4345 [=IMI 356790]. Pigment: brown // cycloheximide: resistant.

Chrysosporium pseudomerarium van Oorschot

- 3089 (T *Arachniotus hebridensis*) sandy pasture soil Isle of Rhum, Scotland A. Apinis Sep 1962 /IMI 102467 [=ATCC 22272 =Orr O-3287 =GenBank GU951696 partial LSU =CBS 360.66]. Molecular systematics: Blast match 99% ITS similarity to *Chrysosporium pseudomerarium* AJ390386 (CBS 631.79, UAMH 4330) (fide S. Hambleton) // pigment: brown (yellowish).
3450 contaminant? from culture /G.F. Orr O-3423. Molecular systematics: Blast match 99% ITS similarity to *Chrysosporium pseudomerarium* AJ390386 (CBS 631.79, UAMH 4330) (fide S. Hambleton) // pigment: brown (yellowish).
4330 (T *Chrysosporium pseudomerarium*) beach sand Katwijk, Netherlands W. Gams 1978 /CBS 631.79 [=GenBank AJ390386]. Pigment: brown (yellowish).
11244 swab ex fur of a female little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 58 C.2. Biodiversity: mycobiota of bat caves // mesophilic: grows better @ 22C than @ 18C // molecular systematics: Blast match 99% ITS similarity to AJ390386 T.C. *pseudomerarium* CBS 631.79 = UAMH 4330 (fide UAMH 2010).

Chrysosporium queenslandicum see *Uncinocarpus queenslandicum*

Chrysosporium siglerae Cano & Guarro

- 6541 (T *Chrysosporium siglerae*) garden soil Pobra de Farnesa, Castellon, Spain J. Guarro Jan 1987 /J. Guarro FMR 3066 [=IMI 336467 =GenBank AJ131684]. Pigment: brown.
7348 forest soil Torrepacheco, Murcia, Spain J. Cano Aug 1985 /J. Guarro FMR 921 [=CBS 282.93]. Cycloheximide: sensitive // pigment: brown.

Chrysosporium sp.

- 871 lung ex rodent J.W. Carmichael 10 Jun 1960 /J.W. Carmichael [=ATCC 42994 =CBS 271.77].
1125 G.F. Orr O-736 [=CBS 277.77].
1337 ex Richardson's ground squirrel Brooks, Alta. J.W. Carmichael 21 Aug 1962 /J.W. Carmichael.
1637 ex Punjab soil Poona, India Co. S.L. Kalra 28 Feb 1959 /CDC B-0352.
1676 ex snake USA /CDC [=ATCC 44004 =CBS 629.79].
1858 lung ex Kangaroo rat Dugway, Utah /G.F. Orr KR 3368. Thermotolerant: strongly inhibited at 37C.
1878 soil Dugway, Utah G.F. Orr 1963 /G.F. Orr DPG-127.
1887 soil /G.F. Orr O-264 [=ATCC 42997 =CBS 269.77]. Culture conditions: enhanced by thiamine // mesophilic: NG @ 37C.
1899 soil Dugway, Utah Thorne 1963 /G.F. Orr DM-2.
1910 soil Bakersfield(?), Calif. G.F. Orr 1961 /G.F. Orr O-1068. Thermotolerant: grows @ 37C.
2048 G.F. Orr O-3010.
2539 soil Florida 1965 /G.F. Orr 108.
2540 soil Florida 1965 /G.F. Orr 117.

- 2541 soil Florida 1965 /G.F. Orr 125.
2542 soil Florida 1965 /G.F. Orr 238.
2598 bird nest /Czech. Academy of Sciences 163 H.
2601 soil containing droppings of bats /Czech. Academy of Sciences 181.
2602 pheasant feathers /M. Otcenosek 467-v.
2743 ex internal organs of small mammal India /H.C. Gugnani R 356.
2813 scraping ex lesion Edmonton, Alta. J.W. Carmichael 16 Oct 1967 /J.W. Carmichael. Culture conditions: BCP-MS-G profuse growth; no alkalinity; strong hydrolysis; urea positive; no requirement for vitamins // keratinophilic.
2857 soil ex fabric bait Utah, USA G.F. Orr 1967 /G.F. Orr O-3516 [=CBS 645.79].
3027 R.S. Pore [=O-2553].
3661 lesion ex foot, man California /G.F. Orr O-1122.
3861 feathers of *Pica pica* Krivogastani, S.R. Macedonia, Yugoslavia Hubalek (169-A) 21 May 1968 /G.F. Orr O-1313.
4035 soil Venezuela /L.A. Yarzabal C1. Thermotolerant: strongly inhibited at 37C.
4062 mycetoma Dallas, TX D.P. Drennan 26 Apr 1977 /CDC B-2555. Thermotolerant: grows @ 37C // pigment: brown.
4239 circulating air U.S. N. Grain Insect Res. Lab. G. Semeniuk Apr 1979 /G. Semeniuk 404. Pigment: tan.
4517 CDC 81-979887.
4894 soil using hair bait technique /R. Kushwaha CCD 1.
5050 fingernail New Zealand 1984 /A. Woodgyer 840723.
5395 soil Spain J. Guarro /J. Guarro FMR 882. Cycloheximide: resistant.
5596 soil at horse stable York County, Ont. Renee Chan 16 Oct 1985 /D. Malloch. Odor: offensive // mesophilic: NG @ 37C.
5601 soil baited with feather Edmonton, Alta. L. Sigler 19 Nov 1986 /L. Sigler. Cycloheximide: resistant // mesophilic: NG @ 37C.
5916 right upper lobe lung 1986 /J. Kane K236.
6345 plate contaminant Sweden Nov 1986 /O. Constantinescu UPSC 1979.
7190 ex marine sediment Empuriabrava Beach, Catalonia, Spain K. Ulfing 26 Jun 1991 /J. Guarro FMR 4021. Cycloheximide: resistant // pigment: brown // thermotolerant: grows @ 37C.
7253 sputum, female 45 yr Edmonton, Alta. Stirrat Laboratories 13 Aug 1992 /R. Rennie MY 3853 [=GenBank DQ117447]. Pigment: brown // thermotolerant: grows at 37C but slower than @ 25C // molecular systematics: excluded from *Geomyces* by ITS sequence comparison (Rice AV, Currah RS, *Mycologia* 98:307-318, 2006).
8038 hand, female 39 yr Windsor, Ont. 14 Dec 1994 /R.C. Summerbell FR 168. Cycloheximide: resistant // pigment: amber // mesophilic: NG @ 37C.
8780 skin ex left front scalp lesion with central clearing, *Tinea capitis* & *corporis*, female 5 yr Oakland, CA 1996 /M. Valesco 7420. Cycloheximide: resistant // mesophilic: NG @ 35C // benomyl: sensitive // molecular systematics: Blast match 93% ITS similarity to *Spiromastix* species (fide UAMH).
10728 ex decomposing keratinous skate (*Raja*) egg casing in moist chamber New Brunswick C (D. Malloch) I (M. Saleh) /J. Scott MSSEC-013. Pigment: reddish brown // molecular systematics: Blast search with ITS sequence showed highest similarity to *C. pseudomerarium* and UAMH 7253 (fide M. Saleh).

Chrysosporium sulfureum (Fiedl.) van Oorschot & Samson
4332 cheese St. Nectaire, France 1974 /CBS 632.79.

Chrysosporium synchronum van Oorschot

- 1607 (T *Chrysosporium synchronum*) commercial mushroom Edmonton, Alta. J.W. Carmichael 1963 /J.W. Carmichael [=CBS 640.79 =IMI 282433].
5514 soil Edmonton, Alta. L. Sigler Sep 1986 /L. Sigler.
9675 toenail, female 67 yr Alberta 7 Oct 1999 /R. Rennie MY 6733. Mesophilic: NG @ 37C.

Chrysosporium thermophilum see *Myceliophthora thermophila**Chrysosporium tropicum* Carmichael

- 689 wool serge Guadalcanal W.L. White 1945 /E. Simmons QM 2584.
 690 wool serge India W.L. White 1947 /E. Simmons QM 287.
 691 (T *Chrysosporium tropicum*) wool overcoat Guadalcanal W.L. White 1945 /E. Simmons QM 2449 [=IMI 094288 =CBS 171.92 =ATCC 14802 =JQMD 1087 =IFO 7587 =GenBank AJ131685].
 692 wool overcoat Guadalcanal W.L. White 1946 /E. Simmons QM 845.
 694 contaminant, wool Philadelphia W.L. White 1946 /E. Simmons QM 208.
 695 contaminant, wool Philadelphia W.L. White 1946 /E. Simmons QM 199.
 1034 pack rat dung Kern County G.F. Orr /G.F. Orr O-2034.
 1041 dog dung Kern County G.F. Orr /G.F. Orr O-628.
 1044 mouse dung Riverside County Orr /G.F. Orr O-2038.
 1052 mouse dung India Ghosh /G.F. Orr O-2012.
 1054 soil Kern County Orr /G.F. Orr O-2042.
 1244 scalp Florida J.W. Carmichael 9 Feb 1962 /CDC 45-79-62.
 1276 stable soil Delhi, India H.S. Randhawa Nov 1961 /H.S. Randhawa 134.
 1277 stable soil Delhi, India H.S. Randhawa Nov 1961 /H.S. Randhawa 135.
 1278 cattle yard soil Delhi, India H.S. Randhawa Mar 1962 /H.S. Randhawa 215.
 1534 soil, city park Mexico, Missouri /G.F. Orr O-2501.
 1571 soil, chicken sleeping grounds Tonasi, Panama G.F. Orr /G.F. Orr O-2510.
 1608 soil Alice Springs, Central Australia Sr. Regis. M. Dunne /Sr. Regis. M. Dunne 179.
 1815 soil Argentina /E. Varsavsky.
 1816 soil Argentina /E. Varsavsky.
 1894 hair apparently healthy wild rodents, *Clethrionomys glareolus* Czechoslovakia /J. Dvorak 4.
 1953 soil Argentina Varsavsky 1961 /G.F. Orr EV 7M.
 1954 soil Panama Orr 1963 /G.F. Orr O-2541.
 1991 old bird's nest England C.W. Emmons 1946 /G.F. Orr [=QM 256].
 2388 soil on autoclaved human hair Meerut, India 1963 /A.K. Garg 457.
 2391 vineyard soil isol. on horn Roussillon, France /J.A. Rioux 108.
 2393 soil isol. from horsehair bait Sfax, Tunisia 20 Mar 1965 /J.A. Rioux 131.
 2396 sterile wool on soil in plates exposed to air Jardin des Plantes Montpellier, France /J.A. Rioux 234.
 2397 sterile feathers on soil in plates exposed to air Jardin des Plantes Montpellier, France /J.A. Rioux 229-1.
 2398 sterile feathers on soil in plates exposed to air Jardin des Plantes Montpellier, France /J.A. Rioux 229.
 2552 domestic fowl Charleville, Queensland, Australia May 1965 /R.G. Rees F53.
 2558 domestic fowl Charleville, Queensland, Australia May 1965 /R.G. Rees F113.
 2599 soil /Czech. Academy of Sciences 158.
 2738 soil India /H.C. Gugnani S524.
 2739 soil India /H.C. Gugnani S526.
 2927 soil India A.K. Garg /A.K. Garg 78.
 3410 (T *Chrysosporium pollaccii*) strain G. Pollacci 1928 /J. Taylor [=CBS 270.28]. Thermophilic: grows better @ 35C than @ 30C.
 4177 soil isol. by hair-baiting method Perth, W. Aus. R. McAleer 1978 /R. McAleer G1b.
 4178 soil isol. by hair-baiting method Perth, W. Aus. R. McAleer 1978 /R. McAleer WAR-9.
 4179 soil isol. by hair-baiting method Perth, W. Aus. R. McAleer

1978 /R. McAleer G4.

- 4448 soil survey for keratinophilic fungi of animal inhabiting areas India /P.C. Jain CP-13.
 5073 a Costa strain /A.S. Sekhon PLM 1014. Serology: exoantigen (Sekhon et al. ASM Abstracts Ann. Mtg. 1985:F 78; Sekhon & al. Diagn. Microbiol. Infect. Dis. 4:213-221, 1986).

Chrysosporium undulatum Vidal, Ulfig & Guarro

- 4942 toe nails Ontario /J. Kane FR 125. Cellulolytic: in age (5-7 wk) // cycloheximide: resistant // mesophilic: NG @ 37C // culture conditions: hair perforation negative; slight stimulation on inositol; DTM no change 14 days; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive.
 6953 ex whooper swan air sac Albany, NY M. Kemna Dec 1986 /M. Kemna M 1272-86. Cycloheximide: resistant // cellulolytic: in age (5-7 wk) // mesophilic: NG @ 37C // culture conditions: hair perforation negative; slight stimulation on inositol; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; DTM no change 14 days.
 8217 human nails Belgium July 1985 /J. Guarro FMR 4210 [=CBS 963.97 (presumptive)]. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: brown // cellulolytic: in age (5-7 wk) // culture conditions: BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; no requirement for vitamins; hair perforation negative; DTM no change 14 days.
 8218 (T *Chrysosporium undulatum*) sediment Sabanell Beach, Girona, Catalonia, Spain 9-Nov-1992 /J. Guarro FMR 4360 [=CBS 964.97 (presumptive)]. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: brown // cellulolytic: in age (5-7 wk) // culture conditions: BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; no requirement for vitamins; hair perforation negative; DTM no change 14 days.
 8219 sediment Francoli River, Tarragona, Catalonia, Spain 18-Feb-1992 /J. Guarro FMR 4434. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: brown // cellulolytic: in age (5-7 wk).
 8220 sediment Riumar Beach, Tarragona, Catalonia, Spain 25-May-1992 /J. Guarro FMR 4445. Pigment: brown // mesophilic: NG @ 37C // cycloheximide: resistant // cellulolytic: in age (5-7 wk) // culture conditions: hair perforation negative; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; DTM no change 14 days.
 8221 sediment Ebre River, Spain J. Guarro Feb-1992 /J. Guarro FMR 5352 [=CBS 965.97 (presumptive)]. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: brown // cellulolytic: in age (5-7 wk).
 8222 sediment Llobregat River, Spain J. Guarro May 1992 /J. Guarro FMR 5353. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: brown // cellulolytic: in age (5-7 wk).
 8725 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta. 8-12A) T. Lumley (EI-13-S4G 12 Aug 1996 /R.S. Currah EI-13-S4G, 8-12A. Benomyl: sensitive // cycloheximide: resistant // culture conditions: hair perforation negative // mesophilic: NG @ 35C.
 9033 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-11A) T. Lumley (EI-01-S2C 11 Feb 1996 /R.S. Currah EI-01-S2C, 2-11A. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: brown // culture conditions: hair perforation negative; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; DTM no change 14 days.
 9340 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 9-2A) T. Lumley (ML-03-S2A 2 Sep 1997 /R.S. Currah ML-03-S2A, 9-2A. Cycloheximide: resistant // benomyl: sensitive // pigment: brown // cellulolytic: in age (5-7 wk) // mesophilic: NG @ 37C // culture conditions: hair perforation negative; no requirement for vitamins; BCP-MS-G slow growth; no alkalinity; no hydrolysis; urea positive; DTM no change 14 days.

Chrysosporium vallenarense van Oorshot & Piontelli

- 5713 (T *Chrysosporium vallenarense*) keratinic substrates Chile E. Piantelli /CBS 627.83 [=ATCC 64421 =GenBank AJ390389 (ITS)]. Pigment: brown // psychrophilic: growth strongly inhibited at 25C; growth equivalent @ 18C and 22C // mesophilic: growth equivalent @ 18C and 22C; growth strongly inhibited @ 25C.

Chrysosporium verrucosum see **Geomyces pannorum****Chrysosporium verruculatum** see **Chrysosporium merdarium****Chrysosporium vespertili** Guarro, P. Vidal & de Vroey

- 8215 (T *Chrysosporium vespertili*) intestine of bat captured in cave Kibisi, Sanda, about 50 km SE from Kinshasa, Zaire J. Guarro 16-Jan-1971 /J. Guarro FMR 3752 [=RV 27093 =IMI 357403 =CBS 355.93 =GenBank AJ007846]. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: yellow.
- 8216 intestine of bat captured in cave Kibisi, Sanda, about 50 km SE from Kinshasa, Zaire J. Guarro 18-Jan-1971 /J. Guarro FMR 3814 [=CBS 356.93 =IMI 357404 =RV 27084]. Cycloheximide: resistant // mesophilic: NG @ 37C // pigment: yellow.

Chrysosporium xerophilum Pitt

- 2368 (T *Chrysosporium xerophilum*) high moisture prunes (w.a. 0.85), commercially packed in plastic NSW, Australia J.I. Pitt /J.I. Pitt 24 [=ATCC 18052 =CBS 153.67 =IMI 126287]. Osmophilic: opt. 30-40% dextrose.
- 3393 palm kernels Nigeria J.A. Broadbent 1970 /IMI 150705. Osmophilic: opt. 30-40% dextrose.
- 3582 kernels of flint maize grown in Argentina, shipped to Puerto Rico C. Christensen /IMI 164966. Osmophilic: opt. 30-40% dextrose.
- 4264 2000 yr old Peruvian mummy /G.A. Land 80-002763. Osmophilic: opt. 30-40% dextrose.
- 4695 corn stored in sealed container > 1 year St. Paul, Minn. C.M. Christensen /J.I. Pitt FRR 2348. Osmophilic: opt. 30-40% dextrose.
- 4696 J.I. Pitt FRR 2350. Osmophilic: opt. 30-40% dextrose.

Ciborinia whetzelii (Seaver) Seaver

- 7447 ex *Populus tremuloides* (aspen poplar) Fort Nelson, B.C. L. Hutchison (CCMC-4-10) 20 Sep 1991 /L. Hutchison NOF 1740. Pigment: brown.

Ciferrioxylum chaetomorphum (Speg.) Hughes (morph *Aithaloderma* sp.)

- 4778 sooty mold from *Pinus* sp. Inter state highway 75, 2 mi s., Lake City, FL R.R. Pohlad /M. Pickard [=DAOM 153106 =CCFC 001856].

Circinella minor Lendner

- 826 guinea pig dung Edmonton, Alta. J.W. Carmichael 29 Jul 1960 /J.W. Carmichael.

Circinella muscae (Sorokine) Berlese & de Toni

- 32 sheep dung Edmonton, Alta. E. Keeping /E. Keeping.
- 33 V. Jr. Cutter.
- 431 skin ex neck & hands Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 828 soil ex chicken yard Edmonton, Alta. J.W. Carmichael 14 Jun 1960 /J.W. Carmichael.
- 7605 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 63) 13 Dec 1993 /S.P. Abbott (OHS 63).

Circinella rigida Smith

- 10148 sand dropseed seeds (*Sporobolus cryptandrus*), collected from Banner-tailed kangaroo rat (*Dipodomys spectabilis*) Socorro County, New Mexico B. Stoev 18 Oct 2001 /J. Herrera.

Circinella umbellata van Teigham & Le Monnier

- 39 contaminant ex stock culture Edmonton, Alta. J.W. Carmichael 1957 /J.W. Carmichael.
- 839 Guinea pig dung Edmonton, Alta. J.W. Carmichael 4 Aug 1960 /J.W. Carmichael.

Cirrenalia macrocephala (Kohlmeyer) Meyer & Moore

- 9272 toenail, male 44 yr, DE+ Ontario 09-Jan-1997 /R.C. Summerbell F 319.

Cladobotryum apiculatum (Tubaki) Gams & Hoozemans

- 631 skin ex Lt foot Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael.

Cladobotryum dendroides see **Hypomyces rosellus****Cladobotryum multiseptatum** de Hoog

- 4886 soil using hair-bait technique India /R. Kushwaha NN S13. Pigment: violet.

Cladobotryum mycophilum (Oudemans) W. Gams & Hoozemans (morph *Hypomyces odoratus*)

- 1377 Acer sp. Gatineau Park G.L. Hennebert Oct 1960 /DAOM 71559.
- 3055 soil Claremont, Calif. R.K. Benjamin 27 Sep 1960 /RSA 1044.
- 4840 ex *Armillariella mellea* & surrounding mosses Devonian Bot. Garden, Alta. J.W. Carmichael 19 Sep 1983 /R.S. Currah.

Cladobotryum sphaerocephalum (Berk.) Rogerson & Samuels (syn. *Helminthophora sphaerocephala*; morph *Hypomyces albidus*)

- 8555 palm petiole Zetek Trail, Barro Colorado Island, Panama R.D. Goos 6 Jul 1973 /R.D. Goos BCI 0032 [=CBS 920.96 =ATCC 200723]. Pigment: red // hyperparasite: basidiomycete present on original collection but identity unknown (Goos, Mycotaxon 64:375-383, 1997).

Cladobotryum varium see **Hypomyces aurantius****Cladophialophora ajelloi** see **Cladophialophora carrionii****Cladophialophora** an. *Exophiala dermatitidis* see **Exophiala dermatitidis****Cladophialophora arxii** Tintelnot

- 5881 A. Espinel 53.39 [=dH15849 =CBS 409.96 =GenBank EU103987 ITS =GenBank EU140594 EF alpha]. Culture conditions: use of API 20C to differentiate some dematiaceous fungi (Espinel-Ingroff, A. et al., J. Clin. Microbiol. 27:2565-2569, 1989) // molecular systematics: phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug 7, 2008).

Cladophialophora bantiana (Sacc.) de Hoog, Kwon-Chung & McGinnis (syn. *Xylohypha bantiana*, *Cladosporium bantianum*, *Cladosporium trichoides*, *Cladosporium trichoides* var. *chlamydosporum*)

- 578 (T *Cladosporium trichoides*) brain abscess of man Baltimore, MD C.W. Emmons 1949 /C.W. Emmons [=ATCC 10958 =CBS 173.52 =CBS 100433 =CDC B-1940 =NIH 8579 =GenBank EU103989 ITS =GenBank EU140585 EF alpha].

- Systematics/taxonomy: comparison of partial LS rRNA sequences (Masclaux et al., J. Med. Vet. Mycol. 33:327-338, 1995); revision & physiology (de Hoog et al., J. Med. Vet. Mycol. 33:339-347, 1995); nutritional physiology for species distinction (de Hoog et al., J. Med. Vet. Mycol. 33:339-347, 1995) // molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999); comparison of partial LS rRNA sequences; phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).
- 579 brain abscess of man Pennsylvania T. (8580) Collette 1952 /C.W. Emmons 8580. Molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999) // human/animal pathogen: brain abscess (King AB, Collette TS, Bull. Johns Hopkins Hosp. 91:298-305).
- 3830 canine liver abscess Barbados /J.R. Long [=CBS 648.96 =GenBank EU103993 ITS =GenBank EU140587 EF alpha]. Molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999; Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008); phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).
- 5195 following intratesticular passage in guinea-pig Uruguay /I. Conti 1708 [=CBS 982.96]. Molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999).
- 6501 brain abscess, male 76 yr, histopathology +; no history of recent travel Edmonton, Alta. Jul 1989 /A.S. Sekhon PLM 1951 [=CBS 981.96]. Human/animal pathogen: brain abscess (Sekhon et al., European J. Epidemiol. 8:387-390, 1992) // thermotolerant // molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999).
- 9607 pus from brain, male 73 yr with multiple intercranial lesions, DE + British Columbia BC Centre for Disease Control (99MF393) 1999 /R. Rennie.
- 10767 ex aspirate from brain abscess, male 45 yr The Alfred Hospital, Melbourne A. Woodgyer /A. Woodgyer 2006-20385.
- Cladophialophora carrionii*** (Trejos) de Hoog, Kwon-Chung & McGinnis (syn. *Cladosporium carrionii*, *Cladophialophora ajelloi*)
- 4344 (T *Cladophialophora ajelloi*) lesion ex left arm, Samoan man with chromoblastomycosis Hawaii /CDC B-3253 [=CBS 259.83]. Molecular systematics: comparison of partial LS rRNA sequences (Masclaux et al., J. Med. Vet. Mycol. 33:327-338, 1995); phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).
- 4353 human chromoblastomycosis Queensland, Australia 1948 /M. McGinnis NCMH 889 [=MRL 1113]. Molecular systematics: Blast match 98-99% ITS similarity with *Cladophialophora carrionii* (fide UAMH 2011).
- 4366 human Queensland Inst. of Med. Res., Australia 1948 /M. McGinnis NCMH 923 [=MRL 1114 =CBS 406.96].
- 4392 case of chromoblastomycosis /M. McGinnis NCMH 1010 [=Duke 2403 =CBS 410.96].
- 5717 clinical material /A. Espinel MCV-VCU 53.37 [=CBS 986.96]. Thermotolerant: grows @ 37C, NG @ 42C.
- Cladophialophora chaetospora*** (Grove) Crous & Arzanlou (syn. *Heteroconium chaetospora*)
- 10312 isolated using melon roots as bait from forest soil collected in area with mature overstory of *Picea glauca* Banff, Alta. K. Narisawa 20-9-99 /K. Narisawa BPM3 [=GenBank DQ521604 (SSU)]. Culture conditions: grows well on CMA and CER @ 25C // mycorrhizae: dark septate endophyte (DSE) allied to the Herpotrichiellaceae (Narisawa K, Hambleton S, Currah RS, Mycoscience 48:274-281, 2007) // biodiversity: present in humus-rich woodland soils in western Canada (Narisawa K, Hambleton S, Currah RS, Mycoscience 48:274-281, 2007).
- 10313 isolated using barley roots as bait from forest soil collected in area with mature overstory of *Pinus contorta* Jackman Flats, B.C. K. Narisawa 24-01-00 /K. Narisawa BC1HB1. Culture conditions: grows well on CMA and CER @ 25C // mycorrhizae: dark septate endophyte (DSE) allied to the Herpotrichiellaceae (Narisawa K, Hambleton S, Currah RS, Mycoscience 48:274-281, 2007) // biodiversity: present in humus-rich woodland soils in western Canada (Narisawa K, Hambleton S, Currah RS, Mycoscience 48:274-281, 2007).
- 10314 using eggplant roots as bait from forest soil collected in area with mature overstory of *Pinus contorta* Jackman Flats, B.C. K. Narisawa 24-1-00 /K. Narisawa BC2HE2. Culture conditions: grows well on CMA and CER @ 25C // mycorrhizae: dark septate endophyte (DSE) allied to the Herpotrichiellaceae (Narisawa K, Hambleton S, Currah RS, Mycoscience 48:274-281, 2007) // biodiversity: present in humus-rich woodland soils in western Canada (Narisawa K, Hambleton S, Currah RS, Mycoscience 48:274-281, 2007).
- 10418 roots of *Aralia nudicaulis* plated on mycosel; ex aspen-dominated upland nr Elk Island National Park, Alta (C) H. Addy; (I) B.J. Wilson /R.S. Currah A5B [=GenBank DQ521605 (SSU)]. Cycloheximide: tolerant // mycorrhizae: dark septate endophyte (DSE) allied to the Herpotrichiellaceae (Narisawa K, Hambleton S, Currah RS, Mycoscience 48:274-281, 2007).
- Cladophialophora devriesii*** (Padhye & Ajello) de Hoog, Kwon-Chung & McGinnis (syn. *Cladosporium devriesii*)
- 5065 (T *Cladosporium devriesii*) mycotic granuloma left breast, female 26 yrs Grand Cayman Is. /CDC B-3897 [=ATCC 56280 =CBS 147.84 =GenBank EU140595 EF alpha =GenBank EU103985 ITS]. Human/animal pathogen: subcutaneous phaeohyphomycosis (Gonzalez et al., Sabouraudia 22:427-432, 1985) // systematics/taxonomy: revision & physiology (de Hoog et al., J. Med. Vet. Mycol. 33:339-347, 1995); comparison of partial LS rRNA sequences (Masclaux et al., J. Med. Vet. Mycol. 33:327-338, 1995); nutritional physiology for species distinction (de Hoog et al., J. Med. Vet. Mycol. 33:339-347, 1995).
- Cladophialophora emmonsii*** (Padhye, McGinnis & Ajello) de Hoog & Padhye (syn. *Xylohypha emmonsii*)
- 4991 subcutaneous lesion cat I. Weitzman /CDC B-3634 [=NCMH 2248 =CBS 640.96 =GenBank EU103995 ITS =GenBank EU140584 EF alpha]. Human/animal pathogen: phaeohyphomycosis // molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999); phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).
- 4992 subcutaneous abscess on cat U.S. K.J. Kwon-Chung (NIH B-3839) /CDC B-3658 [=GenBank EU103992 ITS =GenBank EU140592 EF alpha =NCMH 2249 =CBS 678.79 =NIH B-3839]. Human/animal pathogen: phaeohyphomycosis (Kwon-Chung & de Vries, Sabouraudia 21:59-72, 1983) // systematics/taxonomy: revision & physiology (de Hoog et al., J. Med. Vet. Mycol. 33:339-347, 1995); nutritional physiology for species distinction (de Hoog et al., J. Med. Vet. Mycol. 33:339-347, 1995) // molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999); phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).
- 4994 (T *Xylohypha emmonsii*) phaeohyphomycosis, subcutaneous

lesion right forearm Virginia /CDC B-3875 [=NCMH 2247 =UTMB 2247 =CDC B-3875D =CBS 979.96 =GenBank EU103996 ITS =GenBank EU140583 EF alpha]. Human/animal pathogen: subcutaneous phaeocephomycosis (Padhye & al., J. Clin. Microbiol. 26:709-712, 1988) // molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999); phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).

Cladophialophora minourae (Iwatsu) Haase & de Hoog
(syn. *Cladosporium minourae*)

- 5021 (T *Cladosporium minourae*) rotting wood Shoroi, Chiba, Japan T. (IFM 4700) Iwatsu 11 Feb 1979 /K. Nishimura DCU 422 [=IMI 298056 =ATCC 52853 =CBS 556.83 =IFM 4700 =GenBank AY251087 ITS =GenBank EU140598 EF alpha]. Molecular systematics: transfer to *Cladophialophora* (Haase et al., Stud. Mycol. 43:80-97, 1999); phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).
- 5022 rotting wood Yachimata, Chiba, Japan T. (IFM 4701) Iwatsu 23 Sep 1979 /K. Nishimura DCU 428 [=IFM 4701 =CBS 987.96 =GenBank EU103988 ITS =GenBank EU140599 EF alpha]. Molecular systematics: transfer to *Cladophialophora* (Haase et al., Stud. Mycol. 43:80-97, 1999); phylogenetic analysis of *Cladophialophora* species (Badali H, Carvalho VO, Vicente V, Attili-Angelis D, et al, Med Mycol Epub Aug7, 2008).
- 10934 ex human brain abscess /D.A. Sutton UTHSC R-4224 [=UTHSC 08-1161]. Thermotolerant: growth equivalent at 30 & 35C.

Cladophialophora minutissima M.L. Davey & Currah

- 10709 (T *Cladophialophora minutissima*) ex *Polytrichum juniperinum* nr Elk Island National Park M.L. Davey 12-May-2004 /R.S. Currah Pj1-R1 [=GenBank EF016382 =GenBank EF016372 =CBS 121758]. Culture conditions: polyphenol oxidase; gelatinase // biodiversity: from boreal and montane bryophyte species (Davey ML, Currah RS, Mycol Res 111:106-116, 2007) // molecular systematics: *Cladophialophora* (Herpotrichiellaceae) (Davey ML, Currah RS, Mycol Res 111:106-116, 2007).
- 10710 ex *Sphagnum fuscum* nr Elk Island National Park M.L. Davey 07-Mar-2005 /R.S. Currah Sfi-B [=GenBank EF016386 =GenBank EF016375]. Culture conditions: gelatinase; polyphenol oxidase // biodiversity: from boreal and montane bryophyte species // molecular systematics: *Cladophialophora* (Herpotrichiellaceae) (Davey ML, Currah RS, Mycol Res 111:106-116, 2007).
- 10711 ex *Polytrichum juniperinum* Donahue's pasture, Blue Ridge, Alta. M.L. Davey 25-Jun-2004 /R.S. Currah Pj4-A2 [=GenBank EF016385 =GenBank EF016374]. Culture conditions: gelatinase; polyphenol oxidase // biodiversity: from boreal and montane bryophyte species (Davey ML, Currah RS, Mycol Res 111:106-116, 2007) // molecular systematics: *Cladophialophora* (Herpotrichiellaceae) (Davey ML, Currah RS, Mycol Res 111:106-116, 2007).

Cladophialophora modesta McGinnis, de Hoog & Haase

- 4004 (T *Cladophialophora modesta*) fatal brain infection in alcoholic male 25 yr; histopathology + for olivaceous hyphae NCMH, Chapel Hill M. McGinnis 1976 /M. McGinnis NCMH 108 [=CBS 985.96]. Molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud. Mycol. 43:151-162, 1999) // human/animal pathogen: brain abscess (McGinnis et al., Stud. Mycol. 43:166-171, 1999) // thermotolerant: grows @ 37C & 45C fide McGinnis et al..

***Cladophialophora* sp. I**

- 5981 soil near sulphur piles Lethbridge, Alberta H. Komadowski /D. Gaudet. Molecular systematics: Blast match 92-94% ITS similarity to *Cladophialophora minutissima* (fide UAMH 2009) // cycloheximide: resistant (MYC) // application: oxidizes sulphur // culture conditions: grows @ 30 C but not @ 35 C; grows at pH 4.5.
- 6209 soil near sulphur piles Lethbridge, Alberta H. Komadowski 1987 /S. McIntosh 1. Cycloheximide: resistant // culture conditions: growth equivalent at 25 & 30C (fide UAMH 2012); NG @ 35C // application: oxidizes sulphur.
- 6210 soil near sulphur piles Lethbridge, Alberta H. Komadowski 1987 /S. McIntosh 2. Cycloheximide: resistant // application: oxidizes sulphur.
- 6211 soil near sulphur piles Strachan, Alta. S. McIntosh Mar 1988 /S. McIntosh 3. Cycloheximide: resistant // application: oxidizes sulphur.
- 6212 soil near sulphur piles Strachan, Alta. S. McIntosh Mar 1988 /S. McIntosh 4. Cycloheximide: resistant // application: oxidizes sulphur.
- 6213 soil near sulphur piles Strachan, Alta. S. McIntosh Mar 1988 /S. McIntosh 5. Cycloheximide: resistant // application: oxidizes sulphur.

Cladorrhinum bulbiliosum Gams & Mouchacca

- 8095 ex corneal scraping from Percheron cross horse Queensland, Australia D. Connole 1995 /D. Connole B1615/3 [=IHEM 15094]. Thermotolerant: grows @ 37C // human/animal pathogen: mycotic keratitis in horse (Chopin JB, Sigler L, Connole MD, O'Boyle DA, Mackay B, Goldstein L, J. Med. Vet. Mycol. 35:53-55, 1997) // molecular systematics: 100% ITS similarity with UAMH 10543 (fide UAMH 2006).
- 10543 corneal ulcer in horse; hyphae seen in Gram stain Melbourne, Australia A. Woodgyer 2005 /A. Woodgyer 2005-04764. Molecular systematics: 100% ITS similarity with UAMH 8095 (fide UAMH 2006) // thermotolerant: grows @ 35 C // cycloheximide: sensitive, overcomes sensitivity after several weeks.
- 11021 upper gum lesion ex horse Melbourne, Australia A. Woodgyer 2008 /A. Woodgyer 2008-20047. Molecular systematics: BLAST match 99% ITS similarity with FM955448 (CBS 304.90) *Cladorrhinum bulbiliosum* (fide UAMH 2010); 99.2% ITS similarity with UAMH 8095 and 10543 (fide UAMH 2010) // thermophilic: growth equivalent at 30 & 35C.

Cladorrhinum foecundissimum Sacc. & Marchal

- 2807 soil ex river bank Cardston, Alta. D. Remington Jul 1967 /D. Remington.
- 7247 ex deer dung Little Lepreau, Charlotte Co., NB D. Malloch Oct 1990 /D. Malloch JS 144. Cycloheximide: sensitive // benomyl: sensitive // mesophilic: NG @ 37C // pigment: brown.

Cladorrhinum phialophoroides Mouchacca & Gams

- 4393 contaminant ex polyporoid fungus Recife Brasil Cavalcante /DAOM 178965.

Cladosporium bantianum see *Cladophialophora bantiana*

Cladosporium brevimosum Morgan-Jones

- 6217 (T *Cladosporium brevimosum*) discolored wallpaper King & Prince Hotel, St. Simon's Is. Georgia, USA B. Jacobsen Dec 1987 /ATCC 64696. Biodeteriogen/biodegradation: wallpaper (Morgan-Jones, Mycotaxon 32:222-235, 1988).

Cladosporium carrionii see *Cladophialophora carrionii*

Cladosporium cladosporioides (Fresen.) de Vries

- 399 mouldy ceilings painted with casein paint Holyrood School, Edmonton J.W. Carmichael 1955 /J.W. Carmichael.
- 4146 pulp samples Hinton, Alta. /J.M. Crosby-Diewold. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 4348 black growth ex *Populus tremuloides* Edmonton, Alta. L. Sigler Nov 1980 /L. Sigler.
- 4678 leaves *Populus tremuloides* Devonian Bot. Garden, Alta. J.W. Carmichael Oct 1982 /J.W. Carmichael.
- 5063 J. Vederas [=NRRL 5507]. *Cladosporin* (phytotoxin) (Reese & al., J. Am. Chem. Soc. 110:316-318, 1988).
- 6172 black stained vinyl pool liner Edmonton, Alta. A. Flis (7d) Jun 1988 /W. Campbell. Biodeteriogen/biodegradation.
- 6878 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 88) Aug 1990 /D. Inglis (MR 88).
- 6988 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 132) Aug 1990 /D. Inglis (MR 132).
- 7684 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 346) 21 Mar 1994.
- 8381 ex sclera from eye bank sent for sterility Auckland, New Zealand /D. Parr MG 5109. Benomyl: sensitive.
- 11412 swab ex fur of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 79 C.3 . Biodiversity: mycobiota of bat caves.

Cladosporium devriesii see ***Cladophialophora devriesii******Cladosporium elatum*** (Harz) Nannfeldt

- 5716 wood pulp E. Melin (389.14) /A. Espinel MCV-VCU 53.21 [=CBS 146.33 =IMI 49629 =ATCC 11280 =IFO 6372 =MUCL 10094]. Molecular systematics: comparison of partial LS rRNA sequences (Masclaux et al., J. Med. Vet. Mycol. 33:327-338, 1995) // systematics/taxonomy: nutritional physiology for species distinction (de Hoog et al., J. Med. Vet. Mycol. 33:339-347, 1995).

Cladosporium gallicola Sutton

- 4281 *Endocronartium harknessii* gall Maligne Lake Rd., Jasper Alta A. Tsuneda 1978 /NFRC C-715 [=UAMH 4282 =UAMH 4283]. Pigment: yellow.
- 4282 white mutant ex UAMH 4281 (NFRC C-715) /NFRC C-715 [=UAMH 4281 =UAMH 4283]. Pigment: yellow.
- 4283 mixed green & white sectors ex UAMH 4281 (NFRC C-715) /NFRC C-715 [=UAMH 4282 =UAMH 4281]. Pigment: yellow.
- 4284 *Endocronartium harknessii* gall, mixed growth with *Scopinella* sp. Devonian Bot. Garden, Alta. A. Tsuneda Apr 1979 /NFRC.
- 4287 *Cronartium comandrae* Barrier Lake, Alta. B.C. Sutton /A. Tsuneda NFRC C-584.
- 4288 *Endocronartium harknessii* on *Pinus contorta* /A. Tsuneda NFRC C-721.

Cladosporium herbarum (Pers.) Link ex Gray (morph***Davidiella tassiana***)

- 470 skin from Rt hand Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
- 986 spleen ex squirrel Edmonton, Alta. J.W. Carmichael May 1959 /J.W. Carmichael. Cellulolytic.
- 1303 soil ex Guanaco's paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael. Cellulolytic.
- 1374 ex *Acer* sp. Ottawa, Ont. G.L. Hennebert Oct 1960 /DAOM 71432-a. Cellulolytic // biodeteriogen/biodegradation: diagenic alteration of spar calcite (Jones & Pemberton, Can. J. Earth

Sci. 24:903-914, 1987).

- 1812 moss Edmonton, Alta. J.W. Carmichael 11 Oct 1963 /J.W. Carmichael. Cellulolytic.
- 3502 skin & forefoot of frog Elkan & Philpot /C. Philpot 3908.
- 6987 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 600) Aug 1990 /D. Inglis (MR 600).
- 6989 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 444) Aug 1990 /D. Inglis (MR 444).
- 7685 indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Girouxville, Alta. S.P. Abbott (OHS 340) 25 Apr 1994 /S.P. Abbott (OHS 340).
- 7708 ex indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 271) 21 Mar 1994 /S.P. Abbott (OHS 271).

Cladosporium macrocarpum Preuss

- 1386 soil ex cougar pen Alberta Game Farm, Edmonton J.W. Carmichael 18 Jul 1962 /J.W. Carmichael. Cellulolytic.
- 1804 leaves of dogwood Emily Murphy Park, Edmonton J.W. Carmichael 9 Oct 1963 /J.W. Carmichael.
- 1805 leaves of dogwood Emily Murphy Park, Edmonton J.W. Carmichael 9 Oct 1963 /J.W. Carmichael.
- 1811 moss Emily Murphy Park, Edmonton J.W. Carmichael 11 Oct 1963 /J.W. Carmichael.
- 6138 black stained vinyl pool liner Edmonton, Alta. A. Flis (7eA) Jun 1988 /W. Campbell. Biodeteriogen/biodegradation.
- 6990 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 537) Aug 1990 /D. Inglis (MR 537).

Cladosporium minourae see ***Cladophialophora minourae******Cladosporium oxysporum*** Berk. & Curt.

- 4327 sp. "B" from dead leaves & stems of *Belparone guttata* (shrimp plant) or leaves of *Coleus* /D.M. Dixon G-3a-2.

***Cladosporium* sp.**

- 4274 sclerotium forming fungus on *Cronartium coleosporioides* chancre Blue River, Alta. A. Tsuneda /A. Tsuneda.
- 4853 lodgepole pine near Princeton, B.C. L. Sigler Jul 1983 /PFRC.
- 5528 decaying basidiocarp Rocky-Clearwater Forest, Alta. L. Sigler 3 Sep 1986 /L. Sigler.

Cladosporium sphaerospermum Penz.

- 4326 dead leaves & stems of several plants (sp. "A") /D.M. Dixon G-3a-1.
- 4745 FUNDO (children's modelling dough) Edmonton, Alta. L. Sigler 9 Feb 1983 /L. Sigler.
- 7686 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Clyde Corner, Alta. S.P. Abbott (OHS 343) 25 Apr 1994 /S.P. Abbott (OHS 343) [=GenBank AY625063 ITS]. Application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004); quantitative PCR analysis of fungi in building materials (Pietarinen V, Rintala H, Hyvärinen A, Lignell U, Kärkkäinen P, and Nevalainen A, Journal of Environmental Monitoring 10:655-663, 2008).
- 10214 contaminant in culture medium during QC process A. Stanchina 09-02 /A. Stanchina 3816-1.

Cladosporium spongiosum Berk. & Curt.

- 267 air contaminant Farlow Herbarium, Cambridge, MA J.W. Carmichael 1953 /J.W. Carmichael.

Cladosporium trichoides see ***Cladophialophora bantiana******Cladosporium trichoides* var. *chlamydsorum*** see

Cladophialophora bantiana*Clathridium corticola* see *Seimatosporium an.****Clathridium corticola******Clathrophaerina zalewskii*** van Beverwijk (morph*Hyaloscypha zalewskii*)

- 8483 decaying *Quercus* sp. leaves submerged in stream Cantallops, Alt Emporda, Catalonia, Spain S.K. Abdullah 7 Nov 1995 /J. Guarro FMR 5579.

Clavispora lusitaniae Rodrigues de Miranda (morph *Candida lusitaniae*)

- 10408 (T *Candida lusitaniae*) pig digestive tract Portugal van Uden /ATCC 34449 [=CBS 4413 =IFO 1019 =JCM 1814 =NRRL Y-11826 =NRRL Y-5394] -. Application: control strain for typing systems.

Clitocybe clavipes (Fr.) Kummer

- 5580 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /;. Biocontrol: activity against *Fusarium* causing damping-off in conifer seedlings (Chakravarty et al., J. Plant Diseases and Protection 106:342-352,1999).

Clitocybe ditopa (Fr.) Gillet

- 5559 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /;.

Clitocybe geotropica Bull. ex St.-Amans

- 5566 mixed *Pinus contorta*, *Picea mariana* bog Rocky-Clearwater Forest, Alta. 28 Jul 1986. Culture conditions: clamps (fide UAMH 2012).

Clitocybe harperi Murrill

- 5181 mixed *Pinus* & *Picea glauca* woods Slave Lake Forest, Alta. UAMH 5 Sep 1985 /UAMH.
5567 mixed *Picea* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /UAMH. Pigment: brown.
5884 *Picea glauca*, *Populus* forest Rocky-Clearwater Forest, Alta. (C) A. Smreciu 20 Aug 1987 /C) A. Smreciu.

Clitocybe irina see *Lepista irina**Clitocybe nuda* see *Lepista nuda****Clitocybe odora*** (Fr.) Kummer

- 5556 mixed *Picea mariana*, *P. glauca* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /see .
5557 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /see .

Clitocybe sp.

- 5562 mixed *Picea glauca*, *P. mariana* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /see .
5565 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986 /see .

Clitocybula oculus (Peck) Singer

- 9358 ex fruiting body on rotting wood Southern Ontario G.L. Barron /W.A. Ayer 378. Pigment: brown.

Clonostachys candelabrum (Bon.) Schroers

- 7264 soil under *Picea* sp. (spruce) Edmonton, Alta. J. Woods Oct 1992 /J. Woods.
9897 soil Edmonton, AB C.F. Gibas Nov 2000 /C.F. Gibas.
9939 shed dorsal mid-body skin ex Mexican bearded lizard (*Heloderma horridum*), male >10yr San Diego Zoo, San Diego CA UAMH (UW075B-B) 31 Jan 2001. Biodiversity: reptile

cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Clonostachys rosea (Link : Fries) Schroers, Samuels, Seifert & W. Gams (morph *Bionectria ochroleuca*)

- 419 yellow poplar stump West Virginia 1953 /H.L. Barnett 914.
588 toe nail Edmonton, Alta. J.W. Carmichael Nov 1957 /J.W. Carmichael.
738 garden soil Edmonton, Alta. J.W. Carmichael 28 Feb 1959 /J.W. Carmichael.
968 soil under pine tree windbreak Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
969 soil ex grassy field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
972 soil ex ploughed field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
1691 rotting *Populus* log Fort Langley, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael [=GenBank AF108495 =GenBank AF108482].
3477 soil Chile /L. Zaror T52 B.
3499 soil Chile /L. Zaror T83 A.
4091 contaminant ex bovine hair & skin Edmonton, Alta. B. Murray 6 Feb 1978 /B. Murray 69.
4746 gopher burrow Elkwater, Alta. R. Currah (81-209) 1983 /R. Currah (81-209).
7494 fresh grouse dung in moist chamber Big Chute, nr Six Mile Lake, ON J. Scott 11 Jun 1991 /D. Malloch JS 174.
Biocontrol: entomopathogenic fungi as potential biocontrol agents of the honey bee parasitic mite *Varroa destructor* (Hamiduzzaman MM, Sinia A, Guzman-Novoa E, Goodwin PH, J Invertebr Pathol 111:237-243, 2012); less than 50% varroa mite mortality caused by UAMH 7494 (Hamiduzzaman MM et al 2012).
9477 ex fruiting body of *Paxillus involutus* Calmar, Alta. S.P. Abbott (SA M97) 02 Jul 1996 /S.P. Abbott (SA M97).
10870 biopsy specimen ex everglades rat snake with chronic dysecdysis and skin lesions on tail; histopathology positive for hyphae; UAMH 10871 also grown Columbus Zoo and Aquarium, Powell, OH (I) L. Sigler (C) M.J. King 19-Nov-2007 /E. Klaphake 963562. Biodiversity: associated with lesion on everglades rat snake (Dadone LI, Klaphake E, Garner MM, Schwahn D, Sigler L, Trupkiewicz JG, Myers G, Barrie MT, J Zoo Wildl Med 41:538-541, 2010).

Clonostachys rosea see *Bionectria ochroleuca****Clonostachys rosea f. catenulata*** (Gilman & Abbott)

- Schroers (morph *Bionectria ochroleuca*)
1339 soil under trees Edmonton, Alta. J.W. Carmichael 23 Jul 1962 /J.W. Carmichael.
9161 soil baited with waxworm larvae southern Ontario M.J. Bidochka /M.J. Bidochka MaT1A1Zi. Biocontrol: bioassays indicate insect pathogenicity (fide M.J. Bidochka); entomopathogenic fungi as potential biocontrol agents of the honey bee parasitic mite *Varroa destructor* (Hamiduzzaman MM, Sinia A, Guzman-Novoa E, Goodwin PH, J Invertebr Pathol 111:237-243, 2012).

Clonostachys rosea f. catenulatum see *Bionectria ochroleuca****Clonostachys sp.***

- 11445 swab ex fur of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 19 C.1. Biodiversity: mycobiota of bat caves // molecular systematics: Blast match highest ITS similarity (92-93%) to *Clonostachys* / *Bionectria* species (fide UAMH 2011).

Cochliobolus geniculatus see *Curvularia geniculata*

Cochliobolus hawaiiensis see *Bipolaris hawaiiensis*

Cochliobolus lunatus see *Curvularia lunata*

Cochliobolus sativus see *Bipolaris sorokiniana*

Cochliobolus spicifer see *Bipolaris spicifera*

Cochliobolus victoriae Nelson (morph *Bipolaris victoriae*)
4969 lesion of frontal sinus & bilateral involvement of frontal lobes of cerebrum, male Fort Worth, TX 1984 /B.H. Cooper 2732. Human/animal pathogen // cellulolytic.
9360 switchgrass (*Panicum virgatum*) Kansas Ecological Reserves, Douglas County, Kansas J. Holah July 1997 /J. Harris.

Codinæa parva Hughes & Kendrick
7280 ex roots of epiphytic orchid *Catasetum maculatum* La Selva, Heredia Prov., Costa Rica K. Richardson 31 Oct 1991 /R.S. Currah K440Pb. Mycorrhizae: root endophyte epiphytic orchid *Catasetum maculatum*.

Coemansia erecta Bainier
5616 arable soil Serra, Valencia, Spain J. Cano Aug 1986 /J. Guarro FMR 845 [=CBS 336.87].

Cokeromyces recurvatus Poitras
9303 V. Chaturvedi M 599-97.

Collecephalus hemerocalli Spencer
3655 day lily (*Hemerocallis*) leaves Burden Res. Plantation, Baton Rouge, LAa. G.E. Holcomb /G. Holcomb B-2.

Colletotrichum acutatum Simmonds (morph *Glomerella acutata*)
4661 sprouts & seed of mung bean *Paseolus aureus*, causing rapid decay of sprouts in sprouting chambers Washington O. Maloy /O.T. Maloy. Plant pathogen: caused rapid decay of mung bean (*Paseolus aureus*) sprouts in sprouting chambers (fide O.T. Maloy 1982) // molecular systematics: Blast match 100% ITS similarity with *Colletotrichum acutatum* species complex; sequencing from other gene regions needed to confirm species identification.
5357 lesion ex gills trout Knoxville, Tenn. R. Walker /CDC 86-018928. Mesophilic: NG @ 35C // culture conditions: carmine red pigment on reverse.
8125 ex roots of *Trigonidium riopalenquense* (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 15 May 1991 /R.S. Currah K129c. Mycorrhizae: root endophyte orchid *Trigonidium riopalenquense* // mesophilic: NG @ 35C.
10325 invertebrate Ohio J.B. Benoit /J. Yoder D. Culture conditions: carmine red pigment on reverse // mesophilic: NG @ 35C // molecular systematics: BLAST match 99% ITS similarity with *Colletotrichum acutatum* species complex; sequencing from other gene regions needed to confirm species identification..

Colletotrichum dematium (Pers.:Fr.) Grove
1338 soil & dextritis Edmonton, Alta. J.W. Carmichael 23 Jul 1962.
6728 red raspberry (*Rubus idaeus*) Prince George area, B.C. S.F. Shamoun /S. Shamoun PFC 3858. Culture conditions: sclerotia // molecular systematics: sequencing from other gene regions needed to confirm species identification; BLAST match 99% ITS similarity with *Colletotrichum dematium*, C. *hemerocallidus* clade // biocontrol: potential mycoherbicide in forest renewal areas (fide S. Shamoun 1990).
9679 Roma tomato (*Lycopersicon esculentum*) Calmar, AB S.P.

Abbott (SA-M301) 1 Dec 1999 /S.P. Abbott (SA-M301). Culture conditions: sclerotia.

Colletotrichum gloeosporioides (Penz) Sacc. (morph *Glomerella cingulata*)
1426 CBS strain /DAOM 88011 [=CCFC 9661].
4756 root rot & leaf blight of *Laeliocattelya* hybrid (orchid); Fusarium also isolated Edmonton, Alta. L. Sigler Mar 1983 /G. Marien.
5061 mycotic keratitis California /D. Howard.
8525 avocado (*Persia* sp.) Edmonton, Alta. L. Sigler 21 Mar 1996. Molecular systematics: BLAST match 100% ITS similarity to *Colletotrichum gloeosporioides* species complex (fide UAMH 2013); sequencing from other gene regions needed to confirm species identification.

Colletotrichum gloeosporioides f. sp. malvae Sydow
7517 stems of round leaf mallow, *Malva pusilla* K. Mortenson /C. Kuiuack Philom 4 [=ATCC 20767]. Application: bioherbicide registered under the trade name of Biomal; biological control of round-leaved mallow, *Malva pusilla*, and velvetleaf (Mortensen K et al. U.S. Pat. 5,296,369; Mortensen K, Makowski RM, Weed Sci 43:429-433, 1995; Mortensen K, Weed Sci 36:473-478, 1988) // plant pathogen: naturally occurring plant pathogen specific to round leaf mallow, a common prairie weed; mycoherbicide for control of round-leaved mallow // molecular systematics: Blast match 99-100% ITS similarity with C. orbiculare clade (C. orbiculare, C. lindemuthianum, C. trifoli) (fide UAMH 2013).

Colletotrichum musae (Berk. & Curt.) Arx
4799 plantain Edmonton, Alta. L. Linarez Jul 1983 /L. Linarez. Molecular systematics: Blast match 100% ITS similarity with *Colletotrichum musae* species clade.
7690 ex banana (*Musa* sp.) in fruit ripener Edmonton, Alta. G. Hill-Rackette & S.P. Abbott 25 Aug 1994 /G. Hill-Rackette & S.P. Abbott. Pigment: orange.
8929 banana fruit Jamaica P. Reese /P. Reese [=IMI 374528]. Steroid biotransformations (dehydroisoandrosterone, progesterone, testosterone, cortisone) (Wilson et al, Steroids 64:834-843, 1999); redox reactions on alcohols & ketones (Wilson et al, ibid.).

Colletotrichum orbiculare (Berk. & Mont.) von Arx
6922 leaf litter West Africa /B. Katz 5.

Collybia confluens (Pers.:Fr.) Kummer
6182 Lodgepole pine (*Pinus contorta*) woods Bow-Crow Forest, Alta. S.P. Abbott 12 Jul 1988 /S.P. Abbott.
8297 tissue explant ex fruiting body on ground under *Populus temuloides* and *Pinus banksiana* Devonian Botanic Garden, Edmonton, Alta S.P. Abbott (SA 1075) 08-Jul-1994 /S.P. Abbott (SA 1075).
9055 R.M. Danielson (RMD 2726) /R.M. Danielson RMD 2726.

Collybia conigena (Pers.) Bresadola
3796 CBS 146.29.

Collybia dryophila (Bull. : Fr.) Kummer
5489 mixed *Picea mariana*, *P. glauca* woods Rocky-Clearwater Forest, Alta. 30 Jun 1986 /CBS.
5490 mixed *Picea mariana*, *P. glauca* woods Rocky-Clearwater Forest, Alta. 7 Jul 1986 /CBS.
5491 mixed *Picea mariana*, *P. glauca*, *Populus* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 7 Jul 1986 /CBS.
5492 mixed *Picea mariana*, *P. glauca* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /CBS [=NOF 1476].
5853 mixed *Picea mariana* & *Picea glauca* Forestry Trunk Road, Alta. (C) A. Smreciu 30 Jun 1987 /C) A. Smreciu.

- 5856 *Pinus contorta*, *Picea glauca* Rocky-Clearwater Forest (C) A. Smreciu 16 Jul 1987 / (C) A. Smreciu.
 6228 *Pinus contorta* & *Picea engelmannii* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 16 Aug 1988 / (C) S.P. Abbott [=NOF 1475].

Collybia maculata see *Rhodocollybia maculata*

Collybia velutipes see *Flammulina velutipes*

- Coltricia perennis*** (L.: Fr.) Murrill (syn. *Polyporus perennis*)
 8961 sporocarps scattered on cutline, jackpine & bearberry nearby Mildred Lake, Alta. R.M. Danielson (RMD 3028) 16 Sep 1980 / R.M. Danielson RMD 3028. Mycorrhizae.
 9052 R.M. Danielson (RMD 2443) / R.M. Danielson RMD 2443 [=DAOM 176585 =CCFC 3644]. Pigment: lt brown // mycorrhizae.

Coltricia tomentosa see *Inonotus tomentosus*

Complexipes an. Wilcoxina mikolae var. tetraspora see *Wilcoxina mikolae var. tetraspora*

Complexipes an. Wilcoxina rehmi see *Wilcoxina rehmi*

Complexipes moniliformis see *Wilcoxina mikolae var. mikolae*

Confertobasidium olivaceoalbum see *Leptosporomyces fuscostratus*

Conidiobolus lamprauges Drechsler

- 11219 ex pulmonary lesions at autopsy from 61 year old Japanese patient with malignant lymphoma; histopathology + for hyphae Dept. Pathology, Kinki University Faculty of Medicine, Osaka-Sayama, Japan / D.A. Sutton R-4463 [=GenBank HM593511 ITS =GenBank HM593512 D1D2]. Thermotolerant: grows better @ 35C than @ 30C // human/animal pathogen: disseminated human conidiobolomycosis due to *Conidiobolus lamprauges* (Kimura M, Yaguchi T, Sutton DA, Fothergill AW, Thompson EH, Wickes BL, J Clin Microbiol 49:752-756, 2011).

Coniochaeta malacotricha (Auerswald) Traverso (morph *Lecythophora an. Coniochaeta malacotricha*)

- 9375 decayed wood (stage II decay), white spruce log (*Picea glauca*) Mariana Lake, Alta 8-7H) T. Lumley (ML-01-S4C 8 Jul 1997 / R.S. Currah TCL-1. Pigment: red (Lumley et al., Mycotaxon 74:395-414, 2000) // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
 9503 decayed wood (stage III decay), white spruce log (*Picea glauca*), 15 year post-fire site Slave Lake, Alta T. Lumley (F822-04-S2C) 19 Feb 1999 / R.S. Currah F822-04-S2C. Pigment: brown // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000); brown (Lumley et al., Mycotaxon 74:395-414, 2000).

Coniochaeta mirabile (Udagawa & Tsub.) Dania García, Stchigel & Guarro (syn. *Coniochaetidium mirabile*)

- 5832 (T *Coniochaetidium mirabile*) ex dried salted food, powder of salmon and wakame (*Undaria pinnatifida*) Nagoya-city, Japan H. Tsubouchi Sep 1984 / S.-I. Udagawa NHL 2960. Pigment: pink // osmophilic.

Coniochaeta prunicola Damm & Crous

- 11100 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 / P. Reese HVIHR07A. Molecular systematics: Blast match 100% ITS similarity with *Coniochaeta prunicola*

(*Lecythophora*) GQ154540 (CBS 120875 type) (fide UAMH 2014) // culture conditions: produces infertile ascomata of *Coniochaeta* type.

Coniochaeta saccardoi (Marchal) Cain

- 8481 plant debris submerged in water Lake Mosul, Iraq S.K. Abdullah Apr 1995 / J. Guarro FMR 5514.
 9504 burned wood (stage 1 decay), white spruce log (*Picea glauca*), 2 year post-fire site Mariana Lake, Alta T. Lumley (F953-01-S1D) 19 Feb 1999 / R.S. Currah F953-01-S1D. Pigment: coral // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
 9505 slightly decayed wood (stage 1 decay), aspen log (*Populus tremuloides*) in 2 yr post-fire site Mariana Lake, Alta T. Lumley (F953-03-S1C) 19 Feb 1999 / R.S. Currah F953-03-S1C. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Coniochaeta savoryi (C. Booth) Dania García, Stchigel & Guarro (syn. *Coniochaetidium savoryi*)

- 8600 soil Chambe Basin, Mulanje Mt., Malawi, Africa J.C. Krug (ML-166a) 13 Apr 1991 / J.C. Krug TRTC 51980.
 8632 soil in alpine bushland Kosciusko National Park nr Cabesmurres, NSW, Australia R. Guyer Mar 1988 / J.C. Krug TRTC 51643.

Coniochaeta sp.

- 9506 wood of white spruce (*Picea glauca*) log, stage 1 decay Mariana Lake, Alta T. Lumley (ML-08-S2A) 29 Jan 1999 / R.S. Currah ML-08-S2A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Coniochaeta velutina (Fuckel) Cooke (morph *Lecythophora an. Coniochaeta velutina*)

- 10912 ex gametophytes of *Hylcomium splendens* growing in a *Sphagnum fuscum* dominated bog with *Picea mariana* & *Larix laricina* overstory Moe's Bog, 2km W Hoselaw, Alta. M. Davey (Hs6-GJ10) 2008 / R.S. Currah Hs6-GJ10. Biodiversity: from boreal bryophyte species (Davey ML, Diversity, systematics and ecology of bryophilous fungi, University of Alberta Ph.D. thesis, 2009); saprotic and parasitic interactions with mosses (Davey, M.L., Tsuneda, A., Currah, R.S., Botany 88:258-265, 2010).

Coniochaetidium mirabile see *Coniochaeta mirabile*

Coniochaetidium savoryi see *Coniochaeta savoryi*

Coniophora puteana (Schum.:Fr.) Karsten

- 8261 black spruce (*Picea mariana*) Quebec Nov 1941 / S. Davies FC-096 [=NOF 4]. Biodeteriogen/biodegradation: brown rot // pigment.

Coniosporium epidermidis D.M. Li, de Hoog, Saunte & X.R. Chen

- 9976 sinus, 2 yr Austin, TX 2001 / Texas Dept. of Health BY 301. Mesophilic: restricted growth @ 37C // molecular systematics: Blast match 99% similar to *Coniosporium epidermidis* CBS 120353 T GenBank EU730589 (fide UAMH 2011); ITS 2bp difference between UAMH 9976 & 9979.
 9979 toenail, female 64 yr Houston, TX Sep 2000 / Texas Dept. of Health BY 2377. Mesophilic: restricted growth @ 37C // molecular systematics: ITS 2bp difference between UAMH 9976 & 9979; Blast match 99% similar to *Coniosporium epidermidis* CBS 120353 T GenBank EU730589 (fide UAMH 2011) // culture conditions: produces chains of swollen cells that rarely break apart to form conidia.

Coniosporium uncinatum De Leo, Urzi & de Hoog

4550 brown microcolonies on rock Phoenix, Arizona L. Sigler Mar 1982 /J.T. Staley.

Coniothyrium sp.

8097 outside air ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M250) 21 Dec 1994 /S.P. Abbott (SA-M250).

Connersia rilstonii (C. Booth) Malloch

10834 ex underside of dead standing poplar (*Populus*) Lakehead University Research Station, Black Sturgeon Lake, Ont. D.W. Malloch 09-Sep-1973 /DAOM 145387 [=CBS 537.74 =CBS H-10713]. Culture conditions: no ascospores formed on any medium.

Conocybe sp.

9063 sporocarp ex slender wheat grass plot near tanks R.M. Danielson (RMD 3098) 28 Jul 1980 /R.M. Danielson RMD 3098. Pigment: brown.

Coprinellus domesticus (Bolton) Vilgalys, Hopple & Jacq.

Johnson (syn. *Coprinus domesticus*; morph

Hormographiella verticillata)

4101 poss ex CBS Holland Ginns /R. Watling H/1. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002); produces basidiocarps on OATC.

7698 (T *Hormographiella verticillata*) ex cerebro-spinal fluid catheter Lyon, France M.A. Piens Mar 1991 /J. Guarro FMR 3936 [=IP 2019.91]. Benomyl: sensitive @ 10ppm, resistant @ 2 ppm.

7890 ex air, municipal landfill site Pocznesna, Poland K. Ulfig 21 Jun 1994 /K. Ulfig IEIA 787. Pigment: brown // molecular systematics: RFLP of ribosomal & mitochondrial DNA (Gene et al., Ant. v. Leeuw. 70:49-57, 1996).

Coprinellus micaceus (Bull.) Vilgalys, Hopple & Jacq.

Johnson

3029 sputum UCLA Medical Centre /R.S. Pore [=Orr O-2563 =CBS 122332]. Pigment: yellow // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

4110 Edinburgh Henderson 21 Oct 1969 /R. Watling A/06 mono.

7500 ex basidiospores from fruiting body at base of *Populus tremuloides* (aspen poplar) Spruce Grove, Alta. S.P. Abbott (SA 902) 23 Aug 1993 /S.P. Abbott (SA 902). Pigment: yellow // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

Coprinopsis atramentaria (Bull.) Redhead, Vilgalys &

Moncalvo (syn. *Coprinus atramentarius*)

7496 ex basidiospores from fruiting body at base of *Populus tremuloides* Spruce Grove, Alta. S.P. Abbott (SA 900) 23 Aug 1993 /S.P. Abbott (SA 900). Crystals // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

7497 tissue explant from fruiting body at base of *Populus* sp. Spruce Grove, Alta. S.P. Abbott (SA 901) 23 Aug 1993. Culture conditions: clamp connections.

Coprinopsis cinerea (Schaeff.) Redhead, Vilgalys &

Moncalvo (syn. *Coprinus cinereus*; morph

Hormographiella aspergillata)

4103 beet seed Birmingham Butler Apr 1973 /R. Watling P/04 NAS mono. Extracellular peroxidase (Ikehata K, Buchanan ID, Smith DW, Can J Microbiol 50:57-60, 2004; Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

Biodeteriogen/biodegradation: high levels of extracellular peroxidase effective for removal of aqueous phenol (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002); role of peroxidases in remediation of organopollutants (Husain Q, Husain M, Kulshrestha Y, Critical Reviews in Biotechnology 29:94-119, 2009).

7752 human prepuce lesions Hospital Verge de la Cinta, Tortosa, Spain J. Guarro 11 Oct 1990 /CBS 518.91 [=IMI 349603 =FMR 3786]. Thermotolerant: growth @ 37C // molecular systematics: confirmation of relatedness with *Coprinus cinereus* (Gene et al., Ant. v. Leeuw. 70:49-57, 1996).

7753 (T *Hormographiella aspergillata*) ex human skin lesions Brussels, Belgium J. Guarro 2 Feb 1979 /CBS 519.91 [=FRM 3839 =IMI 349604 =RV 49160]. Thermotolerant: growth @ 37C // molecular systematics: confirmation of relatedness with *Coprinus cinereus* (Gene et al., Ant. v. Leeuw. 70:49-57, 1996).

7907 ex air, municipal landfill site Sosnowiec, Poland K. Ulfig 11 Oct 1993 /K. Ulfig IEIA 511. Extracellular peroxidase (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002). Molecular systematics: RFLP of ribosomal & mitochondrial DNA (Gene et al., Ant. v. Leeuw. 70:49-57, 1996) // biodeteriogen/biodegradation: high levels of extracellular peroxidase effective for removal of aqueous phenol (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

8819 lung tissue ex acute lymphoblastic leukemia patient with fatal lung disease Nijmegen, Netherlands J. Meis 11 Oct 1990 /J. Meis [=CBS 833.96]. Human/animal pathogen: fatal pulmonary infection (Verweij et al., J. Clin. Microbiol. 35:2675-2678, 1997).

9225 sinus Alabama 1997 /CDC 97-034153. Pigment: yellow // human/animal pathogen: sinusitis.

9660 sputum, female 27 yr Alberta Provincial Laboratory for Southern Alberta 1999 /R. Rennie MY 5924 [=CBS 122337]. Benomyl: resistant // cycloheximide: sensitive.

10067 urea amended soil Alberta A. Suzuki 2001 /A. Suzuki 043UA. Biodeteriogen/biodegradation: ammonia fungus (fide A. Suzuki); treatment of methane and swine slurry by biofiltration (Girard M, Viens P, Ramirez AA, Brzezinski R, Buelna G, Heitz M, J Chem Technol Biotechnol 87:697-704, 2012) // culture conditions: clamps, no arthroconidia, sclerotia; produces basidiocarps on OAT // biodiversity: urea amended soil // molecular systematics: Blast match 99% ITS similarity to *Coprinopsis cinerea* (fide UAMH 2011) // application: extracellular peroxidase production; role of peroxidases in remediation of organopollutants (Husain Q, Husain M, Kulshrestha Y, Critical Reviews in Biotechnology 29:94-119, 2009).

Coprinopsis clastophylla (Maniotis) Redhead, Vilgalys &

Moncalvo (syn. *Coprinus clastophyllus*)

4104 original Type isolate ex Maniotis USA Maniotis /R. Watling C/03 mono. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

Coprinopsis kimurae (Hongo & Aoki) Redhead, Vilgalys &

Moncalvo (syn. *Coprinus kimurae*)

4105 Tokorozawa City, Japan Aoki 28 May 1978 /R. Watling 504/05 mono. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

Coprinopsis lagopus (Fr.) Redhead, Vilgalys & Moncalvo

(syn. *Coprinus lagopus*)

7499 ex basidiospores from fruiting body on woodchip trail Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 893) 16 Aug 1993 /S.P. Abbott (SA 893). Extracellular peroxidase

(Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002). Pigment: amber // biodeteriogen/biodegradation: produces extracellular peroxidase effective for removal of aqueous phenol (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

Coprinopsis neophlyctidospora Raut, Fukiharu & A. Suzuki

- 11230 (T *Coprinopsis neophlyctidospora*) ex urea treated litter & soil collected near lodgepole pine (*Pinus contorta* var. *latifolia*) Nojack, Alta. A. Suzuki (9a-1) 28-Jun-2001 /A. Suzuki CHU 2009 [=GenBank AB564409 ITS =CBM FB-37998 voucher]. Biodiversity: ammonia fungus // systematics/taxonomy: description (Raut JK, Suzuki A, Fukiharu T, Shimizu K, et al, Mycotaxon 115:227-238, 2011) // culture conditions: clamp connections, fruits in culture.
- 11404 ex urea treated litter & soil collected near aspen (*Populus tremuloides*) Chipman, Alta A. Suzuki /A. Suzuki CHU 2021 [=CBM-FB33899 voucher]. Biodiversity: ammonia fungus // systematics/taxonomy: description (Raut JK, Suzuki A, Fukiharu T, Shimizu K, et al, Mycotaxon 115:227-238, 2011); basidiocarps produced in culture.
- 11405 ex urea treated litter & soil collected near aspen (*Populus tremuloides*) Chipman, Alta A. Suzuki /A. Suzuki CHU 2022 [=CBM-FB33901 voucher]. Biodiversity: ammonia fungus // systematics/taxonomy: description (Raut JK, Suzuki A, Fukiharu T, Shimizu K, et al, Mycotaxon 115:227-238, 2011); basidiocarps produced in culture but not fully developed.
- 11406 ex urea treated litter & soil collected near aspen (*Populus tremuloides*) Chipman, Alta A. Suzuki /A. Suzuki CHU 2024 [=CBM-FB33896 voucher]. Biodiversity: ammonia fungus // systematics/taxonomy: description (Raut JK, Suzuki A, Fukiharu T, Shimizu K, et al, Mycotaxon 115:227-238, 2011); fruits in culture.
- 11407 ex urea treated litter & soil collected near aspen (*Populus tremuloides*) Chipman, Alta A. Suzuki /A. Suzuki CHU 2025 [=CBM-FB38024 voucher]. Biodiversity: ammonia fungus // systematics/taxonomy: description (Raut JK, Suzuki A, Fukiharu T, Shimizu K, et al, Mycotaxon 115:227-238, 2011); basidiocarps produced in culture.

Coprinopsis psychromorbida (Redhead & Traquair)

Redhead, Vilgalys & Moncalvo

- 6383 alfalfa 1979 /W.A. Ayer LRS-067. Psychrophilic: low temperature basidiomycete; grows @ 25C, 18C & 4C; grows best @ 25C but restricted at 4C // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002); fruits in culture.
- 6387 decaying leaves 1980 /W.A. Ayer LRS-104. Psychrophilic: low temperature basidiomycete; grows @ 25C, 18C & 4C but grows best @ 18C.

Coprinus atramentarius see ***Coprinopsis atramentaria***

Coprinus cinereus see ***Coprinopsis cinerea***

Coprinus clastophyllus see ***Coprinopsis clastophylla***

Coprinus comatus (Mull.:Fries) Pers.

- 7498 ex basidiospores from fruiting body on lawn nr *Populus* sp. Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 934) 10 Sep 1993 /S.P. Abbott (SA 934). Pigment: orange // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).

Coprinus domesticus see ***Coprinellus domesticus***

Coprinus kimurae see ***Coprinopsis kimurae***

Coprinus lagopus see ***Coprinopsis lagopus***

***Coprinus* sp.** (morph *Hormographiella* sp.)

- 358 ex stool Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Extracellular peroxidase (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002). Biodeteriogen/biodegradation: produces extracellular peroxidase effective for removal of aqueous phenol (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 380 specimen Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Extracellular peroxidase (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002). Biodeteriogen/biodegradation: produces extracellular peroxidase effective for removal of aqueous phenol (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 1211 soft rot cedar cooling tower Toronto J.W. Carmichael 1962. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 3261 dung ex rodent Baja, Calif. R. Benjamin 22 Feb 1963 /R.K. Benjamin 1777. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 4568 soil /J. Guarro FFBA 222. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 4569 soil /J. Guarro FFBA 240.
- 5166 sputum pneumonia, female 63 yr New York 1985 /M. Kemna M902-85. Culture conditions: arthroconidia, no clamps.
- 6409 rotting *Abies pinsapo* Spain /A. Martinez IJFM A-536. Culture conditions: clamps, arthroconidia.
- 6478 adult *Dendroctonus ponderosae* beetle Valemount, B.C. Y. Yamaoka 8 Aug 1988 /Y. Yamaoka NOF 1395. Pigment: tan // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 7051 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, pre-defecation Lethbridge, Alta. D. Inglis (MR 1135) Aug 1990. Culture conditions: arthroconidia, no clamps.
- 7251 ex bronchial washing, female 80 yr Alberta 1992 /R. Rennie MY 3333 [=CBS 122336]. Cycloheximide: sensitive // benomyl: resistant // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 7412 outdoor air ex RCS strip Edmonton, Alta. S.P. Abbott (EA-1-1J) 14 Jul 1993 /N. Dhanani 1. Pigment: brown // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 7413 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (EA-2-2G) 14 Jul 1993 /N. Dhanani 2. Pigment: brown, occasional blue-green patches // culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- 7414 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (SSP-3-1N) 10 Aug 1993 /N. Dhanani 3. Pigment: brown.
- 7415 outside air ex RCS strip Edmonton, Alta. S.P. Abbott (SSP-4-1I) 10 Aug 1993 /N. Dhanani 4. Pigment: brown.
- 7421 outdoor air ex RCS strip Edmonton, Alta. S.P. Abbott (EA-1-20) 14 Jul 1993 /N. Dhanani 1.
- 7423 ex lung, marine mammal Texas D. McGough 1992 /M.G. Rinaldi UTHSC 92-724. Cycloheximide: sensitive // benomyl: resistant // pigment: brown, patches of blue-green occasionally.
- 7424 ex sputum, male 53 yr Edmonton, Alta. Misericordia Hospital 21 Jul 1993 /R. Rennie MY 3048A. Cycloheximide: sensitive // benomyl: resistant // pigment: brown.
- 7484 bronchus ex male with lung mass Texas 1993 /M.G. Rinaldi UTHSC 93-1545. Pigment: brown.
- 7485 bronchial wash, female Omaha, NE 1993 /M.G. Rinaldi

- UTHSC 93-2082. Pigment: brown.
- 7520 Rt. finger, 4 yr old female Alberta Provincial Laboratory for Southern Alberta 19 Aug 1993 /R. Rennie MY 4436. Mesophilic: NG @ 37C.
- 7620 sputum ex lung transplant patient San Antonio, Texas /M.G. Rinaldi R-2746. Pigment: brown.
- 7621 ex bronchia of patient in respiratory failure San Antonio, Texas 1994 /M.G. Rinaldi UTHSC 94-1197. Pigment: brown.
- 7622 Rt. lung washing ex patient with Pneumocystis pneumonia San Antonio, Texas /M.G. Rinaldi UTHSC 94-1220. Pigment: brown.
- 7626 ex nasopharyngeal area, male 48 yr; assessment prior to liver transplant Edmonton, Alta. C. Sand 5 Jun 1994 /R. Rennie MY 2558.
- 7630 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (2-1I) 21 Jul 1994.
- 7631 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (1-1P) 21 Jul 1994.
- 7643 ex wrist, female San Antonio, Tx D. McGough 15 Jul 1994 /M.G. Rinaldi UTHSC 94-1430.
- 7644 ex tracheal, female San Antonio, Tx D. McGough 20 Jun 1994 /M.G. Rinaldi UTHSC 94-1219. Pigment: brown.
- 7769 ex sputum, male 79 yr Edmonton, Alta. Stirrat Labs 4 Aug 1994 /R. Rennie MY 3370.
- 7923 ex vagina, female 21 yr Saskatchewan H. Congly (527M/95) 7 Apr 1995 /R. Rennie MY 1026.
- 7944 ex Rt lower lobe lung tissue, bone marrow transplant recipient, male Houston, TX /M.G. Rinaldi UTHSC 95-528.
- 8036 ex respiratory system, marine mammal Sea World of Texas, San Antonio, TX DVM Dalton 5 May 1995 /M.G. Rinaldi UTHSC 95-842.
- 8064 ex sputum, male 72 yr Alberta Bentley Clinic 31 May 1995 /R. Rennie MY 1862.
- 8199 bronchial wash, female 50 yr, DE - Edmonton, Alta. C. Sand 22 Jun 1995 /R. Rennie MY 2136. Benomyl: resistant // cycloheximide: sensitive.
- 8200 BAL fluid ex RML, male 64 yr, DE- Edmonton, Alta. C. Sand 06-Jul-95 /R. Rennie MY 2278. Cycloheximide: sensitive // benomyl: resistant @ 2ppm.
- 8201 sputum, male 15 yr Alberta Provincial Laboratory for Southern Alberta July 1995 /R. Rennie MY 2359. Benomyl: resistant // cycloheximide: sensitive.
- 8299 basidiospore germination ex fruiting body in basement bathroom Edmonton, Alta S.P. Abbott 19-May-1995.
- 8588 bronchial wash, male 23 yr, following heart-lung transplant; calcofluor - Edmonton, Alta. July 1996 /R. Rennie MY 2874. Benomyl: tolerant // pigment: amber.
- 8589 bronchial wash, female 85 yr; DE - Edmonton, Alta. July 1996 /R. Rennie MY 2878. Benomyl: tolerant // pigment: amber.
- 8590 sputum, male 50 yr; calcofluor - Edmonton, Alta. July 1996 /R. Rennie MY 2923. Benomyl: tolerant.
- 8773 bronchial secretions, female 49 yr Quebec G. St-Germain 1996 /G. St-Germain MY 7881.
- 10065 urea amended soil Alberta A. Suzuki 2001 /A. Suzuki 074UA. Culture conditions: fruits in culture; clamps, no arthroconidia // biodeteriogen/biodegradation: ammonia fungus (fide A. Suzuki) // biodiversity: urea amended soil // application: extracellular peroxidase production.
- 10066 urea amended soil Alberta A. Suzuki 2001 /A. Suzuki 018UA. Biodeteriogen/biodegradation: ammonia fungus (fide A. Suzuki) // culture conditions: fruits in culture; clamps, no arthroconidia // biodiversity: urea amended soil // application: extracellular peroxidase production.
- 10486 urea amended soil nr Elk Island Park, Alta. A. Suzuki 31-Aug-2004 /A. Suzuki 204. Culture conditions: fruiting bodies produced on PDA and OAT; clamps, no arthroconidia // biodiversity: urea amended soil // biodeteriogen/biodegradation: ammonia fungus.
- 10504 urea amended soil nr Elk island Park, Alta. A. Suzuki 31-Aug-2004 /A. Suzuki 114. Culture conditions: fruiting bodies produced on pda; clamps, no arthroconidia // biodiversity: urea amended soil // biodeteriogen/biodegradation: ammonia fungus.
- 10505 urea amended soil nr Elk Island Park, Alta. A. Suzuki 17-Sep-2004 /A. Suzuki 3003. Culture conditions: clamps, arthroconidia // crystals // biodiversity: ammonia fungus // biodeteriogen/biodegradation: ammonia fungus.
- Coprinus sterquilinus* Fries**
4106 Neuchatel, Switzerland Delamadeleine /R. Watling C/01 mono?.
- 4155 Braunton Burrows, Soms H. Simpson 20 Jun 1972 /R. Kemp B/01. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- Coprinus velox* Godey**
4137 Braunton Burrows Webster 27 Sep 1974 /R. Watling KCC 243/03 mono. Culture conditions: no extracellular peroxidase produced in liquid culture (Ikehata & Buchanan, Environmental Technology 23:1355-1367, 2002).
- Cordana pauciseptata* Preuss**
1344 contaminant West Virginia H.L. Barnett (604) 1951 /DAOM 40409 [=IMI 96730].
- 9422 well rotted wood of jack pine (*Pinus banksiana*) North Buck Lake near Lac La Biche, Alta S.P. Abbott (SA-M105) 6 Aug 1996 /S.P. Abbott (SA-M105).
- Cordyceps bassiana* see ***Beauveria bassiana***
- Cordyceps memorabilis* see ***Paecilomyces farinosus***
- Cordyceps ophioglossoides* (Ehrhart:Fries) Link**
7751 ex *Elaphomyces granulatus* W. Loeffler /ATCC 36865. Ophiocordin (Arch. Microbiol. 113:121-130, 1977). Pigment: yellow.
- Cordyceps owariensis* f. *viridescens* see ***Nomuraea owariensis***
- Cordyceps subsessilis* see ***Tolypocladium inflatum***
- Coremiella cubispora* (Berk. & Curt.)**
1513 ex *Picea abies* Sjaelland, Horsholm, Skordtrikt, Denmark E.W. Mason 1949 /IMI 36938 [=NCMH 354].
- 3793 stump of *Lindera umbellata* Nagano Pref., Japan M. Icyinoe 1966 /K. Tubaki IFO 8862 [=NHL 4583]. Pigment: dark brown on CER.
- 6595 peritoneal fluid, female Seattle, WA /M.G. Rinaldi UTHSC 90-77. Odor: musty.
- Coriopsis gallica* (Fries) Ryvarden (syn. *Trametes hispida*, *Trametes peckii*, *Trametes stuppeus*, *Funalia gallica*)**
8259 Alberta L.L. Kennedy (T-520) /S. Davies FC-046. Biodeteriogen/biodegradation: white rot.
- 8260 aspen (*Populus tremuloides*) Alberta R.J. Bouchier 30-Jul-1954 /S. Davies FC-161 [=NOF 138 =ATCC MYA 265]. Biodeteriogen/biodegradation: white rot // application: lignolytic enzymes (Pickard et al., Can. J. Microbiol. 45:627-631, 1999); metabolism of polycyclic aromatic hydrocarbons & oxidation by laccase (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999); enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999); laccase activity (Tinoco, Pickard & Vazquez-Duhalt, Lett. App. Microbiol. 32:331-335, 2001; Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhalt R, Chemosphere 77:687-692, 2009; Torres-Duarte C et al 2009;

Hildén K, Hakala TK, Lundell T. *Biotechnology Letters* 31:1117-1128, 2009); pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhalt R, *Chemosphere* 77:687-692, 2009); direct electron transfer of laccase to improve enzymatic biofuel cell (Martinez-Ortiz J, Flores R, Vazquez-Duhalt R, *Biosens Bioelectron* 26(5):2626-2631, 2011) // culture conditions: cereal bran for laccase production (Pickard et al., *Can. J. Microbiol.* 45:627-631, 1999).

Coriolus versicolor see *Trametes versicolor*

Coriolus zonatus see *Trametes zonatus*

Cornucopiella fusispora (P. Karsten) Seifert
6135 decorticated wood Merrickville, Ont. K. Seifert Oct 1987 /K. Seifert FRT745A.

Cornuvesica falcata (E.F. Wright & Cain) C.D. Viljoen, M.J. Wingfield & K. Jacobs (syn. *Ceratocystis falcata*, *Ceratocystiopsis falcata*; morph *Chalara an. Cornuvesica falcata*)

9701 larch (*Larix* sp.) Compartment 5, Waitapu, Kaingaroa State Forest, New Zealand J. & S. Reid (82-23) 8 May 1982 /J. Reid UM 487. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988); notes on *Cornuvesica falcata* (Hausner, Eýjolfssdóttir & Reid, *Can. J. Bot.* 81:40-48, 2003) // biodeteriogen/biodegradation: does not cause staining of any wood tested (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988) // culture conditions: produced fertile ascomata on CERC.

9702 Monterey pine (*Pinus radiata*) Compartment 1212, Taupo, Kaingaroa State Forest, NZ J. & B. Reid (88-305) 17 Feb 1988 /J. Reid UM 792 [=GenBank L05963 =GenBank L05965 =GenBank AY271797 =WIN(M) 792]. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, *Mycol. Res.* 97:625-633, 1993); relationships between the genera *Ceratocystis* & *Ophiostoma* (Hausner, Reid & Klassen, *Can. J. Bot.* 71:52-63, 1993); relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, *Can. J. Bot.* 78:903-916, 2000); phylogeny of *Cornuvesica*, *Sphaeronaemella* and *Gabarnaudia* (Hausner G, Reid J, *Can J Bot* 82:752-762, 2004) // cycloheximide: resistant (Hausner, Reid & Klassen, *Mycol. Res.* 97:625-633, 1993) // systematics/taxonomy: notes on *Cornuvesica falcata* (Hausner, Eýjolfssdóttir & Reid, *Can. J. Bot* 81:40-48, 2003) // culture conditions: produced fertile ascomata on CERC.

9703 Monterey pine (*Pinus radiata*) Compartment 1212, Taupo, Kaingaroa State Forest, New Zealand J. & B. Reid (88-306) 17 Feb 1988 /J. Reid UM 793. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, *Mycol. Res.* 97:625-633, 1993); relationships between the genera *Ceratocystis* & *Ophiostoma* (Hausner, Reid & Klassen, *Can. J. Bot.* 71:52-63, 1993) // cycloheximide: resistant (Hausner, Reid & Klassen, *Mycol. Res.* 97:625-633, 1993) // culture conditions: produced fertile ascomata on CERC.

Corollospora intermedia I. Schmidt

10726 ex decomposing keratinous skate (Raja) egg casing in moist chamber New Brunswick C (D. Malloch) I (M. Saleh) /J. Scott MSSEC-004. Culture conditions: no ascomata produced.

Coronatomyces cubensis D. García, Stchigel & Guarro
9953 (T *Coronatomyces cubensis*) forest soil Playa Larga, Cienaga de Zapata, Cuba (C) coll. R.F. Castañeda J. Guarro 07 Dec 1995 /J. Guarro FMR 7132 [=GenBank AJ458184 ITS =CBS

109268 =IMI 385316 holotype =FMR 7132 isotype]. Systematics/taxonomy: description (García D, Stchigel AM, Cano J, Guarro J, *Stud Mycol* 50:143-148, 2004).

Corticium centrifugum (Lev.) Bres.

8184 *Pinus contorta* (lodgepole pine) Alberta M.K. Nobles 18 Sep 1955 /S. Davies FC-093 [=NOF 113]. Biodeteriogen/biodegradation: white rot // pigment: blue.

Corticium expallens see *Crustomyces expallens*

Corticium fuscostratum see *Leptosporomyces fuscostratus*

Corticium galactinum see *Scytinostroma galactinum*

Corticium vellereum see *Hypochnicium vellereum*

Cortinarius amoenolens Henry ex Orton

5534 mixed *Picea mariana*, *P. glauca* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /see . Mycorrhizae.

5535 mixed *Picea glauca*, *P. mariana*, *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.

5536 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.

Cortinarius anomalus (Fr. ex Fr.) Fr.

5929 caespitose to gregarious in moss under *Abies balsamea* & *Acer pensylvanicum* Chamcook, St. Andrews Township, Charlotte Co. N.B. D. Malloch 3 Sep 1985 /L. Hutchison LH-128-85 [=TRTC LH-128-85]. Mycorrhizae.

Cortinarius brunneus Fr.

5793 ex moss carpet under *Picea mariana* Dunmore Lake, Timiskaming District, Ont. D.G. Lahaie (80110 A) 18 Aug 1980 /L. Hutchison DM 154 [=TRTC DM 154]. Pigment: yellow // mycorrhizae.

Cortinarius fraudulentus Britz.

5474 mixed *Picea glauca*, *P. mariana*, *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.

Cortinarius nigrocupidatus

5855 *Picea glauca* Rocky-Clearwater Forest (C) A. Smreciu 16 Jul 1987 / (C) A. Smreciu. Mycorrhizae.

Cortinarius sp.

5561 mixed *Picea mariana*, *P. glauca*, *Populus* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /: . Mycorrhizae.

5581 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /: . Mycorrhizae.

Cortinarius subpurpurascens Fr.

5940 gregarious under *Populus tremuloides* & *Pinus banksiana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Malloch 8 Sep 1982 /L. Hutchison DM 156 [=TRTC DM 156]. Mycorrhizae: growth on different nitrogen sources (Lilleskov EA, Hobbie EA, Fahey TJ, *New Phytologist* 154:219-231, 2002).

Corynascus heterothallicus see *Myceliophthora thermophila*

Corynascus sepedonium (Emmons) von Arx (morph *Myceliophthora an. Corynascus sepedonium*)

1106 sputum India /G.F. Orr UCLAB 409. Cellulolytic // pigment: yellow-brown.

- 1154 garden soil Edmonton, Alta. J.W. Carmichael 13 Sep 1961 /J.W. Carmichael.
- 1634 human clinical material Atlanta, GA 7 Dec 1951 /CDC A-0563. Cellulolytic // pigment: yellow-brown.
- 1635 Punjab soil Pimpri, India Dr. Thirnalachar /CDC B-0295. Cellulolytic // pigment: yellow-brown.
- 2297 C.C. Campbell Y-1 [=NIH B1540]. Pigment: yellow-brown.
- 2301 rope Guadalcanal /C.C. Campbell Y-4 [=NIH 5107]. Cellulolytic.
- 2302 sputum /C.C. Campbell Y-15 [=NIH 5115]. Cellulolytic.
- 2303 soil Keys West, Florida /C.C. Campbell Y-16 [=NIH 5116].
- 2307 air filter Washington, D.C. /C.C. Campbell Y-21 [=NIH 5127]. Cellulolytic // pigment: yellow-brown.
- 2309 India /C.C. Campbell Y-23 [=NIH 5131]. Cellulolytic // pigment: yellow-brown.
- 5004 Indonesian fish North Ryde, Australia J. Pitt /J.I. Pitt FRR 2819. Thermotolerant // cellulolytic.
- 5738 soil of potted *Ficus benjamina* Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell RCS W 1661.
- 6033 ex stool Lanark, Ont. 8 Jan 1988 /R.C. Summerbell FR 58.88. Pigment: yellow-brown.
- 7877 ex soil, municipal landfill site Sosnowiec, Poland K. Ulfig 26 Apr 1993 /K. Ulfig IEIA 182. Pigment: orange.
- 8388 soil Moara, Australia J. Guarro Mar 1994 /J. Guarro FMR 5481. Pigment: orange.
- 10387 sputum, female 65 yr with deep cough Alta. 12-03 /R. Rennie MY 7646. Thermotolerant: grows @ 35 C.
- 10713 moldy paper liner of wooden crate imported from India UAMH L. Sigler 12-Dec-2005.
- Corynascus thermophilus*** (Fergus & Sinden) von Klopotek (syn. *Thielavia thermophila*; morph *Myceliophthora fergusii*)
- 2982 coal spoil tips England H.C. Evans /H.C. Evans ADD IX + mates with UAMH 9031, 5791. Thermophilic: range 25-54C // pigment: red // systematics/taxonomy: mating studies (Sigler et al., Mycotaxon 68:185-192, 1998).
- 2984 coal spoil tips England H.C. Evans /H.C. Evans DVD III - mates with UAMH 8054. Thermotolerant: range 25-54C // systematics/taxonomy: mating studies (Sigler et al., Mycotaxon 68:185-192, 1998).
- 5791 decomposing jute fibres Banda U.P. India R. Shukla /R. Shukla - mates with UAMH 9031, 6111, 8054. Thermophilic // pigment: red // cellulolytic // systematics/taxonomy: mating studies (Sigler et al., Mycotaxon 68:185-192, 1998).
- 6111 soil India /R. Maheshwari IIS-278 + mates with UAMH 9031, 5791. Thermophilic // systematics/taxonomy: mating studies (Sigler et al., Mycotaxon 68:185-192, 1998).
- 8054 soil Jim Corbet National Park, Nainital, India K.R. Aneja Apr 1994 /K.R. Aneja + mates with UAMH 9031, 5791, 2984. Benomyl: sensitive // cycloheximide: sensitive // thermophilic // cellulolytic // pigment: red // systematics/taxonomy: mating studies (Sigler et al., Mycotaxon 68:185-192, 1998).
- 9030 (T *Corynascus thermophilus*) mushroom compost Pennsylvania C.L. Fergus (R46W1) /ATCC 22066 [=CBS 405.69 =GenBank JQ067905 SSU =GenBank JF412005 ITS =GenBank HQ871731 EF1a =GenBank HQ871814 RBP2 =GenBank HQ871793 ITS] + mating type 9031 mates with UAMH 5791. Thermophilic: optimum temperature 45C // systematics/taxonomy: mating studies (Sigler et al., Mycotaxon 68:185-192, 1998) // molecular systematics: phylogeny of thermophilic fungi (Morgenstern I, Powlowski J, Ishmael N, Darmond C et al, Fungal Biology 116:489-502, 2012).
- 9031 (T *Corynascus thermophilus*) mushroom compost Pennsylvania C.L. Fergus (R46W2) /ATCC 22067 [=CBS 406.69] - mating type 9030 mates with UAMH 2982, 6111, 8054. Thermophilic: optimum temperature 45C.
- 9160 (T *Chrysosporium fermentotritici*) wheat silage Tierkcoof, near Piketberg, South Africa K. Matshushima 5 Sep 1995 /K. Matshushima MFC-5K411 + mates with UAMH 9031, 5791. Thermophilic: opt. 37C (Matshushima & Matshushima, *Franti Mycologica* II p 32, 1996) // systematics/taxonomy: mating studies (Sigler et al., Mycotaxon 68:185-192, 1998).
- Corynascus verrucosus*** Stchigel, Cano & Guarro (morph *Myceliophthora an. Corynascus verrucosus*)
- 8833 (T *Corynascus verrucosus* isotype) soil Quilmes, Buenos Aires province, Argentina A.M. Stchigel Aug 1996 /J. Guarro FMR 5904 [=IMI 378522 holotype =GenBank AJ224203]. Systematics/taxonomy: description & key (Stchigel, Sagues, Cano & Guarro, Mycol. Res. 104:79-887, 2000) // thermophilic: grows well @ 42C.
- Coryne an. Ascocoryne sarcooides*** see ***Ascocoryne sarcooides***
- Coryne* sp.**
- 6759 CCA-treated Douglas Fir pole (in storage) Binghamton, NY /C.J.K. Wang ED-83 [=ATCC 66827].
- 9231 heartwood tissue ex freshly exposed longitudinal cut in felled *Tsuga heterophylla* log, about 90 yr, after 4.5 mo storage in forest at felling site Washlawis Creek at Rupert Inlet, west of Port McNeill, BC J. Clark 1996 /J. Clark X70K1. Benomyl: sensitive.
- 9232 heartwood tissue ex freshly exposed longitudinal cut in felled *Tsuga heterophylla* log, about 90 yr, Washlawis Creek at Rupert Inlet, west of Port McNeill, BC J. Clark 1996 /J. Clark X37E1. Benomyl: sensitive.
- 10129 gut, coffee berry borer (*Hypothenemus hampei*) Monteperla, Chiapas, Mexico J. Perez 13 Jul 2001 /F. Vega MP-TD R7-5. Culture conditions: pycnidia on cereal agar; heavily sporulating.
- 10134 gut, coffee berry borer (*Hypothenemus hampei*) Monteperla, Union Juarez, Chiapas, Mexico J. Perez 13-7-01 /F. Vega MP-TD R36-14.
- Corynespora cassicola*** (Berk. & Curt.) Wei
- 3480 ex *Cucumis sativus* /R. Hudson [=CBS 161.60]. Culture conditions: some kind of culture conditions (Onesirosan et al, Mycopathologia 55(2):121-123, 1975).
- 11096 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB02. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // pigment: red-brown // molecular systematics: BLAST match 100% ITS similarity to *Corynespora cassicola* (fide UAMH 2010).
- 11120 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB03. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // pigment: red-brown.
- Corynespora smithii*** (Berk. & Br.) Ellis
- 1613 wood & bark ex *Fagus sylvatica* Ranmore Common, Surrey Ellis 1946 /IMI 5649b.
- Corynespora ureticae*** Munjal & Gill
- 9353 confirmed subcutaneous infection in an African male /R.C. Summerbell BB 1268. Pigment: dark brown.
- Cosmospora consors*** see ***Volutella minima***
- Cosmospora vilior*** see ***Acremonium berkeleyanum***
- Creopus gelatinosus*** (Tode ex Fries) Link
- 26 origin unknown /see .
- 31 origin unknown /see .
- 4783 mixed culture *Creopus gelatinosus* with *Cladobotryum* hyperparasite UAMH L. Linarez May 1983 /L. Linarez.

Culture conditions // hyperparasite: with *Cladobotryum* sp..

Cristaspora arxii Fort & Guarro

6051 (T) ex forest soil Torrelles de Llobregat, Catalunya, Spain Dec 1982 /J. Guarro FMR 416 [=ATCC 52744 =CBS 525.83].

Crustomyces expallens (Bres.) Hjort. (syn. *Corticium expallens*, *Phlebia expallens*)

8185 *Populus tremuloides* (aspen poplar) Alberta M.K. Nobles Jun 1958 /S. Davies FC-101 [=NOF 493].
Biodeteriogen/biodegradation: white rot.

Cryptendoxyla hypophloia Malloch & Cain (morph *Chalara an. Cryptendoxyla hypophloia*)

7049 hand, male 33 yr Ottawa, Ont. Feb 1991 /R.C. Summerbell FR 552.

7390 bronchial brush, lung, male 7 months /CDC B-5390. Pigment: brown.

7391 lung tissue, male /CDC B-5391. Pigment: brown.

8816 nails of male, DE- Ottawa, ON 1 Mar 1995 /R.C. Summerbell FR 58.

10412 ex hairy fungus beetle (*Mycetophagus californicus*) Elk Island National Park, Amisk trail, Alta. M. Greif (EIAW 199) 4-7-01 /R.S. Currah EIAW 199.

10413 ex European ground beetle adjacent to Elk Island National Park, Alta. M. Greif (B-53) 19-6-02 /R.S. Currah B-53.

10414 ex springtail adjacent to Elk Island National Park, Alta. M. Greif (W-223) 9-7-03 /R.S. Currah W-223.

10817 ex damp particle board in crawl space nr Chelmsford, 18 km WNW of Sudbury, ON T. Ingram 19-Oct-2006 /J. Scott.
Culture conditions: mass ascospore isolate, fruits in culture.

Cryptococcus aerius (Saito) Nannizzi (syn. *Cryptococcus albidus* v. *aerius*)

2664 as *Cryptococcus albidus* v. *aerius* /D. Westlake [=PRL 389-63].

Cryptococcus albidus (Saito) Skinner

493 wrist pus swab Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Culture conditions: API profile # 2706231.

1928 crop of pigeon, Prov. Vet. Lab. Edmonton, Alta. J.W. Carmichael 3 Feb 1964 /J.W. Carmichael. Culture conditions: API profile # 2702231.

4198 refrigerator tray Edmonton, Alta. A. Sekhon /A.S. Sekhon PLM 700.

6629 quality control strain for MicroScan Yeast ID panel /H. Congly ATCC 66030 [=ATCC 66030]. Culture conditions: API profile # 2706273.

7076 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 696) Aug 1990 /D. Inglis (MR 696). Application: API profile # 2722771 // mesophilic: NG @ 35C.

Cryptococcus albidus v. *aerius* see ***Cryptococcus aerius***

Cryptococcus albidus v. *diffluens* see ***Cryptococcus diffluens***

Cryptococcus albidus* var. *kuetzingii (Fell & Phaff)

Fonseca, Scorzetti & Fell (syn. *Cryptococcus kuetsingii*)
2958 (T *Cryptococcus kuetsingii*) Medlar fruit (*Mespilus* sp.) Italy G. Protti 1953 /J.W. Fell ML 165 [=CBS 1926 =ATCC 22025 =GenBank AF137602]. Molecular systematics: diversity in *Cryptococcus albidus* (Fonseca, Scorzetti & Fell, Can. J. Microbiol. 46:7-27, 2000).

Cryptococcus bacillisporus see ***Cryptococcus gattii***

Cryptococcus diffluens (Zach) Lodder & Kreger-van Rij
(syn. *Cryptococcus albidus* v. *diffluens*)

2661 as *Cryptococcus diffluens* v. *diffluens* /D. Westlake [=PRL 4R5].

Cryptococcus flavescens (Saito) C.E. Skinner

6337 shipping door, brewery Calgary, Alta. L. Sigler 6 Feb 1989 /J. Schulz 2382-11 [=PYCC 6021 =Genbank HQ681900 D1D2 =Genbank HQ681901 ITS]. Culture conditions: API profile # 2773673 // molecular systematics: ITS and D1D2 sequence match to match to *Cryptococcus flavescens* T CBS 942 (AB035042/AB035046). (fide Dr. Alvaro Fonseca, Portuguese Yeast Culture Collection); Concordia Univ Fungal Genomics Project (<https://fungalgenomics.concordia.ca/feadb/search.php>); <https://fungalgenomics.concordia.ca/home/index.php>; <https://fungalgenomics.concordia.ca/fungi/Clau.php>); identification of fungal enzymes for industrial and environmental applications.

Cryptococcus gattii (Vanbreus. & Takashio) Kwon-Chung & Boekhout (syn. *Cryptococcus neoformans* var. *gattii*, *Cryptococcus bacillisporus*; morph *Filobasidiella bacillispora*)

4043 isolated from CSF, bronchial washings, sputum, urine Edmonton, Alta. A. Sekhon 1977 /A.S. Sekhon PLM 587

[=McGill R241 =PLPH m, 72]. Serology: serotype B.

4128 A.S. Sekhon PLM 634 [=CDC 312] + mating type alpha. Serology: serotype C (fide A. Sekhon).

4129 A.S. Sekhon PLM 635 [=CDC 191] - mating type a. Serology: serotype C (fide A. Sekhon).

4130 A.S. Sekhon PLM 636 [=CDC 444] + mating type alpha. Serology: serotype B (fide A. Sekhon).

4131 A.S. Sekhon PLM 637 [=CDC 409] + mating type alpha. Serology: serotype B (fide A. Sekhon).

4926 I. Salkin 444. Serology: serotype B (fide I. Salkin).

4927 I. Salkin 298. Serology: serotype C (fide I. Salkin).

9837 Atlantic bottlenose dolphin (*Tursiops truncatus*), male 19 yr with fatal infection Space & Naval Warfare Systems Center, San Diego, CA 2000 /CDC B-6253 [=CDC B-6253 =ATCC MYA-867 =GenBank AY973118 (URA5) =GenBank AY972006 (FTR1) =GenBank AY973076 (LAC) =GenBank AY971964 (CAPI)]. Serology: serotype B // human/animal pathogen: first culture proven case of cryptococcosis fatal infection in Atlantic bottlenose dolphin caused by *Cryptococcus neoformans* v. *gattii* (Miller WG, Padhye AA, van Bonn W, et al., J. Clin. Microbiol. 40:721-724, 2002) // molecular systematics: phylogenetic relationships in *Cryptococcus gattii* (Kidd SE, Guo H, Bartlett KH, Kronstad JW, Xu J, Eukaryotic Cell 4:1629-1638, 2005).

10071 lung fine needle aspirate, male 51 yr Victoria, BC P. Kibsey 2001 /P. Kibsey 40234.

10072 bronchial wash, male 65 yr Victoria, BC P. Kibsey 2001 /P. Kibsey 29804.

10083 bronchial wash, male 69 yr Victoria, BC P. Kibsey (52466) 2001 /R. Rennie MY 7035.

10084 spinal fluid, female 48 yr Victoria, BC P. Kibsey (66067) 2001 /R. Rennie MY 7038.

10085 BAL, male 60 yr Victoria, BC P. Kibsey (86798) 2001 /R. Rennie MY 7039.

10086 bronchial wash, male 76 yr Victoria, BC P. Kibsey (53383) 2001 /R. Rennie MY 7040.

10087 bronchial wash, male 45 yr Victoria, BC P. Kibsey (14120) 2001 /R. Rennie MY 7041.

10088 bronchial wash, male 51 yr Victoria, BC P. Kibsey (84562) 2001 /R. Rennie MY 7042.

10089 spinal fluid, male 57 yr Victoria, BC P. Kibsey (26132) 2001 /R. Rennie MY 7518.

Cryptococcus kuetsingii see ***Cryptococcus albidus* var.**

kuetzingii

Cryptococcus lactativorus see *Sporopachydermia lactativora*

Cryptococcus laurentii (Kufferath) Skinner

- 371 dried specimen *Tillandsia* sp. Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Culture conditions: API profile # 2775733.
- 619 fish with Cladosporium disease Calgary hatchery, Alta. J.W. Carmichael 1 Dec 1959 /J.W. Carmichael. Application: API profile # 2772773 // mesophilic: NG @ 35C.
- 2902 throat swab Edmonton, Alta. J.W. Carmichael Mar 1968 /J.W. Carmichael. Culture conditions: API profile # 2775773.
- 7077 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 741) Aug 1990. Application: API Profile # 2767773.
- 7170 indoor air of office ex RCS strip Fort McMurray, Alta. S.P. Abbott (SA-M) 23 Apr 1992 /S.P. Abbott (SA-M).
- 10406 (T *Cryptococcus laurentii*) palm wine, malaffou Congo H. Kufferath /ATCC 18803 [=CBS 139 =IFO 0609 =MUCL 30398 =NRRL Y-2536]. Application: Preceptrol culture, quality control strain for API identification.
- 10589 R. Rennie ATCC 76483 [=ATCC 76483 =YBC 505].

Cryptococcus neoformans (Sanfelice) Vuillemin (morph *Filobasidiella neoformans*)

- 37 Dept. Health Ottawa / . Culture conditions: teaching strain. 38 origin unknown; as *Torula histolytica*.
- 616 skin lesion, mouse Edmonton, Alta. J.W. Carmichael /J.W. Carmichael [=McGill R240]. Serology: serotype A (fide L. Kapica & K.J. Kwon-Chung).
- 2995 soil 1952 /CDC A-0593 [=Emmons 3720].
- 2996 pigeon droppings Washington, D.C. /CDC B-0358 [=Emmons NDC 2-49].
- 2997 drainage from human hand 1963 /CDC B-0546.
- 4057 trans tracheal fluid, male 11 yr; var. *neoformans* Edmonton, Alta. A. Sekhon Nov 1977 /A.S. Sekhon PLM 624 [=McGill R242 =PLPH m, 11]. Serology: serotype D (fide L. Kapica & K.J. Kwon-Chung).
- 4124 var. *grubii* /A.S. Sekhon PLM 630 [=CDC 38-1] - mating type a. Serology: serotype A (fide A. Sekhon).
- 4125 var. *grubii* /A.S. Sekhon PLM 631 [=CDC 37-1] + mating type alpha. Serology: serotype A (fide A. Sekhon).
- 4126 var. *neoformans* /A.S. Sekhon PLM 632 [=CDC 12] +. Serology: serotype D.
- 4127 var. *neoformans* /A.S. Sekhon PLM 633 [=CDC 52] + mating type alpha. Serology: serotype D (fide A. Sekhon).
- 4925 var. *grubii* /I. Salkin 372. Serology: serotype A (fide I. Salkin).
- 4928 var. *neoformans* /I. Salkin 430. Serology: serotype D (fide I. Salkin).
- 5552 meningitis, male with AIDS who had lived in California Edmonton, Alta. P. Kibsey 1986 /P. Kibsey BC7935. Culture conditions: API profile # 2557131.
- 6630 quality control strain for MicroScan Yeast ID panel /H. Congly ATCC 66031 [=ATCC 66031]. Culture conditions: API profile # 2757131.
- 7616 ex pus from cranial fluid, male 49 yr, originally from Hong Kong, with chronic active hepatitis; DE+ Edmonton, Alta. C. Sand 11 Apr 1994 /R. Rennie MY 1589. Culture conditions: confirmed by Vitek physiological profile (fide submitting laboratory) // serology: latex agglutination +.
- 10590 Vitek strain /R. Rennie ATCC 76484 [=ATCC 76484 =YBC 81].

Cryptococcus neoformans var. *gattii* see *Cryptococcus gattii*

Cryptococcus skinneri Phaff & do Carmo-Sousa

- 7439 *Populus tremuloides* Hinton, Alta. C. Myrholm (BG-90-4-5c) 28 Sep 1990 /L. Hutchison NOF 1590. Culture conditions: physiological reactions (Hutchison & Hiratsuka, *Mycologia* 86:386-391, 1994).

Cryptococcus uniguttulatus (Zach) Phaff & Fell (morph *Filobasidium uniguttulatum*)

- 6631 quality control strain for MicroScan Yeast ID panel /H. Congly ATCC 66033 [=ATCC 66033].

Cryptosphaeria populina see *Libertella an.****Cryptosphaeria populina******Cryptosporiopsis brunnea*** Sigler

- 10106 (T *Cryptosporiopsis brunnea*) ex root of *Gaultheria shallon* N Vancouver Island, BC T.R. Allen 05-98 /T.R. Allen UBCtra 288 [=GenBank AF149074 =CBS 120291]. Mycorrhizae: ericoid endophyte, not mycorrhizal in resynthesis (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002) // molecular systematics: phylogeny of ericoid mycorrhizal fungi (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002); DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, *New Phytologist* 160:255-272, 2003); clustered with low support to *Cryptosporiopsis radicola* (Verkeley et al., *Mycol. Res.* 107:689-698, 2003); root associated *Cryptosporiopsis* species (Sigler L, Allen TR, Lim SR, Berch S, Berbee M, *Stud. Mycol.* 53:53-62, 2005) // culture conditions: morphology of conidiomata by SEM (Wang W, *Mycology* 2:237-247, 2011).

Cryptosporiopsis ericae Sigler

- 9445 (T *Cryptosporiopsis ericae*) ex roots of *Vaccinium membranaceum* Priest Lake, Idaho B. McCracken (PL3BciiE) /B. McCracken 22 [=CBS 120290 =GenBank AY540126]. Mycorrhizae: endophyte of ericaceous plants // pigment: brown // molecular systematics: root associated *Cryptosporiopsis* species (Sigler L, Allen TR, Lim SR, Berch S, Berbee M, *Stud. Mycol.* 53:53-62, 2005) // culture conditions: morphology of conidiomata by SEM (Wang W, *Mycology* 2:237-247, 2011).
- 10348 roots of *salal* (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Oct. 1998 /M.L. Berbee UBCtra 1129 [=GenBank AY442322]. Pigment: tan on PDA // molecular systematics: root associated *Cryptosporiopsis* species (Sigler L, Allen TR, Lim SR, Berch S, Berbee M, *Stud. Mycol.* 53:53-62, 2005) // culture conditions: non sporulating on deposit; no conidia obtained.
- 10349 roots of *Vaccinium ovalifolium* N. Vancouver Is., B.C. T.R. Allen Oct. 1998 /M.L. Berbee UBCtra 1204 [=GenBank AY442321]. Pigment: tan on PDA // molecular systematics: root associated *Cryptosporiopsis* species (Sigler L, Allen TR, Lim SR, Berch S, Berbee M, *Stud. Mycol.* 53:53-62, 2005).
- 10350 roots of *Vaccinium ovalifolium* N. Vancouver Is., B.C. T.R. Allen Oct. 1998 /M.L. Berbee UBCtra 1234 [= GenBank AY442323 SSU]. Pigment: tan on PDA // molecular systematics: root associated *Cryptosporiopsis* species (Sigler L, Allen TR, Lim SR, Berch S, Berbee M, *Stud. Mycol.* 53:53-62, 2005) // culture conditions: non sporulating on deposit; no conidia obtained.
- 10419 culture ex root (56) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCtra 374 [=GenBank AY853167 =CBS 120292]. Culture conditions: produces conidia on PDA // pigment: tan on PDA // molecular systematics: BLAST match 100% with *Cryptosporiopsis ericae*; root associated *Cryptosporiopsis* species (Sigler L, Allen TR, Lim SR, Berch S, Berbee M, *Stud. Mycol.* 53:53-62, 2005).

- 10818 ex root of *Populus tremuloides*, wet chernozem Bilby Lake natural area, Alta. W. Wang (92a) /R.S. Currah BWC-31-92a. Pigment: brown on PDA // mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007).
- 10819 ex root of *Populus tremuloides*, wet chernozem Bilby Lake natural area, Alta. W. Wang (126d) /R.S. Currah BWC-42-126d [=GenBank EF413591 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007).
- 10820 ex root of *Populus tremuloides*, dry luvisol Lamont, Alta. W. Wang (28b) /R.S. Currah MDL-10-28b. Pigment: brown on PDA // mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007).
- 10865 ex root of *Populus tremuloides*, dry chernozem Bilby Lake natural area, Alta. W. Wang /R.S. Currah BDC-26-77b [=GenBank EF413593 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007).
- 10866 ex root of *Populus tremuloides*, dry luvisol Lamont, Alta. W. Wang (50c) /R.S. Currah MDL-17-50c [=GenBank EF413594 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007).
- 10869 ex root of *Populus tremuloides*, wet chernozem Bilby Lake natural area, Alta. W. Wang 2004 /R.S. Currah BWC-31-91b [=GenBank EF413592 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007).
- 10920 ex root of *Populus tremuloides*, wet chernozem Bilby Lake natural area, Alta. W. Wang (127a) 2004 /R.S. Currah BWC-43-127a. Culture conditions: morphology of conidiomata by SEM (Wang W, Mycology 2:237-247, 2011).
- 10921 ex root of *Populus tremuloides*, dry luvisol Lamont, Alta. W. Wang (38a) 2004 /R.S. Currah MDL-13-38a [=GenBank EF413595 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots.
- 11126 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.12 [=GenBank HQ157902 ITS]. Molecular systematics: BLAST match 99% ITS similarity with *Cryptosporiopsis ericae* (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- Cryptosporiopsis melanogena* Kowalski & Halmschlager**
10731 (*T. Cryptosporiopsis melanogena*) ex root of *Quercus petraea* Patzmannsdorf, Austria E. Halmschlager 24-Jun-1993 /CBS 898.97 [=MUCL 40435 =GenBank AF141196]. Molecular systematics: root associated *Cryptosporiopsis* species (Verkeley et al., Mycol. Res. 107:689-698, 2003) // mycorrhizae: endophyte of *Quercus* roots // culture conditions: morphology of conidiomata by SEM (Wang W, Mycology 2:237-247, 2011).
- Cryptosporiopsis radicolica* Kowalski & Bartnik**
10729 (*T. Cryptosporiopsis radicolica*) ex root *Quercus robur* (common oak) Niepolomice, Krakow, Poland T. Kowalski Nov-1992 /CBS 640.94 [=GenBank AF141193]. Molecular systematics: root associated *Cryptosporiopsis* species (Verkeley et al., Mycol. Res. 107:689-698, 2003) // mycorrhizae: endophyte of *Quercus* roots // culture conditions: morphology of conidiomata by SEM (Wang W, Mycology 2:237-247, 2011).
- 10821 ex root of *Populus tremuloides*, dry luvisol Lloyd Creek natural area, Alta. W. Wang (208e) /R.S. Currah YDL-70-208e [=GenBank EF413599 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007).
- 10822 ex root of *Populus tremuloides*, wet chernozem Bilby Lake natural area, Alta. W. Wang (117d) /R.S. Currah BWC-39-117d [=GenBank EF413597 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007) // culture conditions: degenerate, not sporulating when received.
- 10864 ex root of *Populus tremuloides*, wet chernozem Bilby Lake natural area, Alta. W. Wang (89a) /R.S. Currah BWC-30-89a [=GenBank EF413598 (ITS)]. Mycorrhizae: endophyte of aspen (*Populus tremuloides*) roots (Tsuneda A, Wang W, Tsuneda I, Currah RS, Mycologia 101:182-189, 2009 (culture cited as 10869 but should be 10864); Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007) // culture conditions: morphology of conidiomata by SEM (Wang W, Tsuneda A, Gibas CFC, Currah RS, Can J Bot 85:1214-1226, 2007; Wang W, Mycology 2:237-247, 2011).
- Cryptosporiopsis rhizophila* Verkeley & Zijlstra**
10730 (*T. Cryptosporiopsis rhizophila*) ex surface sterilized root of *Erica tetralix* (Ericaceae) Dwingelose heide, Drenthe, Netherlands J. Zijlstra (JA 335) Nov 2001 /CBS 109839 [=GenBank AY176753]. Molecular systematics: root associated *Cryptosporiopsis* species (Verkeley et al., Mycol. Res. 107:689-698, 2003) // mycorrhizae: endophyte of ericaceous plants (Verkeley et al., Mycol. Res. 107:689-698, 2003); colonized healthy rootlets of *Calluna* species in vitro (Zijlstra et al. unpublished in Verkeley et al 2003) // culture conditions: non sporulating on deposit; no conidia obtained; morphology of conidiomata by SEM (Wang W, Mycology 2:237-247, 2011).
- Cryptosporiopsis* sp.**
11127 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 17-May-2007 /G. Kernaghan ARSL 170507.22 [=GenBank HQ157904 ITS]. Pigment: reddish-brown on PDA // culture conditions: non sporulating on deposit; no conidia obtained // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- Cryptosporiopsis tarraconensis* Gene & Guarro**
6546 (*T. Cryptosporiopsis tarraconensis*) ex buds of *Corylus avellana* Vilaseca, Tarragona, Spain Dec 1987 /J. Guarro FMR 2951 [=IMI 324477]. Pigment: brown // plant pathogen: cause of Borro sec disease of hazel buds (Gene et al., Mycol. Res. 94:309-312, 1990).
- Ctenomyces serratus* Eidam (morph *Chrysosporium an.* *Ctenomyces serratus*)**
1115 soil Oak Grove Campground, Calif. /G.F. Orr O-940.
1116 soil Mecca Flats, Calif. /G.F. Orr O-961.
1570 (*T. Neotype Ctenomyces serratus*) soil Australia D.M. Griffin /G.F. Orr 0-3011 [=IMI 86199 =CBS 187.61 =ATCC 15504 =NRRL A-11176 =GenBank AB015771 =GenBank AB040683 =GenBank AY176733] + mates with UAMH 1958. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001; Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
1588 soil England C. Dickinson /G.F. Orr CsCd.
1638 CDC 383.
1958 soil West Bengal, India H.S. Rhandawa 1962 /G.F. Orr SL 466 [=ATCC 15502 =NRRL A-13087 =CBS 221.64 =IFO 31711]

- mates with UAMH 1570.
- 1959 soil England C. Dickinson 1962 /G.F. Orr O-3012 [=ATCC 15503 =CBS 544.63 =NRRL A-11828].
- 1960 soil India Rhandwa 1962 /G.F. Orr SL 85.
- 1961 soil Argentina M. Reza 1962 /G.F. Orr MR T1.
- 1962 soil Argentina M. Reza 1962 /G.F. Orr MR G9.
- 1964 soil Argentina M. Reza 1962 /G.F. Orr MR 5M.
- 1965 soil Argentina M. Reza 1962 /G.F. Orr MR g4.
- 1966 soil Argentina E. Varsavsky 1962 /G.F. Orr EV 7Q.
- 2571 from mixed culture received as Y-4 /R.P. Tewari Y-4.
- 2830 soil Poona, India A. Padhye Aug 1967 /A. Padhye.
- 3090 single ascospore isolate ex soil Berkshire, England C.O. Dawson 1961 /IMI 89564 + mating type 3197.
- 3173 soil Ohio P.V. Kurup 25 Jan 1969 /P.V. Kurup SL-58 + mates with 3197 soil & feathers 1/85.
- 3197 single ascospore isolate ex soil Berkshire, England C.O. Dawson 1961 /IMI 89563 - mating type UAMH 3090. Culture conditions.
- 3621 single ascospore isolate J.C. Gentles /CDC X-456 +.
- 3622 single ascospore isolate ex soil, Argentina E. Varsavsky (0-2) /CDC X-706 [=ATCC 15536] +.
- 3623 single ascospore isolate ex soil Argentina E. Varsavsky (0-3) /CDC X-707 [=ATCC 15537 =CBS 223.64] -.
- 3625 single ascospore isolate J.C. Gentles /CDC X-457 -. Molecular systematics: human pathogenic fungi & relatives (Bowman & Taylor, The Fungal Holomorph, (Reynolds & Taylor, eds.), CAB International, 1993; Bowman et al., Mol. Phylogenetics Evolution 6:89-96, 1996).
- 3633 mutant ex UAMH 1966 UAMH A. Sekhon Dec 1973 /A. Sekhon -.
- 4429 soil survey for keratinophilic fungi India /P.C. Jain CP-19.
- 4583 soil Spain /J. Guarro FFBA 213.
- 4584 soil Spain /J. Guarro FFBA 275.
- 7323 soil Iraq S. Abdullah /S.K. Abdullah BSRA 10281.
- Cudonia circinans** (Persoon) Fries
5563 mixed *Picea glauca*, *P. mariana* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /S.K. Abdullah. Mycorrhizae.
- Culicinomyces bisporalis** Sigler, Frances & Panter
5174 (T *Culicinomyces bisporalis*) ex larvae of *Aedes kochi* Millaa Milaa, Northern Queensland, Australia (C) S. Frances 4 Jun 1984 /M. Goettel [=ARSEF 1948 =ATCC 62857 =CBS 316.87 =DAOM 198934 =Sweeney MM-1]. Mesophilic: opt. 18-30C, NG @ 37C.
- 5175 ex larvae of *Aedes kochi* Millaa Milaa, northern Queensland, Australia (C) S. Frances 8 Jun 1985 /M. Goettel [=ARSEF 1949 =ATCC 62856 =CBS 317.87 =DAOM 198935 =Sweeney MM-2]. Mesophilic: opt. 18-30C, NG @ 37C.
- Culicinomyces clavisporus** Couch, Romney & Rao
4618 dead larva *Culiseta inornata* from pond (DV-9) Devon, Alta. M. Goettel 19 Aug 1982 /M. Goettel FI-59 [=ARSEF 964 =ATCC 52635 =CBS 755.83 =IMI 280342]. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- 4658 mosquito, *Anopheles quadrimaculatus*; an early isolate of J.N. Couch but status as ex-type culture not confirmed North Carolina Couch /ATCC 38490. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- 4659 *Anopheles amictus-hilli* Sydney, Australia Panter 4 Oct 1982 /ATCC 46258. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984; Singh G, Prakash S, Parasitol Res. 2011 Jun 7 Epub (as ATCC 46258)).
- 4848 mosquito larva, *Anopheles quadrimaculatus* Chapel Hill, N.C. J.N. Couch /R. Humber ARSEF-372. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- 4849 *Anopheles quadrimaculatus*, single spore #1 Univ. Lake, Chapel Hill, N.C. (C) S. Romney /R. Humber ARSEF-582. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- 4850 *Anopheles quadrimaculatus*, single spore isol. #3 Univ. Lake, Chapel Hill, N.C. (C) S. Romney /R. Humber ARSEF-584. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- 4851 mosquito larva (Diptera, Culicidae) North Carolina (C) A. Knight /R. Humber ARSEF-706. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- 4854 lab infected *Aedes aegypti* ex natural host *Culiseta inornata* Devon, Alta. M. Goettel /M. Goettel 25B [=ARSEF 1260 =ARSEF 2482]. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- 4869 *Anopheles quadrimaculatus*, single spore isol. #2 Chapel Hill, N.C. S. Romney /R. Humber ARSEF-583. Biocontrol: entomopathogen of mosquitoes (Goettel et al., Mycologia 76:614-625, 1984).
- Cunninghamella bertholletiae** Stadel
7487 isolated 3 times ex sputum, female 72 yr; DE- for each specimen; not considered an etiologic agent of infection in this case New Zealand 1993 /A. Woodgyer 93.399. Thermotolerant: grows better @ 35C than @ 30C; grows slowly @ 41-42 C // culture conditions: no zygospores on OATC.
- Cunninghamella echinulata** (Thaxter) Thaxter
25 V. Jr. Cutter 602.
4142 soil Saskatoon, Sask. R. Haskins (S 17) 15 Nov 1948 /B. Foster [=PRL 32].
4143 soil Saskatoon, Sask. R. Haskins (S 17) 3 Nov 1978 /B. Foster [=PRL 28].
4144 B. Foster [=ATCC 36190 =NRRL 3655].
4145 *Hibiscus* flowers /B. Foster [=ATCC 9244]. Racemic prenalterol (Pasutto & al., J. Pharmaceutical Sci. 76:177-179, 1987); biosynthesis of mexiletine to hydroxymethylmexiletine and p-hydroxymexiletine (Freitag et al. J. Chromatography 616:253-259, 1993).
- 11661 biopsy ex paranasal sinus, right middle meatus in a neutropenic male 15 yr with with relapsing acute leukemia Pathology-Mycology, Johns Hopkins Hospital, Baltimore, Maryland R. Green & M. Ramanathan 12-Aug-2011 /S. Zhang F00263.1 [=GenBank JX966103 LSU]. Human/animal pathogen: fatal invasive fungal sinusitis in a febrile neutropenic patient (Leblanc RE, Meriden Z, Sutton DA, Thompson EH, Neofytos D, Zhang SX, Diagn Microbiol Infect Dis 76:506-509, 2013).
- Cunninghamella elegans** Lendner
7368 soil New Jersey V. (Jr. 296) Cutter /F. Pasutto [=ATCC 9246].
7369 crude oil North Carolina J. Perry /F. Pasutto [=ATCC 26269]. Biodeteriogen/biodegradation: degrades paraffinic hydrocarbons (J. Gen. Appl. Microbiol. 19:151-153, 1973); degrades naphthalene (Appl. Environ. Microbiol. 34:363-370, 1977); degrades polycyclic aromatic compounds (Xenobiotica 16: 733-741, 1986; Int. Biodeterior. Biodegrad. 35: 397-408, 1995); enantioselective reduction of acetylmethylphenylsilane (Biotechnol. Lett. 10:731-736, 1988); reduction of 4-chloro-1-(4-fluorophenyl)butan-1-one (Biotechnol. Appl. Biochem. 17: 139-153, 1993); treatment of methane and swine slurry by biofiltration (Girard M, Viens P, Ramirez AA, Brzezinski R, Buelna G, Heitz M, J Chem Technol Biotechnol 87:697-704, 2012).
- 7370 estuarine mud J. Perry (PA-1) /F. Pasutto [=ATCC 36112]. Biodeteriogen/biodegradation: degrades crude oil (J. Bacteriol. 118: 844-847, 1974; Z. Allg. Mikrobiol. 13: 299-306, 1973); degrades dibenzothiophene (Curr. Microbiol. 21: 229-231, 1990); metabolism of 1-fluoronaphthalene (Appl. Environ. Microbiol. 48: 294-300, 1984) // molecular systematics:

- identification of fungal enzymes for industrial and environmental applications
(<https://fungalgenomics.concordia.ca/home/index.php>); Concordia Univ Fungal Genomics Project
(<https://fungalgenomics.concordia.ca/fungi/Cele.php>).
- 8718 Preceptrol culture /ATCC 8688a [=IMI 53585 =IMI 63877 =NRRL 1369 =DSM 1906 =Upjohn H-334] + mates with ATCC 8688b (IMI 53586). Acronycine (J. Med Chem. 17:599-602, 1974); imipramine (J. Pharm. Sci. 70:151-155, 1981); 1 prime, 2 prime-dihydro-1prime, 2 prime-dihydroxyrotenone, 3 prime-hydroxyrotenone & 1 prime, 2 prime-dihydrorotenone (Appl. Environ. Microbiol. 45:616-621, 1983). Application: transformation of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3029, 1979); transformation of alkaloides (J. Nat. Prod. (Lloydia) 44:466-469, 1981); transformation of pergolide to pergolide sulfoxide (J. Pharm. Sci. 72:733-736, 1983); transformation of flavonoides (Xenobiotica 20:363-373, 1990); oxidation of ebastine to carebastine (Appl. Microbiol. Biotechnol. 44:731-735, 1996); comparable to Upjohn H-334 used in oxidation of steroids (Appl. Microbiol. 3:14, 1955).
- Curvularia geniculata*** (Tracy & Earle) (morph *Cochliobolus geniculatus*)
4371 lesion on shoulder of dog Oklahoma 1963 /CDC B-0785a. Culture conditions: degenerate, not sporulating when received // thermotolerant: grows at 37C but slower than @ 30C.
- Curvularia inaequalis*** (Shear) Boedijn
1406 (T Acrothecium arenarium) sand dune soil Pointe du Siege, Bretagne, France F. Moreau /DAOM 74842 [=CBS 102.42 =ATCC 10713 =IMI 053747 =ATHUM 2866 =MUCL 1080].
9268 indoor air of school classroom ex Andersen sampler Squamish, BC S.P. Abbott (SA-M223) 17 Feb 1998 /S.P. Abbott (SA-M223).
10438 isolated several times from dialysis bags of elderly female CAPD patient who died University of Melbourne, Melbourne, Australia A. Woodgyer 03-04 /A. Woodgyer 2004-6406 [=GenBank AY941256]. Molecular systematics: BLAST match 98% with *Curvularia inaequalis* (fide UAMH) // human/animal pathogen: peritonitis in patient on CAPD (Pimental JD, Mahadevan K, Woodgyer A, Sigler L, Gibas C, Harris OC et al, J. Clin. Microbiol. 43:4288-4292, 2005) // thermotolerant: grows slower @ 35C than at 30C.
11180 ex gametophyte of moss Tortella tortuosa forefield of Saskatchewan Glacier, Banff National Park, Alta. M. Day 2009 /R.S. Currah 17 TtgPDA1 [=Genbank HM101095 ITS]. Biodeteriogen/biodegradation: in vitro decomposition of the moss *Hylocomium splendens* (Day MJ, Currah RS, Can J Microbiol 57:389-391, 2011).
- Curvularia lunata*** (Wakker) Boedijn (morph *Cochliobolus lunatus*)
1349 Alabama J.R. Weir /DAOM 49242 [=GenBank AF081394 =GenBank AF071339].
4378 nasal sinuses ex male B. Katz Mar 1976 /M. McGinnis NCMH 109 [=GenBank AF081411].
4388 lung biopsy ex 13 yr old retarded child Florida 1975 /CDC B-2423.
8281 air of underground parkade ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M62) 31-Aug-1995 /S.P. Abbott (SA-M62).
9191 canvas tarpaulin. This material is cited in a U.S. and/or other Patent and may not be used to infringe the patent claims. Panama C. Pfizer Co. /ATCC 12017 [=CBS 215.54 =IFO 6299 =IMI 61535 =QM 120h =NRRL 2380 =ATCC 12017]. Cynodontin (Experientia 33: 1283-1284, 1977); 11-beta-hydroxylase (Enzyme Microb. Technol. 12: 305-308, 1990). Application: steroid production (U.S. Pat. 2,658,023); transformation of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979); transformation of cycloalkenones (Biotechnol. Lett. 12: 885-890, 1990); degrades insect moulting hormones (J. Chem. Soc. Chem. Commun. 1974:656-657, 1974); hydroxylation of cortexolone (= substance S) to hydrocortisone (Appl. Environ. Microbiol. 45:436-443, 1983; Enzyme Microb. Technol. 12: 616-621, 1990; Biotechnol. Prog. 10: 187-192, 1994); US patent 2658023 // molecular systematics: BLAST match 99% ITS similarity with *Cochliobolus lunatus* isolates (fide UAMH 2011).
- Curvularia lunata var. aerea*** (Bat., Lima & Vasconcelos) M.B. Ellis
9269 indoor air of school classroom ex Andersen sampler Pemberton, BC S.P. Abbott (SA-M214) 18 Feb 1998 /S.P. Abbott (SA-M214).
- Curvularia pallescens*** Boedijn
4373 CDC B-2359a [=CBS 408.96].
10128 cuticle, coffee berry borer (*Hypothenemus hampei*) Finca La Alianza, Chiapas, Mexico J. Perez 16 Mar 2001 /F. Vega AL-CU R4-35.
- Curvularia protuberata*** Nelson & Hodges
8722 recd @ NRRL as *Helminthosporium* sp., reidentified as *C. protuberata* by G. Bills (Merck) K.B. Raper /NRRL 4671.
- Curvularia senegalensis*** (Speg.) Subramanian
4372 eye infection Texas 1975 /CDC B-2357a.
- Curvularia sorghina*** Shivas & Sivanesan
2780 soil Blood Indian Reserve, Alta. D. Remington 22 Jun 1967 /D. Remington. Culture conditions: sporulates on corneal agar overlaid with cellophane.
- Cyathus africanus*** Brodie
9193 Cyprus /ATCC 38353 [=ATCC 38353]. Cyafriins (diterpenoid metabolites) (Ayer WA et al, Can. J. Chem. 56: 2113-2120, 1978).
- Cyathus earlei*** Lloyd.
8104 ex soil H. J. Brodie /S. Davies FC-312 [=ATCC 38343]. Cyathins (Can. J. Chem. 57:3332-3337, 1979; Can. J. Chem. 57:3338-3343, 1979). Benomyl: tolerant @ 2 ppm // pigment: tan // crystals: calcium oxalate (Shinners & Tewari, Can. J. Chem. 75:850-856, 1997).
- Cyathus olla*** Batch:Pers.
8205 canola (Brassica) stubble Edmonton, Alta. 20-Aug-1994 /J.P. Tewari [=DAOM 209610]. Biodeteriogen/biodegradation: infestation of canola stubble (Tewari & Biggs, Can. J. Plant Pathol. 17:291, 1995) // crystals: calcium oxalate (Tewari et al., Z. Naturforsch. 52c:421-425, 1997).
8276 ex basidiospores of peridiole from fruiting body on woodchips Devonian Botanic Garden, Devon, Alta. S.P. Abbott & L. Abbott (SA 1131) 24-Aug-1995 /S.P. Abbott & L. Abbott (SA 1131). Crystals: calcium oxalate (Shinners & Tewari, Can. J. Chem. 75:850-856, 1997) // molecular systematics: RAPD analysis (Shinners & Tewari, Mycologia 90:980-989, 1998).
8947 sporocarp ex pathway Spy Hill, Calgary, Alta. R.M. Danielson (RMD 2996) 24 Jul 1980 /R.M. Danielson RMD 2996 [=DAOM 184718 =CCFC 4312]. Crystals: plentiful.
- Cyathus pygmaeus*** Lloyd
8020 dead Artemesia E. Trueblood /S. Davies FC-320 [=ATCC 38354]. Biodeteriogen/biodegradation: brown rot // crystals: calcium oxalate (Shinners & Tewari, Can. J. Chem. 75:850-856, 1997).

Cyathus striatus Huds.:Pers.

- 8105 river bank H.J. Brodie /S. Davies FC-313 [=ATCC 38356].
Benomyl: tolerant @ 2 ppm // pigment: brown.
8958 sporocarps ex bare soil near willow R.M. Danielson (RMD
3171) /R.M. Danielson RMD 3171.

Cyclomyces tabacinus Pat.

- 9757 fungal ball in nostril ex patient with chronic sinusitis
Melbourne, Australia A. Woodgyer 1999 /A. Woodgyer
9922646.

Cylindrobasidium evolvens (Fr.) Julich

- 7448 ex Populus tremuloides (aspen poplar) Fort Nelson, B.C. L.
Hutchison (CCMC-2-3) 1 Nov 1991 /L. Hutchison NOF 1917.

Cylindrocarpon an. Cylindrodendrum album var. paralion see ***Cylindrodendrum album var. paralion******Cylindrocarpon candidum*** see ***Neonectria coccinea******Cylindrocarpon cyanescens*** (De Vries et al.) Sigler (syn.

Phialophora cyanescens; morph *Phaeosclera an.*
Cylindrocarpon cyanescens)

- 5865 (T *Phialophora cyanescens*) subcutaneous tissues right foot,
male, white grain mycetoma Groningen, Netherlands 1981
/CBS 518.82. Molecular systematics: AB190419 and
AB190389 (strain IFM 50529) blast to *Fusarium solani*
complex.

Cylindrocarpon destructans (Zins.) Scholten (morph *Neonectria radiculicola*)

- 4895 roots & stems of Concord-Bradt grapes Vineland Station, Ont.
H.F. Dias /B. Foster [=DAOM 144524]. Catabolism of
octopine (Beauchamp et al., Appl. Environ. Microbiol.
56:150-155, 1990). Pigment: brown.
4897 washed organic soil particle of alpine eutric brunisol Mt.
Allen, Kananaskis, Alta. J. Bissett (JB 338) Oct 1968 /B.
Foster [=DAOM 174538].
4907 roots *Poa pratensis* CDA Research Station plots, Lacombe,
Alta. B. Berkenkamp (75M-16) 4 Sep 1974 /DAOM 150670
[=GenBank AFI72261]. Molecular systematics: Blast match
100% ITS similarity to *Neonectria radiculicola*.
5863 white grain mycetoma foot, immigrant from Antigua
Edmonton, Alta. D. Zoutman Sep 1987 /D. Zoutman 5761.
Pigment: brown/pink // thermotolerant: grows @ 37C //
human/animal pathogen: mycetoma (Zoutman R, Sigler L, J.
Clin. Microbiol. 29:1855-1859, 1991).
6355 soil around roots of *Rubus parviflorus* Revelstoke, B.C. S.
Shamoun 1988 /A. Funk. Pigment: brown.
6609 roots of *Rubus parviflorus* Victoria, B.C. S. Shamoun /S.
Shamoun PFC 2031. Pigment: brown.
8434 roots of *Erica herbacea* growing in lead polluted soil northern
Slovenia D. Vodnik 1995 /D. Vodnik 4.
10026 roots of white spruce (*Picea glauca*) seedling Bonnyville
Forest Nursery, Bonnyville, AB G. Kernaghan 19 May 2000
/G. Kernaghan.
11438 swab ex skin of living Northern long-eared myotis bat (*Myotis*
septentrionalis) Kitts Cave, New Brunswick K.J. Vanderwolf
2-Feb-2010 /K.J. Vanderwolf Bat 39 C.3 CC1. Molecular
systematics: Blast match 99% ITS similarity to *Neonectria*
radiculicola (*Cylindrocarpon destructans*) (fide UAMH 2011) //
cellulolytic // biodiversity: mycobiota of bat caves.

Cylindrocarpon didymum (Hartig) Wollenw.

- 4888 *Pyrus Harrow*, Ont. /B. Foster [=DAOM 185212]. Evaluation
of opine catabolism (Beauchamp et al, Appl. Environ.
Microbiol. 56:150-155, 1990).

Cylindrocarpon lucidum Booth (morph *Neonectria lucida*)

- 4898 soil (This strain has been cited in a US or other patent and
should not be used to infringe patent claims.) Wisconsin /B.
Foster [=NRRL 5760 =ATCC 56272]. Cyclosporin A (Env. J.
Appl. Microbiol. 3:125-133, 1976); cyclosporin A &
cyclosporin B (US Patent 4,117,118); dihydrocyclosporin C
(US Patent 4,108,985).

Cylindrocarpon magnusianum (Sacc.) Wollenw.

- 5026 subsurface groundwater bearing soil samples Oklahoma J.L.
Sinclair /J.L. Sinclair. Pigment: pink.
5706 carnivore dung Grimsdahl, Norway R. Currah (D5) 1985 /R.
Currah (D5).
6320 soil Edmonton, Alta. C. Starret Oct 1988 /C. Starret. Pigment:
brown.

Cylindrocarpon sp.

- 883 swab ex cervix Edmonton, Alta. J.W. Carmichael 17 Feb 1961
/J.W. Carmichael.
975 soil grassy field Edmonton, Alta. J.W. Carmichael 18 Apr
1961 /J.W. Carmichael.
2789 badger hole diggings Cardston, Alta. D. Remington Jun 1967
/D. Remington.
4316 contaminant ex skin scraping of horse Edmonton, Alta. L.
Hawker May 1980 /L. Hawker 3684.
7181 chronic subcutaneous mycosis of left wrist for 30 yr, black
male 60 yr, multiple courses of Ketoconazole therapy Billings,
MT F. Kahn Apr 1992 /M.G. Rinaldi UTHSC 92-535.
Pigment: brown.
8935 male farmer 53 yr with white grain eumycetoma following
trauma from thorn Belgaum, India 1996 /CDC 534-96.
Pigment: reddish-brown // human/animal pathogen: white
grain mycetoma in Indian male (Hemashettar et al., J. Clin.
Micro 38:4288-4291, 2000).
9772 beach-ridge soil University of Manitoba Field Station, Delta
Marsh, MB listed as UM 10 in thesis) J.W. Pearn (P1-IIS3-34
/J. Reid UM 211.

Cylindrocladium clavatum see ***Cylindrocladium gracile******Cylindrocladium flexuosum*** Crous (morph *Calonectria clavata*)

- 7778 root debris in non-sterilized peat Lee County, Florida D. Ferrin
4-3-78 /P. Crous 078-1261 [=STE-U 2537 =ATCC 66388]
mates with ATCC 66389. Pigment: brown //
systematics/taxonomy: description of teleomorph based on
mating (El-Gholl NE, Alfieri SA, Barnard EL, Mycotaxon
48:201-216, 1993) // culture conditions: sporulates on TAK-C,
2% MEA and on TWA+carnation leaf (fide UAMH 2013).

Cylindrocladium floridanum Sobers & P.C. Seymour (morph *Calonectria kytensis*)

- 9217 white pine seedlings Kempville, Ont. /P.D. Khasa. Culture
conditions: add carnation leaf to 2% MEA, TWA and TAK-C
for growth and sporulation (fide UAMH 2013).

Cylindrocladium gracile (Bugn.) Boesew. (syn.

- Cylindrocladium clavatum*; morph *Calonectria gracilis*)
7780 Eucalyptus roots, Mondri nursery Kwambonambi,
Kwazulu-Natal, South Africa P.W. Crous 03-90 /P. Crous
CPC 328 [=PPRI 3996 =STE-U 328]. Pigment: brown //
culture conditions: sporulates on TAK-C, 2% MEA and on
TWA+carnation leaf (fide UAMH 2013).

Cylindrocladium naviculatum Crous & Wingfield

- 7739 (T paratype *Cylindrocladium naviculatum*) ex soil Manaus,
Brazil M. J. Wingfield Apr 1993 /P. Crous CPC 629. Pigment:
brown // culture conditions: add carnation leaf to 2% MEA,

TWA and TAK-C for growth and sporulation (fide UAMH 2013).

Cylindrocladium ovatum El-Gholl, Alfenas, Crous & Schubert

7740 (T paratype *Cylindrocladium ovatum*) ex Eucalyptus urophylla; single conidial isolate from same collection as holotype Para, Monte Dourado, Brazil N.E. El-Gholl Mar 1990 /P. Crous UFV 91. Pigment: brown // culture conditions: sporulates on TAK-C, 2% MEA and on TWA+carnation leaf (fide UAMH 2013).

Cylindrocladium pteridis F.A. Wolf (morph *Calonectria pteridis*)

7781 soil Kwambonambi, Kwazulu-Natal, South Africa P.W. Crous 18-11-1993 /P. Crous CPC 675 [=STE-U 675]. Culture conditions: sporulates on TAK-C, 2% MEA and on TWA+carnation leaf (fide UAMH 2013).

Cylindrocladium sp.

2790 soil flower bed Edmonton, Alta. D. Remington Jun 1967 /D. Remington.

Cylindrocladium variabile Crous, Janse, Victor, Marais & Alfenas (morph *Calonectria variabilis*)

7779 (T *Cylindrocladium variabile*) ex *Didymopanax morototoni* Para, Brazil F. C. de Albuquerque 1990 /P. Crous AR 2675 [=Herb. PPRI 4174 =IMI 354513 =IFO 32466 =CBS 339.92]. Pigment: brown // culture conditions: sporulates on TAK-C, 2% MEA and on TWA+carnation leaf (fide UAMH 2013).

Cylindrocolla sp.

1166 wood ex *Kalmia* /DAOM 43567.

Cylindrocolla urticae (Pers.) Bonorden (morph *Calloria fusarioides*)

4891 dead stem of *Urtica dioica* Netherlands H.A. van der Aa Jan 1968 /CBS 200.68.

Cylindrodendrum album Bonord.

11464 swab ex fur of living female little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 20 C.1 . Pigment: red-brown // mesophilic: grows better @ 25C than at 30 C // culture conditions: sporulates on TWA, PDA and CER // cellulolytic // biodiversity: mycobiota of bat caves.

Cylindrodendrum album var. paralion Summerbell, Seifert & MacKinnon (morph *Cylindrocarpon an.*)

Cylindrodendrum album var. paralion
5947 (T *Cylindrodendrum album v. paralion*) decaying *Fucus distichus* Wreck Beach, Vancouver, BC R.C. Summerbell (RCS 354) 8 Aug 1980 /R.C. Summerbell 354 K129 [=ATCC 46842 =CBS 301.83 =IMI 255534 =UBC 8265]. Pigment: purple.

Cyphellophora fusarioides (B. Sutton & C.K. Campbell)

Decock (syn. *Pseudomicrodochium fusarioides*)
10142 nasal septum, female 6 yr Austin, TX 2001 /Texas Dept. of Health BY 2860. Culture conditions: good sporulation on OAT // mesophilic: NG @ 35C.

Cyphellophora laciniata de Vries

9277 nail, female 47 yr Quebec G. St-Germain 1997 /G. St-Germain MY 50591.

Cyphellophora pauciseptata P. Feng & de Hoog

7675 ex trachial-bronchial washing /R.C. Summerbell FR 2214.

Cyphellophora pluriseptata De Vries, Elders & Luykx

6573 soil indoor plant Chlorophyton comosum Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell RCS-W1912.
8210 sputum, female 51 yr, DE pseudohyphae, yeast also isolated Edmonton, Alta. C. Sand 1 May 1995 /R. Rennie MY 1532.
8769 nails & skin, female, 68 yr Quebec G. St-Germain 1996 /G. St-Germain MY 7474. Pigment: black.

Cyphellophora sp.

7510 skin, lower lt leg, male Stanford, CA 1993 /M.G. Rinaldi UTHSC 93-1691. Pigment: brown // culture conditions: nitrate + // molecular systematics: Blast match ITS similarity closest to *Cyphellophora* species (fide UAMH 2010); Formerly *Exophiala lecanii-corni*.

Cyphellophora suttonii (Ajello, A.A. Padhye & M. Payne)

Decock (syn. *Pseudomicrodochium suttonii*)
4411 (T *Pseudomicrodochium suttonii*) ear lesion ex dog Atlanta, GA A. Padhye 1978 /CDC B-2968 [=IMI 233463 =MUCL 44073 =GenBank GU225946 ITS =GenBank FN908213 ITS =CBS 449.91 =ATCC 42672]. Culture conditions: no conidia observed // molecular systematics.

Cystodendron sp.

10850 two-year-old coppice shoot of chestnut (*Castanea sativa*) (C) T.N Sieber /C. Gruenig TS 94 087 [=GenBank EU434834 ITS =GenBank EU434865 SSU]. Culture conditions: produces anamorph // biodiversity: endophyte from healthy plant tissues chestnut (*Castanea sativa*) // molecular systematics: phylogeny of *Phaeomollisia piceae* a conifer-needle endophyte and relationships to *Phialocephala* and *Acephala* (Grunig CR, Queloz V, Duo A, Sieber TN. Mycological Research 113:207-221, 2009).

Cystoderma amianthinum var. amianthinum (Scop.:Fr.)

Fayod
5473 mixed *Picea glauca*, *P. mariana*, *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /; [=NOF 1478]. Culture conditions: clamps.
6260 *Pinus contorta*, *Picea engelmannii* & *Populus tremuloides* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 /C) S.P. Abbott [=NOF 1477].

Cystoderma amianthinum var. rugosoreticulatum

(Lorinser) Smith & Singer
5540 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /.

Cystoderma carcharias (Pers. ex Secretan) Fayod

6467 received from CBS as *Cystoderma carcharias* but may represent a contaminant (?*Phlebia radiata*) R. Kuehner /CBS 157.47. Culture conditions: arthroconidia.
6470 soil Belgium /CBS 734.85. Culture conditions: clamps, alternate arthroconidia.

Cystoderma cinnabarinum (A. & S. ex Secr.) Fayod

5538 mixed *Picea* & *Populus* woods Rocky-Clearwater Forest, Alta. 8 Jun 1986 /; .
5539 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986 /; .

Cystoderma fallax Smith & Singer

6466 R. Kuehner /CBS 151.63.

Cystoderma granulosum (Batsch ex Fr.) Fayod

- 5477 mixed Picea woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /CBS.
 6227 Pinus contorta woods Bow-Crow Forest, Alta. (C) S.P. Abbott 16 Aug 1988 /(C) S.P. Abbott.
 6468 M. Moser /CBS 214.59.
 6469 R. Kuehner /CBS 432.79.
 6471 soil Alberta R. Danielson (RMD 2663) /DAOM 176625.

***Cystofilobasidium* sp.**

- 11236 swab ex fur of a male long ear bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 57 C.2. Biodiversity: mycobiota of bat caves // mesophilic: grows better @ 22C than @ 18C.

Cytospora chrysosperma Pers. ex Fr. (morph *Valsa sordida*)

- 7449 ex Populus tremuloides (aspen poplar) Fort Nelson, B.C. L. Hutchison (CCMC-1-12b) 1 Nov 1991 /L. Hutchison NOF 1941. Pigment: black.

Cytospora leucostoma (Pers.) Sacc. (morph *Leucostoma persoonii*)

- 9760 twig ex saskatoon (*Amelanchiers alnifolia*) Alberta H. Bennypaul 1999 /H. Bennypaul AUR-99-3.
 9761 twig ex saskatoon (*Amelanchiers alnifolia*) Alberta H. Bennypaul /H. Bennypaul MH-99-4.

Cytosporina* an. *Cryptosphaeria populina* see *Libertella* an. *Cryptosphaeria populina***Dacrymyces aquaticus*** Bandoni & Hughes

- 5009 sodden conifer wood UBC campus Vancouver R. Bandoni 22 Sep 1977 /R.J. Bandoni Botany, UBC Vancouver.
 5019 rotting stump UBC campus, Vancouver 30 Sep 1981 /R.J. Bandoni 6146.

Dacrymyces stillatus Nees:Fr.

- 7696 G. Fenwick. Cycloheximide: sensitive // benomyl: resistant.

Dactylaria ampulliformis* see *Isthmologispora ampulliformis***Dactylaria brochopaga* see *Arthrobotrys brochopaga******Dactylaria constricta* see *Ochroconis constricta******Dactylaria constricta* v. *gallopava* see *Ochroconis gallopavum******Dactylaria dimorphospora*** Veenbaas-Rijks

- 870 decaying rushes bog nr iron springs J.W. Carmichael Nov 1960 /J.W. Carmichael.

Dactylaria gallopava* see *Ochroconis gallopavum***Dactylaria obovata* see *Scolecobasidium obovatum******Dactylella microaquatica*** Tubaki

- 3377 (*T. Dactylella microaquatica*) submerged leaf *Shiia sieboldii* Tokyo K. Tubaki 1954 /J. Sumner [=ATCC 16260 =CBS 216.59].

Dactylella minuta Grove

- 6576 horse dung North York, Ont. (C) Yasmin Alpay 17 Nov 1989 /G. Thorn Lisa 17.

Dactylomyces crustaceus* see *Thermoascus crustaceus***Dactylomyces thermophilus* see *Thermoascus thermophilus******Daldinia eschscholzii*** (Ehr.) Rehm.

- 6738 endophyte ex surface-disinfested cranberry leaves (*Vaccinium macrocarpon* cultivar Searless) Wood Co., WI S. Jeffers 1987 /S. Jeffers L-IX-5. Pigment: brown.
 6739 endophyte ex surface-disinfested cranberry leaves (*Vaccinium macrocarpon* cultivar Searless) Wood Co., WI S. Jeffers 1987 /S. Jeffers L-IX-15. Pigment: brown.

Daldinia grandis Child

- 7406 ex ascocarp on apple (*Malus* sp.) Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 803) 6 Jul 1993 /S.P. Abbott (SA 803). Pigment: grey-brown // culture conditions: good sporulation on PDA.
 9035 log of aspen (*Populus tremuloides*) Calmar, Alta S.P. Abbott (SA 1256) 21 Aug 1997 /S.P. Abbott (SA 1256).

Daldinia occidentale Child

- 2159 San Blas, Mexico P. Martin Dec 1962 /P. Martin 1542. Cellulolytic.

Dark septate endophyte* see *Root associated fungus***Dark sterile fungi* see *Root associated fungus******Davidiella populorum*** (G.E. Thomps.) Aptroot (syn.

- Mycosphaerella populorum*; morph *Septoria musiva*)
 6396 *Populus tremuloides* Decker Lake, B.C. (C) R. Garbutt 11 Jul 1988 /A. Funk DAVFP 23833.

Debaryomyces hansenii (Zopf) Lodder & Kreger van Rij (morph *Candida famata*)

- 9434 bertha army worm Saskatchewan A. Keddie 1998 /B.A. Keddie SKY-1.
 9435 bertha army worm Saskatchewan A. Keddie 1998 /B.A. Keddie SKY-2.

Debaryomyces hansenii* see *Candida famata***Deconica coprophila*** (Bull.) P. Karst. (syn. *Psilocybe coprophila*)

- 6577 horse dung Tweed, Hastings Co., Ont. L. Sawkins 8 Oct 1989 /G. Thorn Sawkins 11. Culture conditions: produces arthroconidia; fruits in culture // crystals.

Deconica montana (Pers.) P.D. Orton (syn. *Psilocybe montana*)

- 5859 mixed Picea mariana, P. glauca, Pinus contorta entering Rocky-Clearwater Forest (C) S.P. Abbott 27 Jul 1987 /(C) S.P. Abbott. Biodeteriogen/biodegradation: coprophilous.

Deightoniella torulosa (Syd.) Ellis

- 1614 ex Musa sp. Jamaica D.S. Meredith 1960 /IMI 80980 [=ATCC 14090 =CBS 411.62].

Dekkera anomala* see *Brettanomyces anomalus***Dendrostilbella aurifila* see *Gliocladium aurifilum******Dendrostilbella mycophila*** (Pers.) Seifert

- 5673 contaminant ex *Spathularia flavida* UAMH A. Flis 28 Jul 1987 /A. Flis. Psychrophilic: opt. 18C // hyperparasite.

Dendryphiella arenaria Nicot (syn. *Scolecobasidium arenarium*)

- 1357 (T *Dendryphiella arenaria*) coastal sand under *Ammophila arenaria* Purins /DAOM 63738 [=CBS 181.58 =NBRC 8359 =GenBank DQ307320 ITS =GenBank DQ307364 tef1 =GenBank DQ397366 rpb2 =FR52]. Biodiversity: marine species; fungal secondary metabolites from marine habitats (Schulz B, Draeger S, de la Cruz TE, Rheinheimer J, Siems K, et al. *Botanica Marina* 51:219-234, 2008).
- 10474 ex red alga (*Polysiphonia ureolata*) Friedrichsort, Baltic Sea, Germany T.E. De la Cruz (CPK 2121) /T.E. De la Cruz TUBs 7891 [=GenBank DQ307291 ITS =GenBank DQ307335 tef1 =GenBank DQ307357 rpb2 =BS04]. Biodiversity: marine species; fungal secondary metabolites from marine habitats (Schulz B, Draeger S, de la Cruz TE, Rheinheimer J, Siems K, et al. *Botanica Marina* 51:219-234, 2008) // culture conditions: growth responses to abiotic and biotic parameters found in marine habitats (De la Cruz TE, Wagner S, Schulz B, *Mycol Progress* 5:108-119, 2006); utilization of carbon sources assessed with Biolog and API ZYM (De la Cruz TE, Schulz B, Kubicek CP, Druzhinina IS, *FEMS Microbiol Ecol* 58:343-353, 2006).

Dendryphiella salina (G.K. Sutherl.) Pugh & Nicot (syn. *Scolecobasidium salinum*)

- 10475 ex red alga (*Polysiphonia ureolata*) Friedrichsort, Baltic Sea, Germany T.E. De la Cruz (CPK 1862) /T.E. De la Cruz TUBs 7892 [=GenBank DQ307292 ITS =GenBank DQ307336 tef1 =GenBank DQ307358 rpb2 =BS05]. Biodiversity: marine species; fungal secondary metabolites from marine habitats (Schulz B, Draeger S, de la Cruz TE, Rheinheimer J, Siems K, et al. *Botanica Marina* 51:219-234, 2008) // culture conditions: growth responses to abiotic and biotic parameters found in marine habitats (De la Cruz TE, Wagner S, Schulz B, *Mycol Progress* 5:108-119, 2006); utilization of carbon sources assessed with Biolog and API ZYM (De la Cruz TE, Schulz B, Kubicek CP, Druzhinina IS, *FEMS Microbiol Ecol* 58:343-353, 2006).
- 10476 ex brown alga (*Laminaria digitata*) Helgoland, North Sea, Germany T.E. De la Cruz /T.E. De la Cruz TUBs 7897 [=NS10]. Biodiversity: fungal secondary metabolites from marine habitats (Schulz B, Draeger S, de la Cruz TE, Rheinheimer J, Siems K, et al. *Botanica Marina* 51:219-234, 2008) // culture conditions: growth responses to abiotic and biotic parameters found in marine habitats (De la Cruz TE, Wagner S, Schulz B, *Mycol Progress* 5:108-119, 2006); utilization of carbon sources assessed with Biolog and API ZYM (De la Cruz TE, Schulz B, Kubicek CP, Druzhinina IS, *FEMS Microbiol Ecol* 58:343-353, 2006).
- 10477 ex brown alga (*Laminaria digitata*) Helgoland, North Sea, Germany T.E. De la Cruz /T.E. De la Cruz TUBs 7898. Biodiversity: fungal secondary metabolites from marine habitats (Schulz B, Draeger S, de la Cruz TE, Rheinheimer J, Siems K, et al. *Botanica Marina* 51:219-234, 2008) // culture conditions: growth responses to abiotic and biotic parameters found in marine habitats (De la Cruz TE, Wagner S, Schulz B, *Mycol Progress* 5:108-119, 2006); utilization of carbon sources assessed with Biolog and API ZYM (De la Cruz TE, Schulz B, Kubicek CP, Druzhinina IS, *FEMS Microbiol Ecol* 58:343-353, 2006).

Dendryphon nanum (C.G. Nees ex S.F. Gray) S. Hughes

- 10708 ex *Hylocomium splendens* Perryvale Bog, Alta. M.L. Davey 20-Feb-2005 /R.S. Currah Hs3-A1. Biodiversity: First report of fungus from a moss host (Davey ML, Diversity, systematics and ecology of bryophilous fungi, University of Alberta Ph.D. thesis, 2009).

Dendryphiopsis an. Microthelia incrustans (Ellis & Everh.) Corlett & Hughes (morph *Amphisphaeria incrustans*)

- 1376 ex *Acer* sp. Hull, Quebec G.L. Hennebert Oct 1960 /DAOM 71430 [=ATCC 18007 =CBS 111.61 =IMI 96732].
- 4835 ex wood Devonian Bot. Garden, Alta. L. Sigler Sep 1983 /L. Sigler.

***Dermataceae* sp. I**

- 11131 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.53 [=GenBank HQ157901 ITS]. Culture conditions: colony waxy on PDA; non sporulating on deposit // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).

Dexhowardia tetraspora Taylor

- 8191 (T *Dexhowardia tetraspora*) contaminant in culture of "*Sporotrichum aureum*" CBS 324.37 Netherlands J.J. Taylor /CBS 968.70 [=ATCC 18997 =UM 5625-M =MUCL 18901]. Benomyl: resistant // mesophilic: NG @ 37C // culture conditions: optimum growth on 2% MEA; poor growth on cellophane membrane & on OAT, CMA.
- 8293 (T *Dexhowardia tetraspora*) contaminant in culture of "*Sporotrichum aureum*" CBS 324.37 Netherlands J.J. Taylor /ATCC 18997 [=CBS 968.70 =UM 5625-M =MUCL 18901]. Culture conditions: optimum growth on 2% MEA; poor growth on cellophane membrane & on OAT, CMA // benomyl: resistant.

Diatrype stigma (Hoffm.: Fr.) Fr. (morph *Libertella betulina*, *Naemospora aurea*)

- 7236 wood of *Acer* sp.; UAMH 7237 isolated from stromata Lake Manitouwabing, Parry Sound Dist., Ont. W. Untereiner 30 May 1992 /W. Untereiner 81 [=MUCL 41720]. Pigment: brown.

Dichlaena lentisci Montagne & Durieu

- 5553 fallen leaves of *Eucalyptus globulus* campus, Univ. Calif. Berkeley, CA D. Malloch 11 Mar 1986 /D. Malloch. Osmophilic: opt. 30-40% dextrose.

Dichobotrys parvispora see ***Trichophaea saccata******Dichobotrys sessilispora*** Hennebert (morph *Trichophaea minuta*)

- 3031 dung under *Iris* Claremont, Calif. 28 Sep 1966 /R.K. Benjamin RSA 1722.

Dichotomomyces cejpui (Milko) D.B. Scott (morph *Basipetospora an. Dichotomomyces cejpui*)

- 3594 soil S. California /G.F. Orr O-998.
- 4858 anaerobically digested sewage sludge /K. Ulfig 7.

Dichotomomyces cejpui* var. *spinus (Udagawa) Malloch & Cain (morph *Basipetospora an. Dichotomomyces cejpui* var. *spinus*)

- 3850 DAOM 146093 [=TRTC 45357].

Dicoccum minutissimum Corda

- 9380 RLL tissue with granulomas (histopathology -) 1998 /M.G. Rinaldi UTHSC 98-1486. Pigment: brown.

Dictyosporium inflatum (Matsush.) K.L. Pang, E.G.B. Jones & R. Kirschner (syn. *Cheiromyces inflatus*)

11466 swab ex fur of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 15 C.3. Biodiversity: mycobiota of bat caves // molecular systematics: Blast match 99% ITS similarity with *Dictyosporium inflatum* (*Cheiromyces inflatus*) JQ267362 NTOU 3855 (fide UAMH 2012); *Cheiromyces inflatum* transferred to *Dictyosporium* (Kirschner R, Pang K-L, Jones EB, Mycol Progress DOI 10.1007/s11557-012-0812-3 23-Mar-2012 DOI) // culture conditions: produces staurosporous conidia with apical hyaline cells (fide UAMH).

Dicyma ampullifera see ***Ascotricha chartarum******Dicyma an. Ascotricha bosei*** see ***Ascotricha bosei******Dicyma an. Ascotricha guamensis*** see ***Ascotricha guamensis******Dicyma an. Ascotricha lusitanica*** see ***Ascotricha lusitanica******Dicyma an. Ascotricha xylina*** see ***Ascotricha xylina******Dicyma funiculosa*** Guarro & Calvo

5380 forest soil Conca de Barbera, Catalunya, Spain J. Guarro Apr 1986 /J. Guarro FMR 879.

Dicyma olivacea (Emoto & Tubaki) Arx (morph *Ascotricha erinacea*)

9983 ex tape sample from drywall of crawlspace under building Edmonton, AB K. Rypien /K. Rypien.

10740 ex nail, female 54 yr Quebec G. St-Germain 27-Jul-2005 /G. St-Germain MY 62530. Culture conditions: no ascomata produced // thermotolerant: grows @ 30 C but more slowly @ 35 C.

Dicyma parasitica (Barnett) von Arx (syn. *Hansfordia parasitica*)

1393 (*T. Calcarisporium parasiticum*) hyperparasite of *Dothiorella quercina* on black oak *Physalospora obtusa* West Virginia H.L. Barnett (1012) /DAOM 51760 [=ATCC 18061 =CBS 130.58]. Hyperparasite: on *Dothiorella quercina* (Barnett, Mycologia 50:500, 1958).

Dicyma pulvinata (Berk. & Curt.) von Arx (syn. *Hansfordia pulvinata*)

1408 CBS H. grisella strain, tomato leaf (*Lycopersicon esculentum*) Netherlands G.A. de Vries Nov 1959 /DAOM 75858 [=IMI 96736 =CBS 254.59].

6575 mixed culture Toronto, Ont. F. Pasqualoni 27 Oct 1989 /G. Thorn FP 5.

Didymosphaeria arachidicola (Chockrjakov) Alcorn, Punithalingam & McCarthy (morph *Ascochyta adzametlica*)

10133 cuticle, coffee berry borer (*Hypothenemus hampei*) Rosario Izapa, Cacaahoatan, Chiapas, Mexico J. Perez 27-4-01 /F. Vega RI-CU R41-39.

Dimorphospora foliicola Tubaki

10187 decomposing sedge leaves (*Carex aquatilis*) in fen with water sedge (*Carex aquatilis*), wool fruited sedge (*C. lasiocarpa*) and willow (*Salix* spp.) nr Perryvale, AB (54D28'N, 113D18'W) M.N. Thormann 28 May 1999 /R.S. Currah MNT 74 [=ALTA

11713]. Pigment: dark brown.

***Diplodia* sp.**

1336 Richardson's Ground squirrel Alberta J.W. Carmichael 2 Aug 1962 /J.W. Carmichael.

Diplogelasinospora grovesii Udagawa & Horie (morph *Trichosporiella an. Diplogelasinospora grovesii*)

3672 (T *Diplogelasinospora grovesii*) soil ex beet-field Japan 19 Sep 1970 /S.-I. Udagawa NHL 2502 [=ATCC 24288 =CBS 340.73 =IMI 171018 =GenBank AY681236 BetaTub =GenBank AY681202 ITS =GenBank AY681168 LSU]. Cellulolytic.

Diplogelasinospora princeps Cain (morph *Trichosporiella an. Diplogelasinospora princeps*)

3673 soil Amamioshima Isl., Japan 10 Apr 1971 /S.-I. Udagawa NHL 2504 [=ATCC 24289 =CBS 412.73]. Cellulolytic.

Diploospora longispora Matsushima

340 skin ex foot Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Molecular systematics: ITS sequence closest to *Paecilomyces penicillatus* (fide J. Tanney, Agriculture & Agri-Food Canada, Ottawa 2014); ITS sequence differs from UAMH 6367 and 6404 by a few base pairs // culture conditions: produces chains of blastic conidia.

6367 porcupine dung in cave Frost Centre, Haliburton Co., Ont. (C) G. Thorn & R. Cain 17 Sep 1988 /L. Hutchison. Molecular systematics: ITS sequence closest to *Paecilomyces penicillatus* (fide J. Tanney, Agriculture & Agri-Food Canada, Ottawa 2014).

6404 porcupine dung St. Nora Lake, Ont. (C) D. Malloch Sep 1987 /L. Hutchison. Molecular systematics: ITS sequence closest to *Paecilomyces penicillatus* (fide J. Tanney, Agriculture & Agri-Food Canada, Ottawa 2014).

Dipodascopsis uninucleata (Biggs) Batra & P. Millner

651 ex *Drosophila melanogaster* H.S. Jackson /CBS 190.37 [=ATCC 7445].

Dipodascopsis uninucleata var. wickerhamii Kreger van Rij

9927 toenail, female 52 yr British Columbia Nov 2000 /R. Rennie MY 8584. Culture conditions: assimilation (sucrose -, raffinose -, melibiose +, rhamnose +, lactose -, cellobiose -) (compare Th. Smith & de Hoog in Kurzman & Fell, The Yeasts p 178-180, 1998).

10230 skin, male 17 yr B.C. /R. Rennie MY 6408. Culture conditions: assimilations cellobiose, lactose, sucrose, raffinose negative (fide UAH).

Dipodascus aggregatus Francke-Grosman

3192 CBS Birkbeck College, London, U.K. 1959 /IMI 86675.

4921 mountain pine beetle galleries WestCastle, Alta. /P. Muruyama C-851.

Dipodascus albidus Lagerheim (morph *Geotrichum an. Dipodascus albidus*)

1742 freshly sawn conifer wood Vancouver R.J. Bandoni /R.J. Bandoni B13.

Dipodascus capitatus see ***Geotrichum capitatum******Dipodascus geotrichum*** see ***Galactomyces geotrichum******Dipodascus magnusii*** (Ludwig) von Arx (morph *Geotrichum ludwigii*)

51 mucilaginous secretion ex *Quercus* sp. Germany Stautz /S. Windisch 29 [=CBS 151.30].

52 S. Windisch 30.
1750 R.J. Bandoni B7 [=IFO 0110].

Dipodascus reessii see *Galactomyces reessii*

Disarticulatus devroeyi see *Gymnascella devroeyi*

Discohainesia oenotherae see *Hainesia lythri*

Disporotrichum dimorphosporum (von Arx) Stalpers (syn. *Sporotrichum dimorphosporum*)

- 2230 balsam fir-black spruce pulpwood chips New Brunswick /J.K. Shields 6431-47.
2491 balsam fir-spruce wood chips New Brunswick /J.K. Shields 6430-36.
2492 balsam fir-spruce wood chips New Brunswick /J.K. Shields 6435-28.
3803 Southern pine chips Corvallis, Oregon /WFPL 170 J.
3804 *Picea glauca* host tissue Northwest Alta /WFPL 170 AC [=DAOM X796].
3805 WFPL 170 AA.
4860 blanket New Guinea /WFPL 170 AB [=QM 806 (JQMD 395) =ATCC 24562 =CBS 484.76]. Glucanase; exo-1,3-beta-glucosidase.
9794 skin, male 21 yr Alberta 2000 /R. Rennie MY 2630. Benomyl: resistant.

Doratomyces asperulus see *Cephalotrichum purpureofuscum*

Doratomyces columnaris H.J. Swart

- 8042 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 111) 10 Dec 1993 /S.P. Abbott (OHS 111). Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
8597 nail, 60 yr. old male, DE- Vegreville, Alta /R. Rennie MY 0750 DK. Benomyl: resistant (2 ppm) // cycloheximide: slightly sensitive // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
9281 (T *Doratomyces columnaris*) dung of hare Transvaal, South Africa H.J. Swart /CBS 159.66 [=IMI 116691 =CBS 159.66]. Benomyl: resistant (2 ppm) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).
9623 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility Brooks, Alta S.P. Abbott (OHS 112) 13 Dec 1993 /S.P. Abbott (OHS 112). Systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).

Doratomyces eichhorniae Conway & Kimbrough

- 9288 (T *Doratomyces eichhorniae*) decaying laminae of water hyacinth (*Eichhornia crassipes*) Lake Alice, Gainesville, Florida F.W. Zettler (WH 47) Feb 1974 /ATCC 28418 [=FLAS F 50399 (holotype)]. Benomyl: resistant (2 ppm) // systematics/taxonomy: *Cephalotrichum* and *Doratomyces* species (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000).

Doratomyces microsporus see *Cephalotrichum microsporum*

Doratomyces nanus see *Cephalotrichum nanum*

Doratomyces purpureofuscus see *Cephalotrichum purpureofuscum*

Doratomyces stemonitis see *Cephalotrichum stemonitis*

Dothiorella ulmi Verrall & May

- 9345 elm wood Edmonton, Alta. J.P. Tewari 1997 /J.P. Tewari EW 16 T3 [=Herb. IMI 377473]. Plant pathogen.

Dothiorina tulasnei see *Chlorociboria aeruginascens*

Drechslera avenae (Eidam) Scharif (morph *Pyrenophora avenae*)

- 7091 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 335) Aug 1990 /D. Inglis (MR 335). Culture conditions: produced white coremia-like structures on slide culture cereal blocks; sporulates on tap water agar in window.

Drechslera poae (Baudys) Shoemaker

- 2692 D. Westlake [=PRL 1712]. Culture conditions: sporulates on tap water agar in window.

Drechslera sorokiniana see *Bipolaris sorokiniana*

Drechslera spicifera see *Bipolaris spicifera*

Echinobotryum atrum see *Cephalotrichum stemonitis*

Echinodontium tinctorium (Ell. & Ev.) Ell. & Ev.

- 8187 *Abies lasiocarpa* (alpine fir) British Columbia V.J. Nordin 03 Jun 1952 /S. Davies FC-102 [=NOF 25].
Biodeteriogen/biodegradation: white rot // pigment: brown.

Eladia saccula (Dale) G. Smith

- 962 soil of open field Monterey, Calif. A.L. Cohen /NRRL 1849 [=Smith BB 298A].
5010 field soil Monterey, Calif. A.I. Cohen /J.I. Pitt FRR 1849 [=NRRL 1849].

Eletherascus lectardii (Nicot) von Arx

- 3196 soil Amphill Forest Nursery, Beds., U.K. J.H. Warcup (E18) 1949 /IMI 45134 [=CBS 109.54 =NRRL A-11688 =QM 1802 =UAMH 2007].
3542 (T *Arachniotus lectardii*) salty soil Chateau-Salin, Moselle, France P. Lectard (LC 2022) 1968 /CBS 626.71 [=ATCC 34565 =IMI 168216]. Cellulolytic.

Eletherascus peruvianus Huang

- 6864 soil under Neem tree (*Azadirachta indica*) Shahpure Forest Area, Bidar, Karnataka State, India R. Khan 17 Dec 1989 /R. Khan TRTC 51202.
8631 field soil Forest Conservation area nr Khanapure, Bidar, India R.S. Khan 19 Dec 1989 /J.C. Krug TRTC 51611.

Eletheromyces subulatus (Tode:Fr.) Fuckel em. Seeler

- 5529 decaying Russulaceae Rocky-Clearwater Forest, Alta. L. Sigler 3 Sep 1986 /L. Sigler [=GenBank EU754062 SSU =GenBank EU7754161 LSU =CBS 139.90]. Culture conditions: yeast-like in culture (Sigler, Crypt. Bot. 1:384-389, 1990) // hyperparasite: on decaying russulaceous fruiting body (Sigler, Crypt. Bot. 1:384-389, 1990; Tsuneda et al., Mycologia 89:867-875, 1997).
5671 ex decaying agaric Sweden /CBS 113.86. Culture conditions: yeast-like in culture (Sigler, Crypt. Bot. 1:384-389, 1990) // hyperparasite: on decaying agaric (Sigler, Crypt. Bot. 1:384-389, 1990; Tsuneda et al., Mycologia 89:867-875, 1997).

- 5867 parasitic on rotting *Cortinarius* sp. Rocky-Clearwater Forest A. Flis 3 Sep 1987 /A. Flis. Odor: fragrant // culture conditions: yeast-like in culture (Sigler, Crypt. Bot. 1:384-389, 1990).
- 8225 ex diseased shiitake fruiting body (*Lentinula edodes*) developed on *Quercus serrata* Oki, Shimane Pref., Japan A. Tsuneda /A. Tsuneda TMI 32748 [=TMIC 32748]. Hyperparasite: causes black spot disease on shiitake (Tsuneda et al., *Mycologia* 89:867-875, 1997; Tsuneda et al., Report Tottori Mycological Institute 33:14-20, 1995) // psychrophilic: opt 18C, grows @ 4C (Tsuneda et al., Report Tottori Mycological Institute 33:14-20, 1995).
- 8226 ex diseased shiitake fruiting body (*Lentinula edodes*) developed on *Quercus serrata* Shinji, Shimane Pref., Japan A. Tsuneda /A. Tsuneda TMI 32749 [=TMIC 32749]. Hyperparasite: causes black spot disease on shiitake (Tsuneda et al., Report Tottori Mycological Institute 33:14-20, 1995; Tsuneda et al., *Mycologia* 89:867-875, 1997) // psychrophilic: opt 18C, grows @ 4C.
- Embellisia allii*** (Campanile) Simmons
3444 garlic bulbs ex local markets Massachusetts /E. Simmons QM 8609.
3445 garlic bulbs ex local markets Massachusetts /E. Simmons QM 9269.
- Emericella astellata*** (Fennell & Raper) Y. Horie
6040 forest soil Los Barros, Cadiz, Spain Feb 1986 /J. Guarro FMR 2224.
6052 ex forest soil Jimena de la Frontera, Cadiz, Spain Feb 1986 /J. Guarro FMR 2223.
- Emericella aurantiobrunnea*** (Atkins, Hindson & Russell) Malloch & Cain (morph *Aspergillus an. Emericella aurantiobrunnea*)
6038 garden soil Orjiva, Granada, Spain 1 Feb 1986 /J. Guarro FMR 2219. Pigment: brown.
6039 garden soil Faro Torrox, Malaga, Spain Feb 1986 /J. Guarro FMR 2210. Pigment: brown.
- Emericella echinulata*** (Fennell & Raper) Y. Horie (syn. *Emericella nidulans* var. *echinulata*)
8073 (T *Emericella nidulans* v. *echinulata*) soil Argentina J. Winitzky (M-1-354) Oct 1950 /M. Christensen WB 2395 [=CBS 120.55 =ATCC 16825 =IMI 61454 =NRRL 2395 =QM 1909]. Molecular systematics: phylogenetic analysis of *Aspergillus* species (Peterson SW, *Mycologia* 100:205-226, 2008).
10948 ex left occipital brain biopsy, ex female 21 yr, who had a small bowel transplant 10 yr prior; histopathology + for *Aspergillus*-like hyphae Univ. Nebraska Medical Center, Omaha, NE Aug-2008 /P. Iwen UNMC 083008 [=NRRL 58599]. Culture conditions: heavy ascospores on PDA // human/animal pathogen: cerebral aspergillosis in a small bowel transplant patient // molecular systematics: calmodulin sequence has 99% identity to 5 strains of *E. echinulata* in the GenBank (fide P. Iwen).
- Emericella fruticulosa*** (Raper & Fennell) Malloch & Cain (morph *Aspergillus fruticans*)
8077 (T *Emericella fruticulosa*) ex soil Colorado Desert, California G.F. Orr (O-1077) /M. Christensen WB 4903 [=ATCC 16823 =CBS 486.65 =QM 8033 =IMI 139279]. Pigment: brown.
- Emericella heterothallica*** (Kwon, Fennell & Raper) Malloch & Cain (morph *Aspergillus compatibilis*)
8075 (T *Emericella heterothallica*) ex forest soil Esparata, Prov. of Puntarenas, Costa Rica K. Raper (c) J.C. Cavender 1962 /M. Christensen WB 4981 + mating type 8076. Pigment: yellow.
- 8076 (T *Emericella heterothallica*) ex forest soil Esparata, Prov. of Puntarenas, Costa Rica (c) J.C. Cavender K. Raper 1962 /M. Christensen WB 4983 - mating type 8075. Pigment: yellow.
- Emericella nidulans*** (Eidam) Vuill. (morph *Aspergillus nidulans*)
798 spinal fluid contaminant Edmonton, Alta. J.W. Carmichael 1961.
1656 feed Prov. Vet. Lab., Edmonton, Alta. J.W. Carmichael Apr 1963 /J.W. Carmichael.
1782 ear swab Edmonton, Alta. J.W. Carmichael 31 Aug 1963 /J.W. Carmichael.
3069 contaminant ex IMI 84358 (*Pseudoarachniotus reticulatus*) UAMH 1969.
3674 guttural pouch ex horse Guelph, Ont. J.R. Long 1974 /J.R. Long 2121 (2).
7677 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 140) 30 Jan 1994 /S.P. Abbott (OHS 140). Molecular systematics: comparison with auxotrophic mutants derived from UAMH 6982 *Aspergillus flavus* (Scully LR, Bidochka MJ, *Microbiology* 152: 223-232, 2006).
8070 ex soil W. African Cacao Research Inst., Tafo, Gold Coast, Ghana C.F. Charter 1950 /M. Christensen WB 2241. Pigment: brown.
8965 strain F derived from FGSC A722 and containing PKS (polyketide synthase) under the control of the *alcA* promoter C.R. Hutchison /J. Vederas TPKS F. Polyketide synthase. Culture conditions: requires para amino benzoic acid (PABA) for growth // pigment: brown.
8966 strain derived from FGSC A722 and transformed with a vector to give it the same nutritional requirements C.R. Hutchison /J. Vederas GM 32.4. Culture conditions: requires para amino benzoic acid (PABA) // pigment: red-brown.
9315 designated as *Aspergillus* reference strain /DAOM 222012 [=NRRL 1092 =SRRC 330 [originally designated 303] =SRRC 303 =ATCC 96921 =CBS 288.95 =IMI 370083 =IFO 33017 =DAOM 222012]. Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996).
9355 *Aspergillus nidulans* recombinant with *alcA::NPKS* expression clone, has cosmid vector without an insert strain F (UAMH 8965) is the parental designation C.R. Hutchison /J. Vederas F+AN26 - 1. Pigment: brown // culture conditions: requires para amino benzoic acid (PABA) for growth.
9356 *Aspergillus nidulans* recombinant with *alcA::NPKS* expression clone, has D4B cosmid and makes monacolin J strain F (UAMH 8965) is the parental designation C.R. Hutchison /J. Vederas F+D4B - 1. Monacolin J. Pigment: brown // culture conditions: requires para amino benzoic acid (PABA) for growth.
9357 *Aspergillus nidulans* recombinant with *alcA::NPKS* expression clone, has D4B cosmid and makes monacolin J & monacolin L strain F (UAMH 8965) is the parental designation C.R. Hutchison /J. Vederas F+D4B - 2. Monacolin J & L. Pigment: brown // culture conditions: requires para amino benzoic acid (PABA) for growth.
9373 rotted wood (stage II decay) of poplar (*Populus balsamifera*) Wagner Natural Area near Spruce Grove, Alta S.P. Abbott (SA-M273) 15 Nov 1996 /S.P. Abbott (SA-M273). Pigment: brown // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
9442 *Aspergillus nidulans* G191-F (pyr4, *alcA::NPKS*) + (PhleoR, *alcA::lovC*) clone C.R. Hutchison /J. Vederas FDH 13. Culture conditions: resistant to Zeocin (Ivitrogen) to 100 ug/ml, although both plasmids should be integrated in a stable way so selection with Zeocin is not required (C.R. Hutchison, pers comm., Jan 11, 1999); requires para amino benzoic acid (PABA) for growth.

- 9629 strain carrying mutant version of LNKS gene (which is truncated & does not contain C-terminus which has the 'elongation' domain) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas TRU 1. Same pyrone products as wild type LNKS, but produces more hexaketide. Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9630 strain carrying mutant version of LNKS gene (which is truncated & does not contain C-terminus which has the 'elongation' domain) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas TRU 4. Same pyrone products as wild type LNKS, but produces more hexaketide. Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9632 strain carrying mutant version of LNKS gene (which is truncated & does not contain C-terminus which has the 'elongation' domain) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas TRU 11-2-11. Same pyrone products as wild type LNKS, but produces more hexaketide. Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9633 strain carrying mutant version of LNKS gene (which contains a point mutant in proposed active site of 'elongation' domain) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas ELO 1-2. Same pyrone products as wild type but in smaller amounts (difficult to tell if proportion of hexaketide to heptaketide altered). Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth.
- 9634 strain carrying mutant version of LNKS gene (which contains a point mutant in proposed active site of 'elongation' domain) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas ELO 1-8. Same pyrone products as wild type but in smaller amounts (difficult to tell if proportion of hexaketide to heptaketide altered). Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9635 strain carrying mutant version of LNKS gene (which contains a point mutant in proposed active site of 'elongation' domain) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas ELO 2-1. Same pyrone products as wild type but in smaller amounts (difficult to tell if proportion of hexaketide to heptaketide altered). Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9636 strain carrying mutant version of LNKS gene (which contains a point mutant in proposed active site of 'elongation' domain) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas ELO 2-4. Same pyrone products as wild type but in smaller amounts (difficult to tell if proportion of hexaketide to heptaketide altered). Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9637 strain carrying mutant version of LNKS gene (which contains a point mutant in methyltransferase active site) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas MET 1-A2. Same pyrone products with same molecular weight (as det. by LC-MS) as wild type LNKS. Some non-methylated product may also be produced.. Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9638 strain carrying mutant version of LNKS gene (which contains a point mutant in methyltransferase active site) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas MET 1-B4. Same pyrone products with same molecular weight (as det. by LC-MS) as wild type LNKS. Some non-methylated product may also be produced.. Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9639 strain carrying mutant version of LNKS gene (which contains a point mutant in methyltransferase active site) under control of *aclA* promoter. Wisconsin C.R. Hutchinson 1999 /J. Vederas MET 1-B5. Same pyrone products with same molecular weight (as det. by LC-MS) as wild type LNKS. Some non-methylated product may also be produced.. Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9640 strain carrying mutant version of LNKS gene (which contains a point mutant in methyltransferase active site) under control of *aclA* promoter Wisconsin C.R. Hutchinson 1999 /J. Vederas MET 1-B9. Same pyrone products with same molecular weight (as det. by LC-MS) as wild type LNKS. Some non-methylated product may also be produced.. Culture conditions: induce expression of LNKS mutant with cyclopentanone; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9819 isolate G191 transformed with a plasmid /J. Vederas WMH 1788 (M1-B9). Culture conditions: requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9820 isolate WMH 1738 (i.e. G191 + LNKS) transformed with a plasmid containing a HIS tagged version of *lovC* /J. Vederas WMH 1771 (FZ6). Culture conditions: resistant to Zeocin; requires para amino benzoic acid (PABA) for growth // pigment: brown.
- 9821 isolate WMH 1738 (i.e. G191 + LNKS) transformed with a plasmid /J. Vederas WMH 1773 (FZ 13). Pigment: brown // culture conditions: resistant to Zeocin; requires para amino benzoic acid (PABA) for growth.
- 10735 isolate *lov-A-his-1*, derived from FGSC A722, having the *Aspergillus terreus lovA* gene inserted into the genome via plasmid pAL3 /J. Vederas SM-9-204. Culture conditions: expresses the *lovA* protein when induced by cyclopentanone; requires para amino benzoic acid (PABA) for growth.

Emericella nidulans* var. *acristata (Fennell & Raper) Subram.

8071 (T *Emericella nidulans* v. *acristata*) ex fabric exposed in New Mexico Wright-Patterson Air Force Base, Dayton, Ohio M.E. Sorte (62X) Nov 1952 /M. Christensen WB 2394 [=ATCC 16839 =NRRL 2394 =QM 1908 =CBS 119.55 =IMI 61453]. Pigment: purple-brown.

Emericella nidulans* var. *dentata (Sandhu & Sandhu) Subram. (morph *Aspergillus an. Emericella nidulans* var. *dentata*)

8072 (T *Emericella nidulans* v. *dentata*) ex diseased nails V.P. Chest Institute, Delhi, India R.S. Sandhu /M. Christensen WB 4908 [=ATCC 16829 =CBS 114.63 =IMI 126693 =QM 8172].

Emericella nidulans* var. *echinulata see *Emericella echinulata*

Emericella nidulans* var. *lata (Thom & Raper) Subram. (morph *Aspergillus an. Emericella nidulans* var. *lata*)

8074 (T *Emericella nidulans* v. *lata*) /M. Christensen WB 200 [=CBS 492.65 =ATCC 16848 =IMI 74181 =QM 7425 =NRRL 200 =Thom 110]. L-malic and succinic acids (Appl. Environ. Microbiol. 56:1594-1597, 1990). Pigment: brown.

Emericella parvathecia (Raper & Fennell) Malloch & Cain
(morph *Aspergillus microthecius*)

- 8078 (T *Emericella parvathecia*) contaminant ex human skin Los Angeles, California G.F. Orr (O-326) /M. Christensen WB 4904 [=ATCC 16822 =CBS 493.65 =IMI 139280 =QM 8034]. Pigment: brown.

Emericella quadrilineata (Thom & Raper) Benjamin (morph *Aspergillus tetrazonus*)

- 8081 (T *Emericella quadrilineata*) ex soil New Jersey /M. Christensen WB 201 [=ATCC 16816 =CBS 591.65 =IMI 89351 =NRRL 201 =QM 7465 =Thom 4138.n8]. Pigment: brown.
- 8389 soil Moara, Australia J. Guarro Mar 1994 /J. Guarro FMR 5488. Pigment: brown.

Emericella rugulosa (Thom & Raper) Benjamin (morph *Aspergillus rugulovalvus*)

- 8079 (T *Emericella rugulosa*) ex soil New Jersey /M. Christensen WB 206 [=ATCC 16820 =CBS 133.60 =NRRL 206 =IMI 136775 =QM 1987 =Thom 4138.T11]. Sterigmatocystin (Appl. Microbiol. 30:589-591, 1975). Pigment: brown.

***Emericella* sp.**

- 10777 aberrant isolate ex tissue of left maxillary sinus, female 59 yr Kingston General Hospital, Kingston, ON /R. Rennie MY 7860 [=OMH FR 1345]. Thermotolerant: grows @ 42C (fide UAH); growth equivalent at 30 & 35C // culture conditions: atypical white variant; sparse conidial production, no ascomata // molecular systematics: BLAST match 100% D1D2 similarity with *Emericella* species (fide UAMH 2008); BLAST match 100% ITS similarity with *Emericella* species (fide UAMH 2008).
- 10898 atypical isolate ex tissue of left antrum following Caldwell-luc procedure, female 70 yr; antrum filled with black, caseous material; no evidence of tissue invasion Edmonton, Alta. S. Kulkarni (S07-68254) 28-Nov-2007 /R. Rennie MY 8904. Culture conditions: sparse conidial production, no ascomata // molecular systematics: BLAST match 100% ITS similarity with *Emericella* species (fide UAMH 2008) // thermotolerant: grows better @ 35C than @ 30C.

Emericella striata (Rai, Tewari & Mukerji) Malloch & Cain
(morph *Aspergillus striatulus*)

- 8082 (T *Emericella striata*) ex mud, Mangrove swamp (pH 7.3) Kagh Islands, West Bengal, India J.N. Rai (KWB) Dec 1960 /M. Christensen WB 4699 [=ATCC 16815 =CBS 592.65 =IMI 96679]. Pigment: red-brown.

Emericella unguis Malloch & Cain (morph *Aspergillus unguis*)

- 8084 (T *Emericella unguis*) shoe leather Philadelphia, PA E. Reese (QM 25b) Dec 1948 /M. Christensen WB 2393 [=NRRL 2393 =CBS 132.55 =IMI 136526 =ATCC 16812 =QM 25b =NRRL A-2391 =NRRL A-445].

Emericella varicolor Berk. & Br. (morph *Aspergillus stellifer*)

- 8080 ex fruit of *Olea europaea* (olives) Italy O. Verona /M. Christensen WB 212 [=ATCC 10067 =CBS 597.65 =IMI 136777 =QM 1901 =Thom 5602.3 =NRRL 212].
- 8824 soil Aimerd, India J. Guarro 21 Nov 1995 /J. Guarro FMR 5831. Pigment: purple.

Emericella violacea (Fennell & Raper) Malloch & Cain
(morph *Aspergillus violaceo-brunneus*)

- 6423 soil, base of *Diospyros mespiliformis* in Inland Forest Area Okavango Delta, Botswana (C) D. Pierce 9 Sep 1987 /R. Khan

TRTC 51035 [=CBS 314.89]. Pigment: gold.

- 8083 (T *Emericella violacea*) ex soil W. African Cacao Research Inst., Tafo, Gold Coast, Ghana C. F. Charter May 1950 /M. Christensen WB 2240 [=ATCC 16813 =CBS 138.55 =IMI 61449 =NRRL A-3156 =QM 1905]. Pigment: brown.

Emericellopsis glabra (J.F.H. Beyma) Backus & Orpurt

- 8928 soil La Mussara, Tarragona, Spain A.M. Stchigel Aug 1996 /J. Guarro FMR 5915. Pigment: brown.

Emericellopsis minima Stolk (morph *Acremonium an.**Emericellopsis minima*)

- 9799 marsh soil University of Manitoba Field Station, Delta Marsh, MB J.W. Pearn 1971 /J. Reid UM 273. Culture conditions: produced ascomata at time of isolation but not at time of deposit; similar to *E. minima*, but has much smaller conidia.

Emericellopsis salmosynnemata Grosklags & Swift (morph *Cephalosporium salmosynnematum* Roberts)

- 1437 (T *Cephalosporium salmosynnematum*) lab contaminant Lansing, Michigan J.M. Roberts 1954 /DAOM 64321 [=ATCC 11661 =IMI 58330 =NRRL 2271 =CBS 182.56 =IFO 9239 =IMI 058330 =VKM F-1260 =NBRC 9239 =GenBank AB425991 ITS]. Cephalosporin N (synnematin B) (U.S. Patent No. 2658018) (Proc. Soc. Exp. Biol. Med. 76:307-311, 1951).

***Emericellopsis* sp.** (morph *Acremonium an. Emericellopsis*

- 685 DAOM 45677. Cellulolytic.

Emericellopsis sphaerospora Udagawa & Furuya (morph *Acremonium an. Emericellopsis sphaerospora*)

- 6519 (T *Emericellopsis sphaerospora*) urea-treated copse soil Sanrizulca, Narita-shi, Chiba-pref., Japan (C) K. Furuya 20 Sep 1987 /S.-I. Udagawa NHL 2984. Culture conditions: oatmeal agar amended with urea (Udagawa & Furuya, Mycotaxon 33:291-301, 1989) // thermotolerant: grows @ 37C.

Emericellopsis terricola van Beyma (morph *Acremonium an. Emericellopsis terricola*)

- 1920 air contaminant Tokyo, Japan 1960 /S.-I. Udagawa NHL 2272. Cellulolytic.
- 1921 soil Chiba, Japan Nov 1962 /S.-I. Udagawa NHL 2307. Cellulolytic.
- 9538 marl pond soil Wagner Natural Area near Spruce Grove, Alta S.P. Abbott (SA-M286) 7 Jan 1999 /S.P. Abbott (SA-M286).

Emilmuelleria spirotricha (R.K. Benjamin) von Arx (syn.*Chaetomidium spirotrichum*, *Kernia spirotricha*)

- 3064 (T *Kernia spirotricha*) deer dung San Gabriel Mts., L.A. Co., Calif. R.K. Benjamin 15 Jul 1953 /R.K. Benjamin RSA 116 [=ATCC 12128 =CBS 211.55 =IMI 60034 =NRRL A-5988 =NRRL 2537].

Emmonsia crescens see ***Ajellomyces crescens******Emmonsia parva*** (Emmons & Ashburn) Ciferri &*Montemartini* (syn. *Emmonsia parva* v. *parva*, *Chrysosporium parvum* v. *parvum*)

- 125 host unknown Arizona C.W. Emmons /C.W. Emmons 2370 [=GenBank AF038331 (ITS) =CBS 139880]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996); descriptions & relationships (Carmichael, Mycologia 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson

- & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Arizona.
- 130 host unknown Arizona Emmons Nov 1946 /C.W. Emmons [=GenBank AF038333 (ITS) =CBS 139881]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996); descriptions & relationships (Carmichael, Mycologia 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- 134 pack rat *Neotoma micropus* Texas 1949 /C.W. Emmons 2372 [=GenBank AF038326 =CBS 139882]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996); descriptions & relationships (Carmichael, Mycologia 43:605-624, 1951) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // human/animal pathogen: naturally infected animal from Texas.
- 434 ?soil (but see Carmichael 1962, 40:1166) Italy R. Ciferri 1955 /R. Ciferri [=GenBank AF038332 (ITS) =GenBank AF038332 =CBS 139883]. Systematics/taxonomy: descriptions, relationships & sexual stage of *E. crescens* (Sigler, J. Med. Vet. Mycol. 34:303-314, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998).
- Emmonsia parva v. parva* see *Emmonsia parva*
- Emmonsia pasteuriana* Drouhet, Gueho & Gori
9510 (T *Emmonsia pasteuriana*) disseminated cutaneous lesions in a HIV+ female, 40 years; histopathology + for yeast-like cells Italy /E. Gueho IP 2310-95 [=GenBank EF592152 ITS =CBS 101426]. Human/animal pathogen: disseminated mycosis in AIDS (Gori et al., J. Mycol. Med. 8:57-63, 1998) // systematics/taxonomy: distinction from *Emmonsia* spp and *Blastomyces* // molecular systematics: Genome Project # PRJNA234734 as strain EP 9510.
- Emmonsia capsulata* see *Ajellomyces capsulatus*
- Endoconidioma populi* Tsuneda, Hambleton & Currah (morph *Hormonema-like*)
10297 (T *Endoconidioma populi*) twig of aspen (*Populus tremuloides*) Whitemud creek, Edmonton, Alta. A. Tsuneda 7-8-01 /A. Tsuneda [=GenBank EU981287 LSU =GenBank AY604526 (SSU-ITS)]. Molecular systematics: phylogeny & morphology of an endoconidial fungus (Tsuneda, Hambleton & Currah, Mycologia 96:1136-1142, 2004; Tsuneda, Hambleton & Currah, Mycologia 96:1128-1135, 2004; Tsuneda A, Hambleton S & Currah RS, Botany 88:675-684, 2010) // biodiversity: black meristematic fungi (BMF) on *Populus tremuloides*.
- 10298 twig of aspen (*Populus tremuloides*) Lansdowne area of Edmonton, Alta. A. Tsuneda 3-11-01 /A. Tsuneda -Y strain [=GenBank AY604527 (ITS)]. Molecular systematics: phylogeny & morphology of an endoconidial fungus (Tsuneda, Hambleton & Currah, Mycologia 96:1128-1135, 2004; Tsuneda A, Hambleton S & Currah RS, Botany 88:675-684, 2010) // biodiversity: endoconidial black meristematic fungi (BMF) on *Populus tremuloides*.
- 10299 ex twig of aspen (*Populus tremuloides*) nr Snow Valley Ski Hill, Edmonton, Alta. A. Tsuneda 2-11-02 /A. Tsuneda WM strain. Biodiversity: endoconidial black meristematic fungi (BMF) on *Populus tremuloides*; produces elongate conidiomata (cleistopycnidia) // molecular systematics: phylogeny & morphology of an endoconidial fungus (Tsuneda A, Hambleton S & Currah RS, Botany 88:675-684, 2010).
- 10902 ex black subiculum formed on a twig of *Alnus crispa* Valley of the Five Lakes, Jasper National Park, Alta. A. Tsuneda 20-Sep-2003 /A. Tsuneda 352. Culture conditions: grow at 18 to 22C // biodiversity: endoconidial black meristematic fungi (BMF) on *Alnus crispa* // molecular systematics: phylogeny & morphology of an endoconidial fungus (Tsuneda A, Hambleton S & Currah RS, Botany 88:675-684, 2010).
- 10903 bark of *Alnus crispa* Valley of the Five Lakes, Jasper National Park, Alta. A. Tsuneda 25-May-2003 /A. Tsuneda 400. Culture conditions: grow at 18 to 22C // biodiversity: endoconidial black meristematic fungi (BMF) on *Alnus crispa*; endoconidial black meristematic fungi (BMF) on *Populus tremuloides* // molecular systematics: phylogeny & morphology of an endoconidial fungus (Tsuneda A, Hambleton S & Currah RS, Botany 88:675-684, 2010).
- Endophoma elongata* Tsuneda & M.L. Davey
11216 (T *Endophoma elongata*) ex soil in bat cave Boulder Run in Cadomin cave, Whitehorse Wildland Provincial Park, Alta (C) A. Hudgins 13-Jun-2010 /A. Tsuneda Bat-1 [=GenBank JF340087 ITS =GenBank JF340088 LSU =GenBank JF340089 Btub]. Systematics/taxonomy: endoconidial conidiogenesis in conidiomata (Tsuneda A, Davey ML, Tsuneda I, Hudgins A, Currah RS, Mycologia 103:1146-1155, 2011).
- Endophragmiella taxi* (Ellis) Hughes
3103 (T *Endophragmia taxi*) dead fern petiole, Pteridium aquilinum rachides under *Taxus* sp. Roundsea Wood, Lancashire, Eng. J.C. Frankland (M 3215) 1961 /IMI 98900 [=ATCC 24320 =CBS 646.66].
- Endosporium aviarium* Tsuneda
10530 (T *Endosporium aviarium*) ex skin piece from uropygial gland area of a bohemian waxwing (*Bombycilla garrulous*) Edmonton, Alta. (C) M. Plishka 26-Apr-03 /A. Tsuneda [=GenBank EU304351 LSU =GenBank EU304349 SSU =GenBank EU304350 ITS]. Molecular systematics: *Endosporium*, a new endoconidial genus (Tsuneda A, Davey ML, Hambleton S, Currah RS, Can J Bot 86:1020-1033, 2008) // biodiversity: endoconidial black meristematic fungus (BMF).
- 10531 black subiculum formed on a twig of balsam poplar (*Populus balsamifera*) Ogilvie Ridge, Edmonton, Alta. A. Tsuneda 5-10-03 /A. Tsuneda [=GenBank EU304353 LSU =GenBank EU304352 ITS]. Molecular systematics: *Endosporium*, a new endoconidial genus (Tsuneda A, Davey ML, Hambleton S, Currah RS, Can J Bot 86:1020-1033, 2008) // biodiversity: endoconidial black meristematic fungus (BMF).
- Endosporium populi-tremuloidis* Tsuneda
10529 (T *Endosporium populi-tremuloidis*) bud of aspen (*Populus tremuloides*) Whitemud Creek, Edmonton, AB A. Tsuneda 3-Nov-02 /A. Tsuneda [=GenBank EUEU304358 LSU =GenBank EU304358 LSU =GenBank EU304347 ITS]. Molecular systematics: *Endosporium*, a new endoconidial genus (Tsuneda A, Davey ML, Hambleton S, Currah RS, Can J Bot 86:1020-1033, 2008) // plant pathogen: potential pathogen of trembling aspen // biodiversity: endoconidial black meristematic fungus (BMF).
- Endoxyla macrostoma* Fuckel
11491 rotting decorticated wood of *Pinus strobus* Brookvale Demonstration Woodlot, Queens County, PEI (C) A. Carter; (I) W. Untereiner Jun-2009 /W. Untereiner WUC 679 [=GenBank JX460985 ITS =GenBank JX460990 LSU]. Culture conditions: does not sporulate in culture (fide W. Untereiner) // odor: fruity (fide UAMH 2012) // molecular

systematics: systematics of Apiorhynchostoma, Endoxyla and Pseudovalsaria in the Boliniales (Untereiner WA, Bogale W, Carter A, Platt HW, Hanson S-A, T Laessoe, Stepanek V, Reblova M, Mycologia 105:564-588, 2013).

Endoxyla mallochii Unter., A. Carter & Reblova

11087 rotten log of Abies sp. or Picea sp. Fort Amherst, PEI (C) A. Carter (AC-880) 2-Jun-2008 /W. Untereiner WUC 667 [=GenBank JX460986 ITS =GenBank JX460991 LSU]. Culture conditions: does not sporulate in culture (fide W. Untereiner) // molecular systematics: systematics of Apiorhynchostoma, Endoxyla and Pseudovalsaria in the Boliniales (Untereiner WA, Bogale W, Carter A, Platt HW, Hanson S-A, T Laessoe, Stepanek V, Reblova M, Mycologia 105:564-588, 2013).

Endoxyla operculata (Alb. & Schwein.) Sacc.

11085 mass ascospore isolate ex ascocarp on rotten log of Populus cf. balsamifera Cumberland, PEI (C) A. Carter 1-Jun-2009 /W. Untereiner WUC 665 [=GenBank JX460987 ITS =GenBank JX460992 LSU]. Pigment: purple/brown // odor: sweet scent, especially on cereal agar // molecular systematics: systematics of Apiorhynchostoma, Endoxyla and Pseudovalsaria in the Boliniales (Untereiner WA, Bogale W, Carter A, Platt HW, Hanson S-A, T Laessoe, Stepanek V, Reblova M, Mycologia 105:564-588, 2013) // culture conditions: does not sporulate in culture.

11086 single ascospore isolate ex ascocarp on rotten log of Populus balsamifera Cumberland, PEI (C) A. Carter 1-Jun-2008 /W. Untereiner WUC 666. Pigment: purple/brown // molecular systematics: systematics of Apiorhynchostoma, Endoxyla and Pseudovalsaria in the Boliniales (Untereiner WA, Angus A, Reblova M, Orr M-J, Botany 86:742-750, 2008) // culture conditions: does not sporulate in culture.

Engyodontium album (Limber) de Hoog (syn. *Beauveria alba*)

1441 human skin Netherlands G.A. de Vries 1955 /DAOM 75867 [=CBS 348.55 =ATCC 22563 =MUCL 1060].

4511 eye wound following corneal transplant Princeton, West Virginia Aug 1981 /CDC 82-011024. Human/animal pathogen: eye infection after injury (McDonnell et al, Cornea 3:213, 1985).

4512 eye wound following corneal transplant Princeton, West Virginia Aug 1981 /CDC 82-001629 [=UAMH 4511]. Human/animal pathogen: eye infection after injury.

4870 human specimen /J. Kane FR 1293-83.

6034 air hospital post-construction Toronto R.C. Summerbell 10 Jun 1987 /R.C. Summerbell J10/2A2.

8194 indoor air ex RCS strip, basement crawlspace Sherwood Park, Alta S.P. Abbott (SA-M264) 31-Jul-1995 /S.P. Abbott (SA-M264).

8313 blood from Isolator tube, male 37 yr with acute myelogenic leukemia Saskatoon, Sask. C. Kinahan Nov 1995 /C. Kinahan RUH 199128/95.

9661 ventilation tube in mine Yellowknife, NWT G. Seto Oct 1999 /G. Seto. Cycloheximide: resistant.

9836 rt. side bronchoscopy specimen, male 69 yr Toronto, ON Jun 2000 /R. Rennie MY 4573 [=OMH FR-0562].

9874 specimen, female 76 yr Texas Oct 2000 /Texas Dept. of Health BY 2747. Thermotolerant: grows @ 37C.

10043 pleural fluid, brood mare with pericarditis and tamponade Lexington, KY 17 May 2001 /J. Reimer 5608. Human/animal pathogen: horse euthanized and repeat cultures at necropsy were negative (fide submitting lab).

10250 drywall in hospital Didsbury, Alta. L. Sigler 9-Dec-2002.

11234 ex vegetations on valve, male 44 yr with endocarditis following insertion of bovine pericardial thermafix bioprosthesis; histopathology + for hyphae Bridgeport

Hospital, Bridgeport, CT 2010 /D.A. Sutton UTHSC 10-669 [=UTHSC R-4523 =GenBank HM214540 D1D2 =GenBank HM214541 ITS]. Human/animal pathogen: bioprosthetic valve endocarditis (Balasingham S, Chalkias S, Balasingham A, Saul Z, Wickes BL, Sutton DA, Medical Mycology 49:430-434, 2011).

Enterocarpus grenotii see *Lophotrichus bartlettii*

Epicoccum andropogonis (Ces.) Schol-Schwarz

7277 ex roots of epiphytic orchid Epidendrum sp. La Selva, Heredia Prov., Costa Rica K. Richardson 2 Apr 1991 /R.S. Currah K204e. Pigment: black // mycorrhizae: root endophyte epiphytic orchid Epidendrum sp..

7278 ex roots of epiphytic orchid Stelis sp. La Selva, Heredia Prov., Costa Rica K. Richardson 22 Oct 1991 /R.S. Currah K382e. Pigment: black // mycorrhizae: root endophyte epiphytic orchid Stelis sp..

Epicoccum nigrum Link (syn. *Epicoccum purpurascens*)

1202 soft rot of cedar cooling tower Toronto, Ont. J.W. Carmichael 1962 /J.W. Carmichael.

1210 soft rot of cedar cooling tower Toronto, Ont. J.W. Carmichael 1962. Pigment: brown // culture conditions: good sporulation on TAK.

2776 garden soil Edmonton, Alta. D. Remington 30 May 1967 /D. Remington. Culture conditions: nonsporulating in 2002.

3247 livestock feed Edmonton, Alta. J.W. Carmichael 2 Jul 1969 /D. Stelfox PI 69-291 [=GenBank AY625064 ITS]. Application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004) // molecular systematics: ITS sequence AY625064 demonstrates 1 bp difference with GU014950 Epicoccum group 2 of Favero et al 2011 (fide UAMH 2012; Compare Favero et al, PLoS One, 6(8):e14828, 2011 Epub Aug 11).

4256 contaminant ex skin specimen Edmonton, Alta. 1979 /; . Biodeteriogen/biodegradation: diagenic alteration of spar calcite (Jones & Pemberton, Can. J. Earth Sci. 24:903-914, 1987).

5221 acorn squash Cucurbita pepo var. pepo Vermilion, Alta. L. Sigler Dec 1985 /L. Sigler. Pigment: brown.

5353 white spruce seeds Alberta R. Mittal 9 Jan 1986 /R. Mittal M50. Pigment: red // plant pathogen: on seed (pathogen?) (Mittal & Wang, Can. J. For. Res. 17:1026-1034, 1987).

5362 white spruce seeds Alberta R. Mittal 22 Jan 1986 /R. Mittal M-51. Pigment: red // plant pathogen: on seed (pathogen?) (Mittal & Wang, Can. J. For. Res. 17:1026-1034, 1987).

5363 eastern white pine seed Algonquin Park, Ont. R. Mittal 9 Jan 1986 /R. Mittal R-73. Pigment: red // plant pathogen: on seed (pathogen?) (Mittal & Wang, Can. J. For. Res. 17:1026-1034, 1987).

7053 pollen ex Megachile rotundata (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 522) Aug 1990 /D. Inglis (MR 522). Pigment: orange.

7276 ex roots of orchid Sobralia sp. La Selva, Heredia Prov., Costa Rica K. Richardson 28 Mar 1991 /R.S. Currah K168a. Pigment: black // mycorrhizae: root endophyte orchid Sobralia sp..

7772 indoor air ex RCS strip, from Apis mellifera (honeybee) equipment cleaning warehouse Beaverlodge, Alta. S.P. Abbott (OHS 286) 4 May 1994 /S.P. Abbott (OHS 286). Pigment: brown // cellulolytic.

10787 ex liquid scintillator containing naphthalene, ethoxylated nonylphenol, mineral oil, diphenyloxazole and benzene University of British Columbia, Vancouver, B.C. A. Zakaryan (AZ1) 25-Jan-06 /M.L. Berbee AZ 1 [=GenBank DQ981396]. Molecular systematics: ITS 100% similarity with GU014946 CBS 318.83 // culture conditions: growing in liquid scintillator and interfering with detection of elementary particles (fide M.

- Berbee); good sporulation on CER + CER blocks on TWA // application: Cited in patent US20120129718
Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
11635 environmental fungus from unknown source Edmonton, Alta. S. Kozak Dec-2011 /J. McDonald A. Molecular systematics: ITS 99% similarity with UAMH 3247 (AY625064); Blast match 99-100% ITS similarity with *Epicoccum nigrum* (fide UAMH 2012).

Epicoccum purpurascens see *Epicoccum nigrum*

Epidermophyton floccosum (Harz) Langeron & Milochevitch

- 56 scrapings from groin Edmonton, Alta. J.W. Carmichael Jan 1950 /J.W. Carmichael.
502 skin ex groin Edmonton, Alta. J.W. Carmichael May 1956 /J.W. Carmichael.
2499 scrapings ex hand Edmonton, Alta. J.W. Carmichael 15 Apr 1965 /J.W. Carmichael.
2500 scrapings from groin Edmonton, Alta. J.W. Carmichael 20 Apr 1965 /J.W. Carmichael.
2501 scrapings from arm Edmonton, Alta. J.W. Carmichael 6 May 1965 /J.W. Carmichael.
2590 scrapings from wrist Johannesburg S. Africa 1965 /P. Martin 18.
6208 teaching strain /P. Martin.
7946 ex Lt foot, male /A. Woodgyer 94.321.

Epidermophyton stockdaleae see *Arthroderma uncinatum*

Epulorhiza albertaensis Currah & Zelmer

- 6445 (T *Epulorhiza albertaensis*) endophyte of round-leaved orchid *Platanthera orbiculata* Edson Forest, Alta. R. Currah (248b) 3 Jun 1987 /R. Currah (248b) [=CBS 276.90]. Mycorrhizae: with orchid *Platanthera orbiculata*.

Epulorhiza anaticula (Currah) Currah (syn. *Rhizoctonia anaticula*)

- 5428 ex fairy slipper orchid *Calypso bulbosa* Swan Hills, Alta. R. Currah (11e) 4 Jun 1985 /R. Currah (11e) [=ATCC 64842 =IMI 318089 =GenBank AY243520 LSU =GenBank AF345559 LSU]. Mycorrhizae: septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992) // molecular systematics: orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093, 2001; Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008); Tulasnella clade (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).
5431 ex white bog orchid *Platanthera dilatata* Castle River, Alta. R. Currah (56a) 20 Jun 1985 /R. Currah (56a). Mycorrhizae: orchid endophyte *Platanthera dilatata*.
5434 (T *Rhizoctonia anaticula*) ex blunt-leaved orchid *Platanthera obtusata* Imperial Mills, Alta. R. Currah (75a) 10 Jul 1985 /R. Currah (75a) [=ATCC 64843 =DAOM 197968 =IMI 318091]. Mycorrhizae: orchid endophyte *Platanthera obtusata*.
5435 ex blunt-leaved orchid *Platanthera obtusata* Imperial Mills, Alta. R. Currah (82ta4) 10 Jul 1985 /R. Currah (82ta4). Mycorrhizae: orchid endophyte *Platanthera obtusata*.
6447 endophyte of northern green orchid *Platanthera hyperborea* nr Edmonton, Alta. R. Currah (261a) 3 Jun 1987 /R. Currah (261a). Mycorrhizae: with orchid *Platanthera hyperborea*.
6448 endophyte of blunt-leaved orchid *Platanthera obtusata* Rocky Mountain Forest, Alta. R. Currah (281c) 30 Jun 1987 /R. Currah (281c). Mycorrhizae: with orchid *Platanthera obtusata*.
6449 endophyte of long-bracted green orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (285b) 14 Jul 1987 /R. Currah

(285b) [=CBS 191.90]. Mycorrhizae: with orchid *Coeloglossum viride*.

- 6450 endophyte of long-bracted green orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (288a) 14 Jul 1987 /R. Currah (288a). Mycorrhizae: with orchid *Coeloglossum viride*.

Epulorhiza calendulina Zelmer & Currah

- 7782 (T *Epulorhiza calendulina*) ex pelotons in root cortical cells of small round-leaf orchid *Amerorchis rotundifolia* (Orchidaceae) growing in fen Calahoo, Alta. C. Zelmer 7 Jul 1991 /R.S. Currah Z11-orv-(b)1. Mycorrhizae: with orchid *Amerorchis rotundifolia* // pigment: orange // molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010).
7783 ex pelotons in root cortical cells of small round-leaf orchid *Amerorchis rotundifolia* (Orchidaceae) Calahoo, Alta. C. Zelmer 7 Jul 1991 /R.S. Currah Z10-orh-2a(1). Mycorrhizae: with orchid *Amerorchis rotundifolia* // molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010).
7784 ex pelotons in root cortical cells of small round-leaf orchid *Amerorchis rotundifolia* (Orchidaceae) Calahoo, Alta. C. Zelmer 7 Jul 1991 /R.S. Currah Z25-orh-a. Mycorrhizae: with orchid *Amerorchis rotundifolia* // cellulolytic // molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010).
7785 ex pelotons in root cortical cells of orchid *Amerorchis rotundifolia* (Orchidaceae) Calahoo, Alta. C. Zelmer 7 Jul 1991 /R.S. Currah Z26-orh-2a. Mycorrhizae: with orchid *Amerorchis rotundifolia* (Zelmer & Currah, Can. J. Bot. 73:1981-1985, 1995).

Epulorhiza inquilina Currah, Zettler & McInnis

- 7632 (T *Epulorhiza inquilina*) lateral roots (non-tuberous) of terrestrial monkey face orchid *Platanthera integrilabia*, part of small population (ca.50) on muck soil on shaded S-facing seepage slope Pinnacle Mountain, Greenville Co., South Carolina L. Zettler 29 Apr 1989 /L. Zettler Pi-70. Mycorrhizae: orchid endophyte *Platanthera integrilabia*; very effective at promoting seed germination and propagation of orchid *Platanthera integrilabia* // benomyl: sensitive // cycloheximide: sensitive // culture conditions: use of light & fungal inoculation to stimulate germination & growth of seedlings (Zettler & McInnis Plant Sci. 102:133-138, 1994).
7807 lateral (non-tuberous) roots of monkey face orchid *Platanthera integrilabia* in a small population Savage Gulf State Natural Area, Grundy Co., Tennessee L. Zettler 20 May 1989 /L. Zettler Pi-89. Mycorrhizae: very effective at promoting seed germination and soil establishment of orchid *Platanthera integrilabia*; orchid endophyte *Platanthera integrilabia* // culture conditions: use of light & fungal inoculation to stimulate germination & growth of seedlings (Zettler & McInnis Plant Sci. 102:133-138, 1994).
7808 lateral (non-tuberous) roots of monkey face orchid *Platanthera integrilabia* in a small population Savage Gulf State Natural Area, Grundy Co., Tennessee L. Zettler 20 May 1989 /L. Zettler Pi-93. Mycorrhizae: very effective at promoting seed germination and soil establishment of orchid *Platanthera integrilabia*; orchid endophyte *Platanthera integrilabia*.
7810 ex lateral roots of mature *Platanthera cristata* in largest known population of *P. integrilabia* within the Cherokee National Forest Starr Mountain, McMinn Co., Tennessee L. Zettler 19 Aug 1989 /L. Zettler Pst-163. Mycorrhizae: effective at promoting seed germination and soil establishment of orchid *Platanthera integrilabia*; orchid endophyte *Platanthera cristata* // culture conditions: use of light & fungal inoculation to stimulate germination & growth of seedlings (Zettler &

McInnis Plant Sci. 102:133-138, 1994).

Epulorhiza repens (Bernard) Moore (syn. *Rhizoctonia repens*;
morph *Tulasnella calospora*)

- 5746 ex green-winged orchid *Orchis morio* P. Vermeulen /CBS 297.32 [=ATCC 24975]. Mycorrhizae: orchid endophyte *Orchis morio*.
- 5747 CBS 298.35.
- 6095 endophyte ex orchid *Dactylorhiza maculata* Netherlands E. Dijk /E. Dijk DMC3. Molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010) // mycorrhizae: orchid endophyte *Dactylorhiza maculata*.
- 6096 endophyte ex orchid *Dactylorhiza majalis* Netherlands E. Dijk /E. Dijk DMJ9. Molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010) // mycorrhizae: orchid endophyte *Dactylorhiza majalis*.
- 6097 endophyte ex green-winged orchid *Orchis morio* Netherlands E. Dijk /E. Dijk OMR07. Molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010) // mycorrhizae: orchid endophyte *Orchis morio*.
- 6564 endophyte ex Cases ladies tresses orchid *Spiranthes casei* growing in sphagnum with *Scirpus hudsonianus*, *Pogonia oplioglossoides*, *Calopogon tuberosa* & *Sedum groenlandica* Mount Forest bog, Wellington Co., Minto Twp., Ont. A. Anderson 30 Aug 1989 /A. Anderson. Molecular systematics: orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010) // mycorrhizae: orchid endophyte *Spiranthes casei* (Lievens B, van Kerckhove S, Juste A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80:76-85, 2010).
- 6565 endophyte ex Great Plains ladies tresses orchid *Spiranthes magnicamporum*, mixed *S. magnicamporum* (many) & *S. cernua* (few) in moist areas of dry stony field with grasses Muirkirk, Ont. A. Anderson 19 Sep 1989 /A. Anderson. Mycorrhizae: orchid endophyte *Spiranthes magnicamporum*.

Epulorhiza repens see *Tulasnella calospora*

***Epulorhiza* sp.**

- 5427 ex fairy slipper orchid orchid *Calypso bulbosa* Swan Hills, Alta. R. Currah (11d) 4 Jun 1985. Mycorrhizae: orchid endophyte *Calypso bulbosa*.
- 5429 ex fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (33b) 19 Jun 1985. Mycorrhizae: orchid endophyte *Calypso bulbosa*.
- 5430 ex blunt-leaved orchid *Platanthera obtusata* Grassi L., Canmore, Alta. R. Currah (62a4) 19 Jun 1985 /R. Currah (62a4) [=ATCC 64844 =IMI 318090 =GenBank EU218890 ITS]. Mycorrhizae: septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992) // molecular systematics: orchid mycorrhizal fungi (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008); *Tulasnellaceae* clade (fide Taylor & McCormick 2008).
- 5432 ex fairy slipper orchid *Calypso bulbosa* Castle River., Alta. R. Currah (51d) 20 Jun 1985. Mycorrhizae: orchid endophyte *Calypso bulbosa*.
- 5436 ex Western rattlesnake plantain orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (32a) 19 Jun 1985. Mycorrhizae: orchid endophyte *Goodyera oblongifolia*.
- 7633 ex roots of terrestrial yellow fringed orchid *Platanthera ciliaris* from semi-dry clay soil in mowed field Van Buren Co., Tennessee L. Zettler 18 Aug 1989 /L. Zettler TN29-Pcil-154. Mycorrhizae: orchid endophyte *Platanthera ciliaris*; effective

at promoting seed germination and soil establishment of orchid *Platanthera integrilabia*; effect of light & fungal inoculation in germination & seedling development of orchid *Spiranthes odorata*; symbiotic germination of orchid seed, *Platanthera integra*, a species in decline or threatened (Zettler LW, Sunley JA, Delaney TW, Castanea 65:207-212, 2000) // benomy: sensitive.

- 8562 roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991 /R.S. Currah Z63-nr-1b(1). Mycorrhizae: naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera* // cellulolytic: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- 8563 roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991 /R.S. Currah Z63-nr-2c(2). Mycorrhizae: naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera* // cellulolytic: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- 8564 roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991 /R.S. Currah Z63-nr-3a(1). Mycorrhizae: naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera* // cellulolytic: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- 8565 roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991 /R.S. Currah Z63-nr-3a(2). Mycorrhizae: naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera* // cellulolytic: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- 8566 roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991 /R.S. Currah Z65-NR-a(2). Mycorrhizae: naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera*; by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997) // cellulolytic.
- 9203 ex roots of epiphytic green fly orchid (*Epidendrum conopseum*) growing with Resurrection fern (*Polypodium polypodioides*) on horizontal limb of 200+ yr oak (*Quercus virginiana*) Gainesville, Alachua Co., Florida L. Zettler 7 Jun 1995 /L. Zettler Econ-242. Mycorrhizae: *Encyclia tampensis* seed germination in presence of fungus isolated from *Epidendrum conopseum*. Evidence for non-specificity for mycorrhizal fungi. (Burkhead, Marshall & Zettler, Association of Southeastern Biologists Bulletin 45(2) :175 (abstract), 1998; Zettler, Wilson Delaney & Sunley, Selbyana 19:249-253, 1998); orchid endophyte epiphytic *Epidendrum conopseum*; seed germination and propagation of Green Fly orchid (*Epidendrum conopseum*) using mycorrhizal fungus (Zettler LW, Burkhead JC, Marshall JA, Lindleyana 14:102-105, 1999; Zettler LW, Wilson Delaney T, Sunley JA, Selbyana 19:249-253, 1999); symbiotic germination of orchid seeds (*Habenaria repens*, *H. quinquiseta*, *H. macroceratitis*) (Stewart, S.L. & L.W. Zettler, Aquatic Botany 72:25-35, 2002); water uptake of fungus infected orchid seeds (*Platanthera integrilabia*, *Epidendrum conopseum*); symbiotic seed germination (*Platanthera integrilabia*, a US federally-threatened terrestrial orchid species); symbiotic germination of semi-aquatic rein orchids; symbiotic seed germination of orchid *Spiranthes brevilabris*.
- 9824 orange-tan region of primary lateral roots of Texas ladies tresses orchid *Spiranthes brevilabris* Levy Co., Florida (c) P.M. Brown H.A. Hudgens Apr 1999 /S.L. Stewart Flx-Sbrev-266. Mycorrhizae: symbiotic germination of orchid seeds (*Habenaria repens*, *H. quinquiseta*, *H. macroceratitis*) (Stewart, S.L. & L.W. Zettler, Aquatic Botany 72:25-35, 2002); symbiotic seed germination with *Spiranthes delitescens*, an endangered orchid species (US Endangered Species Act); symbiotic seed germination of orchid *Spiranthes brevilabris*;

- failed to promote germination in seeds of orchid *Eulophia alta* (Johnson TR, Stewart SL, Dutra D, Kane ME, Richardson L, Plant Cell Tiss Organ Cult Plant Cell Tiss Organ Cult 90:313-323, 2007).
- 9826 orange-tan regions of the primary lateral roots of Florida terrestrial orchid *Habenaria macroceratitis* Indian Ledges site, Sumter Co., FL, USA (c) S.L. Stewart & P.M. Brown S.L. Stewart 09 Oct 1999 /S.L. Stewart Flx - Hmac - 292. Mycorrhizae: symbiotic germination of orchid seeds (*Habenaria repens*, *H. quinquiseta*, *H. macroceratitis*) (Stewart, S.L. & L.W. Zettler, Aquatic Botany 72:25-35, 2002).
- 9844 protocorm of one year old Western prairie fringed orchid *Platanthera praecleara* seedling Bicentennial Prairie, Clay County, Minnesota J. Sharma 25 Jul 1999 /J. Sharma Bic 68 [=GenBank DQ068772 ITS]. Mycorrhizae: symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praecleara* (Sharma J, Zettler LW, Van Sambeek JW, Ellersieck MR, C.J. Starbuck CJ, Am Midl Nat 149:104-120, 2003); septum ultrastructure (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003); survey of mycobionts of federally threatened orchid *Platanthera praecleara* (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003) // molecular systematics: Tulasnellaceae clade (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).
- 9846 new lateral root of flowering Western prairie fringed orchid *Platanthera praecleara* Helton Prairie, Harrison County, Missouri J. Sharma /J. Sharma Hel-166. Mycorrhizae: symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praecleara* (Sharma J, Zettler LW, Van Sambeek JW, Ellersieck MR, C.J. Starbuck CJ, Am Midl Nat 149:104-120, 2003); survey of mycobionts of federally threatened orchid *Platanthera praecleara* (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003); septum ultrastructure (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003) // molecular systematics: Tulasnellaceae clade (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).
- 9855 peloton ex root-like organs in mature plant of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999 /L. Zettler Pleu-268 [=GenBank DQ068772 ITS]. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- 9856 peloton ex root-like organs in mature plant of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999 /L. Zettler Pleu-272. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 9857 peloton ex root-like organs in mature plant of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999 /L. Zettler Pleu-290. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 10219 ex roots of adult eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02 /L. Zettler III-Pleu 302 [=Illinois College Herb. LWZ 865 (voucher orchid)]. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 10220 ex roots of adult eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02 /L. Zettler III-Pleu 304 [=Illinois College Herb. LWZ 865 (voucher orchid)]. Mycorrhizae: orchid endophyte *Platanthera leucophaea*; study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- 10545 ex peloton, protocorm "B", from endangered endemic Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004 /L. Zettler 328. Mycorrhizae: orchid endophyte, endangered Hawaiian orchid // culture conditions: poor growth on CMA; slow growth on PDA pH5 at 18C // biodiversity: acquired by means of a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait // mesophilic: grow at 18 to 22C.
- 10546 ex peloton, protocorm "A", from endangered endemic Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004 /L. Zettler 330. Mycorrhizae: orchid, from endangered Hawaiian orchid *Platanthera holochila* // culture conditions: poor growth on CMA; slow growth on PDA pH5 at 18C // mesophilic: grow at 18 to 22C // biodiversity: acquired using a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait.
- 10547 ex peloton, protocorm "Z", from endangered endemic Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004 /L. Zettler 331. Mycorrhizae: orchid endophyte, endangered Hawaiian orchid *Platanthera holochila* // culture conditions: poor growth on CMA; slow growth on PDA pH5 at 18C // mesophilic: grow at 18 to 22C // biodiversity: acquired using a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait.
- 10548 ex peloton, protocorm "Z", from endangered endemic orchid Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004 /L. Zettler 332. Mycorrhizae: orchid endophyte, endangered Hawaiian orchid *Platanthera holochila* // culture conditions: poor growth on CMA; slow growth on PDA pH5 at 18C // mesophilic: grow at 18 to 22C // biodiversity: acquired using a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait.
- 10688 ex hyphal tip from peloton in root of little ladies tresses orchid *Spiranthes tuberosum* Marion County, FL. W. Kutosky 25-Nov-2005 /L. Zettler 340. Mycorrhizae: orchid *Spiranthes tuberosum*.
- 10689 ex hyphal tip from peloton in stage 4 protocorm of Florida terrestrial orchid *Habenaria repens* (protocorm resulted from seed bait sown in-situ 5 mo previously) Cumberland County, NC B. Keel 13-Oct-2005 /L. Zettler 343. Mycorrhizae: orchid endophyte *Habenaria repens*.
- 10748 ex hyphal tip from peloton in small root of little ladies tresses orchid *Spiranthes tuberosum* Marion Co., FL (C) W. Kutosky 25-Nov-2006 /L. Zettler 339. Mycorrhizae: orchid endophyte *Spiranthes tuberosum*.
- 10749 ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (WF-10) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #1) 13-Oct-2005 /L. Zettler 341. Mycorrhizae: orchid endophyte *Habenaria repens*; symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.
- 10750 ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (WF-10) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #2) 13-Oct-2005 /L. Zettler 342. Mycorrhizae: orchid endophyte *Habenaria repens*; symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.
- 10751 ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida

- terrestrial orchid *Habenaria repens* via seed bait (WF-7-b) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #4) 13-Oct-2005 /L. Zettler 345. Mycorrhizae: symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus; orchid endophyte *Habenaria repens*.
- 10752 ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (WF-7-b) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #5) 13-Oct-2005 /L. Zettler 346. Mycorrhizae: orchid endophyte *Habenaria repens*; seed germination of orchid *H. repens* using mycorrhizal fungus (fide B. Keel, Doctoral thesis; Keel BG, Zettler LW, Kaplin BA. *Castanea* 76:43-54, 2011).
- 10753 ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (NH-3) Nags Head Ecological Preserve, Dare Co., NC B. Keel (Fungus #6) 13-Oct-2005 /L. Zettler 347. Mycorrhizae: orchid endophyte *Habenaria repens*; symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.
- 10754 ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (NH-3) Nags Head Ecological Preserve, Dare Co., NC B. Keel (Fungus #7) 13-Oct-2005 /L. Zettler 348. Mycorrhizae: orchid endophyte *Habenaria repens*; symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.
- 10801 ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Hernando Co., FL S.L. Stewart 27-Sep-03 /S.L. Stewart FL-Hmac-309. Mycorrhizae: symbiotic seed germination of *Habenaria macroceratitis* (Stewart SL, Kane ME, Plant Cell, Tissue and Organ Culture 86:159-167, 2006); orchid endophyte *Habenaria macroceratitis*.
- 10802 ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 30-Sep-03 /S.L. Stewart FL-Hmac-313. Mycorrhizae: symbiotic seed germination of *Habenaria macroceratitis* (Stewart SL, Kane ME, Plant Cell, Tissue and Organ Culture 86:159-167, 2006); orchid endophyte *Habenaria macroceratitis*.
- 10803 ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 02-Jul-04 /S.L. Stewart FL-Hmac-319. Mycorrhizae: orchid endophyte *Habenaria macroceratitis*.
- 10804 ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 02-Jul-04 /S.L. Stewart FL-Hmac-321. Mycorrhizae: symbiotic seed germination of *Habenaria macroceratitis* (Stewart SL, Kane ME, Plant Cell, Tissue and Organ Culture 86:159-167, 2006); orchid endophyte *Habenaria macroceratitis*.
- 10805 ex roots Florida terrestrial marsh ladies tresses orchid *Spiranthes odorata* Levy Co., FL S.L. Stewart 20-Nov-04 /S.L. Stewart FL-Sodo-330. Mycorrhizae: symbiotic seed germination of orchid *Spiranthes odorata*; orchid endophyte *Spiranthes odorata*.
- 10806 ex roots Florida terrestrial orchid *Spiranthes odorata* Levy Co., FL S.L. Stewart 20-Nov-04 /S.L. Stewart FL-Sodo-333. Mycorrhizae: symbiotic seed germination of orchid *Spiranthes odorata*; orchid endophyte *Spiranthes odorata*.
- 10962 ex pelotons of mature flowering purple fringed orchid *Platanthera grandiflora* Blue Ridge Parkway, Buncombe Co., NC L.W. Zettler 24-Jun-1991 /L. Zettler 189. Mycorrhizae: orchid endophyte *Platanthera grandiflora*; symbiotic germination studies not done (fide L.W. Zettler).
- 10963 ex pelotons of mature flowering purple fringed orchid *Platanthera grandiflora* Blue Ridge Parkway, Buncombe Co., NC L.W. Zettler 24-Jun-1991 /L. Zettler 191. Mycorrhizae: orchid endophyte *Platanthera grandiflora*; symbiotic germination studies not done (fide L.W. Zettler).
- 11580 ex cortical region (not distinct peloton) from roots of necrotic mature orchid *Platanthera leucophaea* Sundrop Prairie, Cook Co., IL (C) L.W. Zettler & S. Goldman (TNC) 23-Aug-2011 /L. Zettler 368. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11581 ex cortical region (not distinct peloton) from roots of necrotic mature orchid *Platanthera leucophaea* Sundrop Prairie, Cook Co., IL (C) L.W. Zettler & S. Goldman (TNC) 23-Aug-2011 /L. Zettler 369. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11667 ex lateral branch root of mature *Platanthera leucophaea* (Eastern prairie fringed orchid) (specimen #7840) growing in shallow ditch on compact soil Bystricky Prairie, McHenry Co., Illinois (C) L.W. Zettler & L. Ryan 23-Jul-2012 /L. Zettler 372. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.
- 11737 ex lateral roots of mature flowering Florida terrestrial orchid *Spiranthes vernalis* (spring lady's tresses), (voucher LWZ # 886) Florida Panther National Wildlife Refuge, Collier Co., FL (C) A. L. Stice; (I) H. Thixton 10-Mar-2013 /L. Zettler 374. Mycorrhizae: orchid endophyte *Spiranthes vernalis*.
- 11749 ex root of mature epiphytic orchid *Epidendrum amphistomum* Florida Panther National Wildlife Refuge, West Henson location, Collier Co., FL K. Edwards & K. Patel 19-Jun-2013 /L. Zettler 378. Mycorrhizae: orchid endophyte epiphytic *Epidendrum amphistomum*.
- 11752 ex root of mature terrestrial monk orchid *Oeceoclades maculata* (Florida invasive species) Florida Panther National Wildlife Refuge, public hiking trail, Collier Co., Florida K. Edwards & K. Patel 21-Jun-2013 /L. Zettler 381. Mycorrhizae: orchid endophyte *Oeceoclades maculata* (Florida invasive species).
- 11753 ex root of clamshell orchid *Prosthechea cochleata* Florida Panther National Wildlife Refuge, West Henson location, Collier Co., FL K. Edwards & K. Patel 19-Jun-2013 /L. Zettler 382. Mycorrhizae: orchid endophyte *Prosthechea cochleata*.
- 11754 ex root of mature terrestrial ground orchid *Eulophia graminea* (invasive species). Florida Panther National Wildlife Refuge, west side Unit 3 location, Collier Co., FL K. Edwards & K. Patel 21-Jun-2013 /L. Zettler 383. Mycorrhizae: orchid endophyte *Eulophia graminea*.
- 11755 ex root of mature terrestrial ground orchid *Eulophia graminea* (Florida invasive species) Florida Panther National Wildlife Refuge, west side Unit 3 location, Collier Co., FL K. Edwards & K. Patel 21-Jun-2013 /L. Zettler 384. Mycorrhizae: orchid endophyte *Eulophia graminea*.
- 11756 ex root of mature terrestrial ground orchid *Eulophia graminea* (Florida invasive species) Florida Panther National Wildlife Refuge, west side Unit 3 location, Collier Co., Florida K. Edwards & K. Patel 21-Jun-2013 /L. Zettler 385. Mycorrhizae: orchid endophyte *Eulophia graminea*.
- 11800 ex terrestrial juvenile orchid *Platanthera leucophaea* Bystricky Prairie, McHenry Co., Illinois (C) L.W. Zettler and L. Ryan 15-Aug-2013 /L. Zettler 386. Mycorrhizae: orchid endophyte *Platanthera leucophaea*.

***Eremascus albus* Eidam**

- 641 mustard powder Cambridge, MA F.T. Brooks 1950 /IMI 41285 [=CBS 239.50].
2701 Davis, Calif. J.I. Pitt /J.I. Pitt 92.

***Eremascus fertilis* Stoppel**

- 2700 Davis, Calif. J.I. Pitt /J.I. Pitt 37.

***Eremomyces bilateralis* Malloch & Cain**

- 5516 pack rat dung Crystal Spring Reservoir, San Mateo Co., Calif. D. Malloch 30 Dec 1969 /D. Malloch TRTC 45710 [=ATCC 22152]. Cycloheximide: resistant // mesophilic: NG @ 30C.
8972 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta. 5-31A) T. Lumley (EI-13-S3E 31 May 1996 /R.S. Currah EI-13-S3E, 5-31A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

8973 dry, rotted wood (stage 2 decay), aspen log with hollow core (Populus tremuloides) Elk Island National Park, Alta 5-5C) T. Lumley (EI-13-S5E 5 May 1996 /R.S. Currah EI-13-S5E, 5-5C. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Eremomyces langeronii (von Arx) Malloch & Sigler (syn.

Pithoascus langeronii; morph *Arthrographis kalrae*)
4234 (T *Pithoascus langeronii*) contaminant ex CBS 129.78
Petriellidium fimeti Baarn, Netherlands J.A. von Arx /CBS 203.78 [=GenBank GQ262537 ITS =GenBank GQ280421 SSU =GenBank AB213426 LSU =GenBank AB213442 ITS].
Cycloheximide: resistant // thermotolerant: opt. 25-45C.
5361 fossil goat dung cave, Mexico K. Pironzynski /D. Malloch [=GenBank AB128974 LSU =GenBank AB128972 ITS].
Cycloheximide: resistant // thermotolerant: grows @ 37C, NG @ 40C.
5827 rat dung Pickering, Ont. R. Khan 1986 /J.C. Krug.
7600 ex fingernail, male 66 yr Alberta Provincial Laboratory for Southern Alberta 4 Feb 1994 /R. Rennie MY 1352 [=GenBank AB128975 LSU =GenBank AB128973].
9982 shed skin ex leopard gecko (*Eublepharis macularius*), female 1yr Oglebay's Good Zoo, Wheeling, WV UAMH (UW070B-C1) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Eremomyces langeronii see *Arthrographis kalrae*

Eremothecium ashbyi Guillerm.

7852 China A. Jones /A. Jones #1. Riboflavin. Odor: fragrant // pigment: yellow.

Ericoid mycorrhiza see *Root associated fungus*

E-strain a see *Wilcoxina mikolae var. mikolae*

E-strain b see *Wilcoxina rehmi*

E-strain c see *Wilcoxina mikolae var. tetraspora*

E-strain d see *Wilcoxina sp.*

Eupenicillium brefeldianum (Dodge)Stolk & Scott (morph *Penicillium dodgei*)

1941 soil Yamagata, Japan Oct 1958 /S.-I. Udagawa NHL 6059.
Cellulolytic // culture conditions: no ascomata when grown in 2002.
3087 alluvial soil Attenborough, Notts., Engl. A. Apinis 1949 /IMI 114895. Cellulolytic.
4791 Canada W.I. Illman /J. Vederas [=NRRL 2083 =FRR 2083 =IMI 40592ii =ATCC 10417 =CBS 298.48].
Beta-1-6-glucanase (Methods in Enzymology, Vol. VIII, p. 613, 1966); fulvic acid (Tetrahedron Lett. 22:493-496, 1981).
Cellulolytic.
5364 J. Vederas [=?NRRL 2083 =?Sandoz S464].

Eupenicillium cinnamopurpureum Scott & Stolk (morph *Penicillium phoeniceum*)

1653 Richardson's ground squirrel Manville, Alta. J.W. Carmichael 16 Jun 1960 /J.W. Carmichael.
3998 stored grain Vancouver, B.C. M.G. Dolinski 1976 /M.G. Dolinski P6. Cellulolytic.
7507 indoor air ex RCS strip Calgary, Alta. S.P. Abbott (SA-M267) 1 Dec 1993 /S.P. Abbott (SA-M267). Pigment: brown.
8580 soil Kuranda, Australia J. Guarro Mar 1994 /J. Guarro FMR 5555.

Eupenicillium crustaceum Ludwig (morph *Penicillium gladioli*)

5152 J.I. Pitt FRR 3332.

Eupenicillium javanicum (van Beyma) Stolk & Scott (morph *Penicillium indonesiae*)

1747 R.J. Bandoni B6. Cellulolytic // pigment: brown.
8733 soil La Habana, Cuba J. Guarro 8 Jul 1995 /J. Guarro FMR 5772. Pigment: red-brown.

Eupenicillium lapidosum (Raper & Fennell) Scott & Stolk (syn. *Penicillium lapidosum*)

9493 wood Mariana Lake, Alta 1-29A) T. Lumley (ML-07-S2I 29 Jan 1999 /R.S. Currah ML-07-S2I, 1-29A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Eupenicillium shearii Stolk & Scott (morph *Penicillium soppii*)

1000 spleen ex Least chipmunk Slave Lake Alberta J.W. Carmichael Jul 1959 /J.W. Carmichael.
1075 soil under Populus tremuloides Edmonton, Alta. J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
1081 soil under poplar Edmonton, Alta. J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
5593 roots ex Picea mariana Burt Lake, Burt Twp., Timiskaming Dist., Ont. 6 Jun 1986 /R.C. Summerbell. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989).
7283 ex roots of Asplundia sp. (Cyclanthaceae) La Selva, Heredia Prov., Costa Rica K. Richardson 26 Oct 1991 /R.S. Currah K390a. Mycorrhizae: root endophyte Asplundia sp. (Cyclanthaceae).

Eurotium amstelodami Mangin (morph *Aspergillus hollandicus*)

265 skin feet Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
324 skin neck Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
911 skin arm Edmonton, Alta. J.W. Carmichael 11 Apr 1961 /J.W. Carmichael.
5708 beef jerky Leduc, Alta. M. Hamilton /M. Hamilton KB001. Osmophilic.
5710 beef jerky Leduc, Alta. M. Hamilton /M. Hamilton KB003. Osmophilic.
5765 beef jerky Leduc, Alta. M. Hamilton Apr 1987 /M. Hamilton KB005. Osmophilic.
5771 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB018.
5772 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB025.
5810 sorbate treated beef jerky Leduc Alta. M. Hamilton May 1987 /M. Hamilton KBS003 [=CBS 117315]. Osmophilic.
5811 sorbate treated beef jerky Leduc Alta. M. Hamilton May 1987 /M. Hamilton KBS007A. Osmophilic.
6580 Raper & Fennell WB 17 ex mans wrist, from Major Cornell, 1932 /M. Christensen WB 17 [=ATCC 10079 =NRRL 17 =Thom 5305.5 =QM 1972]. Osmophilic.
6585 Raper & Fennell WB 89, from CBS, 1909 /M. Christensen WB 89 [=ATCC 10065 =IMI 211806]. Echinulin (Biochem 11:2154-2160, 1972). Osmophilic.
7032 provisions for Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 560) Aug 1990 /D. Inglis (MR 560). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (Megachile rotundata) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
7681 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 141) 24 Jan 1994 /S.P. Abbott (OHS 141).

9316 (T Neotype *Eurotium amstelodami*) USA C. Thom 1910 /DAOM 222011 [=ATCC 16464 =CBS 518.65 =IMI 229971 =NRRL 90 =WB 90 =QM 1975 =Thom 126 =JCM 10260 =IFO 33018]. Systematics/taxonomy: *Aspergillus* reference set (Klich, M.A., Samson, R.A., eds., *Aspergillus* reference cultures. New Orleans & Baarn: ICPA, 1996).

Eurotium carnoyi Malloch & Cain (syn. *Aspergillus carnoyi*; morph *Aspergillus an. Eurotium carnoyi*)

6590 Raper & Fennell WB 126, recd 1937 from G. Smith via Biourge /M. Christensen WB 126 [=CBS 471.65 =ATCC 16924 =IMI 172279 =QM 7402 =Thom 5612.A32 =NRRL 126 =TRTC 45717 (type)]. Osmophilic // pigment: brown.

Eurotium chevalieri Mangin (morph *Aspergillus equitis*)

7 contaminant in culture ex skin Edmonton, Alta. 9 Oct 1947 / .
430 skin of neck & hands Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
907 sputum Edmonton, Alta. J.W. Carmichael 4 Apr 1961 /J.W. Carmichael.
909 skin arm Edmonton, Alta. J.W. Carmichael 4 Apr 1961 /J.W. Carmichael.
1077 mouldy book cover Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
1139 laboratory contaminant Edmonton, Alta. J.W. Carmichael 12 Oct 1961 /J.W. Carmichael.
1929 ear swab Edmonton, Alta. J.W. Carmichael 24 Feb 1964 /J.W. Carmichael.
3706 mouldy cherry jam Edmonton, Alta. L. Sigler 30 Jul 1974 /L. Sigler.
5749 bronchial washings Edmonton, Alta. P. Kibsey Apr 1987 /P. Kibsey MY 0321.
5782 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB027. Osmophilic.
5784 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB045. Osmophilic.
6583 (T) Raper & Fennell WB 78, ex coffee beans by Thom, 1916 /M. Christensen WB 78 [=ATCC 16443 =CBS 522.65 =NRRL 78 =Thom 4125.3 =IMI 211382 =Herb. IMI 211382 (type)]. Osmophilic // pigment: brown.
7041 frass ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 256) Aug 1990 /D. Inglis (HD 256). Pigment: gold // osmophilic // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
7682 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 142) 31 Jan 1994 /S.P. Abbott (OHS 142). Pigment: brown // osmophilic.
10672 sponge *Haliclona* sp. (grey specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 4C.

Eurotium echinulatum Delacr. (syn. *Aspergillus echinulatus*; morph *Aspergillus brunneus*)

6592 (T) Raper & Fennell WB 131, ex *Ficus carica* fruit recd from E.H. Philips, CA, 1921 /M. Christensen WB 131 [=CBS 112.26 =ATCC 1021 =NRRL 131 =QM 7406 =IFO 5682]. Osmophilic // pigment: brown.
7898 plate contaminant UAMH, Devon, Alta. S.P. Abbott (SA-M40) 5 Aug 1993 /S.P. Abbott (SA-M40). Pigment: brown.

Eurotium glabrum Blaser (morph *Aspergillus glaber*)

5070 (T *Eurotium glabrum*) ex *Vaccinium myrtillus* Zuoz, Switzerland P. Blaser (ZT 8218) /J. Vederas [=CBS 379.75 =ETH 8218 =UAMH 5072].
5072 ex *Vaccinium myrtillus* Zuoz, Switzerland P. Blaser (ZT 8218) /J. Vederas [=ETH 8218 =CBS 379.75 =UAMH 5070].

Eurotium herbariorum (Wiggers) Link (syn. *Aspergillus minor*, *Aspergillus mangini*; morph *Aspergillus glaucus*)

1461 contaminant ex DAOM 59452 (*Diplococcium mirabile*) Ottawa A. Rambelli Jun 1958 /DAOM 59452.
6587 (T Neotype *Eurotium herbariorum*) Raper & Fennell WB 116, ex unpainted basement board K.B. Raper's residence, near Washington, DC, USA 1938 /M. Christensen WB 116 [=ATCC 16469 =CBS 516.65 =FRR 116 =NRRL 116 =Thom 5629c =GenBank AY176751 =LCP 64.1859 =IMI 211383 =Genbank U29553 D1D2 =Genbank EF652052 ITS =Genbank AY176702 mtSSU =Genbank AY373887 ITS]. Osmophilic // pigment: brown.
7766 ex dried prunes New South Wales, Australia J. Pitt 1969 /A. Hocking FRR 390 [=IMI 151279]. Pigment: amber.
7767 ex dried chillies Papua New Guinea A. Hocking 1978 /A. Hocking FRR 1967 [=ATCC 42691]. Pigment: dark brown // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).

Eurotium intermedium Blaser (morph *Aspergillus intermedius*)

6584 (T *Aspergillus chevalieri* var. *intermedius*) Raper & Fennell WB 82, ex cotton yarn by G. Smith, recd 1937 /M. Christensen WB 82 [=LSHTM 107 =QM 7403 =CBS 523.65 =IMI 89278 =ATCC 16444 =Thom 5612.107 =NRRL 82]. Osmophilic // molecular systematics: phylogeny of *Aspergillus* (Peterson SW, *Mycologia* 100:205-226, 2008).
11497 ex fruit spread Parry Sound, Ont. L. Sigler 4-Apr-2011 /Crofters Foods Inc. 0831-16. Osmophilic // molecular systematics: Blast match 100% beta tubulin similarity with *Eurotium intermedium* EF651892 (NRRL 82 ex type) (fide UAMH 2011).

Eurotium medium Meissner (morph *Aspergillus medius*)

6589 (T) Raper & Fennell WB 124, recd 1924 from Raistrick from CBS as ?Meissners original strain /M. Christensen WB 124 [=ATCC 1036 =CBS 113.27 =FRR 124 =IMI 29188]. Osmophilic // pigment: brown.

Eurotium montevidense (Talice & MacKinnon) Malloch & Cain (syn. *Aspergillus montevidense*; morph *Aspergillus an. Eurotium montevidense*)

6586 (T) Raper & Fennell WB 108, ex ear, tympanic membrane, recd 1938 /M. Christensen WB 108 [=CBS 491.65 =ATCC 10077 =IMI 172290 =QM 7423]. Osmophilic.

Eurotium niveo-glaucum (Thom & Raper) Malloch & Cain (syn. *Aspergillus niveo-glaucus*; morph *Aspergillus glauconiveus*)

6591 (T *Eurotium niveo-glaucum*) Raper & Fennell WB 127 /M. Christensen WB 127 [=NRRL 127 =WB 127]. Osmophilic // pigment: brown.

Eurotium pseudoglaucum (Blochwitz) Malloch & Cain (morph *Aspergillus glaucoaffinis*)

253 skin ex foot Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael [=CBS 117309].
6581 (T) Raper & Fennell WB 40, presumed type ex CBS, 1932 /M. Christensen WB 40 [=ATCC 10066 =CBS 123.28 =IMI 16122 =NRRL 40 =Thom 5343 =Herb. IMI 16122ii (type)]. Auroglaucin, flavoglaucine. Osmophilic // pigment: brown.

Eurotium repens de Bary (morph *Aspergillus reptans*)

326 swab ex cervix Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Osmophilic.
357 rummular eczema Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Osmophilic.

- 1302 soil Guanaco paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael. Biodeteriogen/biodegradation: diagenic alteration of spar calcite (Jones & Pemberton, Can. J. Earth Sci. 24:903-914, 1987) // osmophilic: 20 % dextrose.
- 5066 contaminated chocolate V. (S-669) Betina /J. Vederas [=ATCC 42568 =CCM F505]. Asperentin (Folia Microbiol. 23:438-443, 1979).
- 5067 canning jar lid H. Cutler (UK 86) /J. Vederas [=ATCC 38646]. Cladosporin (J. Agr. Fd. Chem. 29:853-855, 1981).
- 5672 arm UA Hospitals, Edmonton /P. Kibsey My 17-1. Mesophilic: NG @ 37C.
- 5767 beef jerky Leduc, Alta. M. Hamilton Apr 1987 /M. Hamilton KB007. Osmophilic.
- 5768 beef jerky Leduc, Alta. M. Hamilton Apr 1987 /M. Hamilton KB009. Osmophilic.
- 5769 beef jerky Leduc Alta. M. Hamilton Apr 1987 /M. Hamilton KB010. Osmophilic.
- 5808 sorbate treated beef jerky Leduc Alta. M. Hamilton May 1987 /M. Hamilton KBS001. Osmophilic.
- 5809 sorbate treated beef jerky Leduc Alta M. Hamilton May 1987 /M. Hamilton KBS004. Osmophilic.
- 6981 provisions for Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 97) Aug 1990 /D. Inglis (MR 97). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (Megachile rotundata) (Inglis GD, Sigler L, Goettl MS, Microb Ecol 26:125-143, 1993).
- 7086 Megachile rotundata (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 75) Aug 1990 /D. Inglis (MR 75).
- 7683 indoor air ex RCS strip, from Apis mellifera (honeybee) equipment cleaning warehouse Girouxville, Alta. S.P. Abbott (OHS 315) 25 Apr 1994 /S.P. Abbott (OHS 315).

Eurotium rubrum Koenig, Spieck. & Bremer (morph

Aspergillus sejunctus)

- 332 swab ex finger Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 2581 ?contaminant in culture /CBS.
- 4780 surface growth on wicker basket shipped from Hong Kong to Edmonton L. Sigler May 1983 /L. Velt.
- 5770 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB028.
- 5775 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB024A.
- 5783 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB021A. Osmophilic.
- 5806 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB050. Osmophilic.
- 5807 beef jerky Leduc, Alta. M. Hamilton May 1987 /M. Hamilton KB051. Osmophilic.
- 5833 sorbate treated beef jerky Leduc, Alta. M. Hamilton Jun 1987 /M. Hamilton KBS029. Osmophilic.
- 5834 sorbate treated beef jerky Leduc, Alta. M. Hamilton Jun 1987 /M. Hamilton KBS030. Osmophilic.
- 6582 Raper & Fennell WB 53 /M. Christensen WB 53. Osmophilic // pigment: brown.

Eurotium umbrosum (Bainier & Sartory) Malloch & Cain

(syn. *Aspergillus umbrosus*; morph *Aspergillus an.*

Eurotium umbrosum)

- 6588 Raper & Fennell WB 120 /M. Christensen WB 120 [=ATCC 16925 =CBS 117.46 =FRR 120 =NRRL 120 =QM 7476 =Thom 4803.1914]. Osmophilic // pigment: brown.

Eutypella sp. (morph *Libertella sp.*)

- 7482 sinus, Rt ethmoid tissue ex immunocompromised male 1993 /M.G. Rinaldi UTHSC 93-1765.
- 7858 ex sputum, male with hypersensitivity pneumonia Danville, PA Geisinger Medical Centre 1994 /M.G. Rinaldi UTHSC

94-2602.

Eutypella sp. see *Libertella sp.*

Exophiala alcalophila Goto & Sugiyama

- 4719 (T *Exophiala alcalophila*) soil (surface col. on med. at pH 10.4) Hirose Wako-shi, Saitama Pref. K. Horikoshi (11) 24 Apr 1978 /CDC B-3618 [=CBS 520.82 =IAM 12519 =IAM-F-0012]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: ITS1 sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996).
- 4720 soil (surface col. on med. at pH 10.4) Hirose Wako-shi, Saitama Pref. K. Horikoshi (21) 24 Apr 1978 /CDC B-3619 [=IAM 12520].
- 4980 interdigital area, human foot Brazil /W.Y. Mok T20P/11-5 [=NCMH 2271]. Human/animal pathogen // thermotolerant: good growth @ 42C.
- 4982 dermal surface ex human scalp Brazil /W.Y. Mok T04C/12-5 [=NCMH 2272]. Human/animal pathogen // thermotolerant: good growth @ 42C.
- 4983 interdigital area, human hand Brazil /W.Y. Mok T18M/9-5 [=NCMH 2273]. Human/animal pathogen // thermotolerant: grows @ 42C.
- 5233 human scalp /I. Conti [=Mok T30 C/8-5].

Exophiala an. Capronia mansonii see *Capronia mansonii*

Exophiala an. Capronia pilosella see *Capronia pilosella*

Exophiala angulospora Iwatsu, Udagawa, & Takase

- 8255 (T *Exophiala angulospora*) drinking well water Yokohama-shi, Japan K. Arai 18 Apr 1989 /W. Untereiner CBS 482.92 [=NHL 3101 =CBS 482.92]. Mesophilic: NG @ 37C // molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996).

Exophiala bergeri Haase & de Hoog

- 6748 (T *Sporotrichum gougerotii*) cystic lesion, man Memphis, USA J. Young & E. Ulrich 1953 /CBS 526.76 [=CBS 526.76 =UAMH 8450]. Human/animal pathogen.
- 8449 *Buxus sempervirens* (boxwood) Petit Luberon, France W. Gams Oct 1974 /W. Untereiner CBS 518.76 [=CBS 518.76 =De Hoog 2802].
- 8450 (T *Sporotrichum gougerotii*) subepidermal cyst in man Memphis, USA J.M. Young & E. Ulrich 1953 /W. Untereiner CBS 526.76 [=CBS 526.76 =UAMH 6748]. Human/animal pathogen: subcutaneous cyst // molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996).

Exophiala brunnea Papendorf

- 3574 CDC B-1433 [=Papendorf MCP-305].
- 3575 CDC B-1434 [=Papendorf MCP 315].
- 8458 (T *Exophiala brunnea*) leaf litter of *Acacia karroo* Potchefstroom, Transvaal, South Africa M.C. Papendorf (MCP 322) /W. Untereiner CBS 587.66 [=CBS 587.66 =ATCC 32288 =PRE 43729]. Molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996); Herpotrichiellaceae (Uithof et al., System. Appl. Microbiol. 20:585-594, 1997).

Exophiala calicioides (Fr.) Okada & Seifert (syn. *Graphium calicioides*)

- 9800 spruce (*Picea sp.*) Hwy 1, Rogers Pass summit, BC J. Reid & B. Reid (87-16-I = JR87-16) 25 Sep 1987 /J. Reid UM 717 [=WIN(M)717 =GenBank HQ202314 SSU intron]. Culture conditions: non sporulating on deposit; very slow growth // molecular systematics: identification of group I introns within

the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitzer KM, et al, Fungal Biology 116:98-111, 2012).

Exophiala castellanii Iwatsu, Nishimura & Miyaji (syn.

Exophiala jeanselmei var. *castellanii*)

- 4071 (T *Microsporum mansonii*) Tinea nigra Ceylon A. Castellani /M. McGinnis NCMH 254 [=ATCC 18657 =CBS 158.58 =UAMH 4072 =UAMH 4073 =UAMH 4074]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Benomyl: sensitive // molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996).
- 4072 (T *Microsporum mansonii*) Tinea nigra Ceylon A. Castellani /M. McGinnis NCMH 268 [=ATCC 18657 =CBS 158.58 =CDC B-2773 =UAMH 4071 =UAMH 4073 =UAMH 4074]. Benomyl: sensitive.
- 4073 (T *Microsporum mansonii*) Tinea nigra Ceylon A. Castellani /M. McGinnis NCMH 746 [=ATCC 18657 =CBS 158.58 =CDC B-2772 =UAMH 4071 =UAMH 4072 =UAMH 4074]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Benomyl: sensitive.
- 4074 (T *Microsporum mansonii*) Tinea nigra Ceylon A. Castellani /M. McGinnis NCMH 774 [=ATCC 18657 =Buckley 44 =CBS 158.58 =CDC B-2774 =NCPH 1243 =UAMH 4071 =UAMH 4072 =UAMH 4073]. Benomyl: sensitive.
- 8660 decaying timber joinery Great Britain L.H.G. Morton 1973 /W. Untereiner CBS 522.76 [=CBS 522.76 =IMI 173394 =De Hoog 2793].

Exophiala crusticola Bates, Gundlapally & Garcia-Pichel

- 10604 abscess on left elbow, male 47 yr Vancouver General Hospital, Vancouver, B.C. 5-Aug-05 /R. Rennie MY 5863. Mesophilic: NG @ 35C // molecular systematics: BLAST match 99% ITS1 similarity with AM048755 *Exophiala crusticola* (fide UAMH).
- 10686 (T *Exophiala crusticola*) ex biological soil crust Colorado Plateau, USA S.T. Bates /F. Garcia-Pichel CP141b [=GenBank AM048755 (ITS1) =CBS 119970 =GenBank AM048756 (D1/D2) =DSM 16793 =ATCC MYA-3639 =CP141b]. Mesophilic: NG @ 37C // cycloheximide: sensitive (fide Gundlapally et al. 2006) // molecular systematics: novel black yeast from biological soil crusts in western USA (Bates ST, Reddy GSN, Garcia-Pichel F, Int J Syst Evol Microbiol 56: 2697-2702, 2006).

Exophiala dermatitidis (Kano) de Hoog (syn. *Wangiella dermatitidis*; morph *Cladophialophora an. Exophiala dermatitidis*)

- 3632 (T *Hormiscium dermatitidis*) Kano's strain /J.E. Mackinnon IHM 1614 [=NCMH 16 =Duke 2400 =CBS 207.35 =ATCC 28869 =UAMH 4031 =CDC B-1775 =GenBank L35287]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Benomyl: sensitive.
- 3681 lymph node Taipei, Taiwan Tien-Ming Jen (62551) /CDC B-1782 [=Duke 3381]. Benomyl: sensitive.
- 3682 oral mucosa /CDC [=Duke 3377]. Human/animal pathogen: mucocutaneous (Nielson & Conant, Sabouraudia 5:283-294, 1967).
- 3685 sputum Charleston, S.C. Jaynes /CDC B-1779 [=Duke 3358]. Benomyl: sensitive.
- 3691 brain /CDC B-1781 [=Duke 3379]. Benomyl: sensitive.
- 3694 oral mucosa /CDC B-2099 [=Duke 3376]. Benomyl: sensitive.
- 3699 skin Barcelona, Venezuela Brincano-Maaz /CDC [=Duke 2807].
- 3700 blood culture New York Silva-Hutner (CH-795) /CDC B-1778 [=Duke 3355]. Benomyl: sensitive.
- 3707 brain Urabe (507) /CDC B-1791 [=Duke 3290]. Benomyl: sensitive.
- 3710 systemic chromoblastomycosis Taipei Taiwan Yau-Chin Lu

(2583) 1966 /CDC [=Duke 3333 =UAMH 3711].

Thermotolerant: growth equivalent at 25 & 37 C.

- 3711 systemic chromoblastomycosis Taipei Taiwan Yau-Chin Lu (2583) 1966 /CDC [=Duke 3333 =NCMH 146 =UAMH 3710].
- 4031 (T *Hormiscium dermatitidis*) chromomycosis skin lesion Japan Kano /M. McGinnis NCMH 16 [=ATCC 28869 =CBS 207.35 =CDC B-1775 =Duke 2400 =IHM 1614 =UAMH 3632 =GenBank L35287 =GenBank AF050269]. Benomyl: sensitive // molecular systematics: ITS1 sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998; Uijthof, Mycol. Res. 100:1265-1271, 1996); Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995).
- 4255 sputum male 68 yrs; same patient as UAMH 4268 Edmonton, Alta. L. Sigler 11 Sep 1979 [=UAMH 4268]. Benomyl: sensitive.
- 4268 sputum male 68 yrs; same patient as UAMH 4255 Edmonton, Alta. L. Sigler 1 Feb 1980 /A.S. Sekhon PLM 549 [=UAMH 4255]. Benomyl: sensitive.
- 4987 interdigital area, human foot Brazil /W.Y. Mok T53P/8-5 [=NCMH 2274]. Benomyl: sensitive.
- 5722 environment /A. Espinel [=NCMH 941]. Benomyl: sensitive.
- 5787 K.J. Kwong-Chung R-208. Thermotolerant: grows @ 42C // molecular systematics: BLAST match 100% ITS similarity to AF050258 (CBS 207.35) & other isolates of *Exophiala dermatitidis* (fide UAMH 2010) // culture conditions: variant with *Cladophialophora synanamorph* predominant and lacking yeast stage.
- 6999 sputum /G. St-Germain MYCO 679. Molecular systematics: BLAST match 100% ITS similarity to DQ826738, AF050258 & other isolates of *Exophiala dermatitidis* (fide UAMH 2010) // culture conditions: variant with *Cladophialophora synanamorph* predominant and lacking yeast stage // thermotolerant: grows at 37C but not at 42C.
- 7143 phaeohyphomycosis Chonnam, Korea I. Chun /T. Matsushima KU A-0052 [=CDC B-4541 =CBS 709.95]. Cycloheximide: sensitive // benomyl: sensitive @ 2 ppm // thermotolerant: grows @ 37C // molecular systematics: ITS1 sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998).
- 8207 Iraq /W. Untereiner CBS 971.87 [=CBS 971.87]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998); Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995).
- 8248 sputum, man Norway P. Sandven /W. Untereiner CBS 748.88 [=CBS 748.88 =GenBank L35288 =GenBank AF050270]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998); Herpotrichiellaceae (Untereiner & Naveau, Mycologia 91:67-83, 1999; Untereiner et al., Mycol. Res. 99:897-913, 1995); rudimentary ascomata (Untereiner et al., Mycol. Res. 99:897-913, 1995) // culture conditions: rudimentary ascomata (Untereiner et al., Mycol. Res. 99:897-913, 1995).
- 8249 sputum, man Germany B. Hoeverner /W. Untereiner CBS 149.90 [=CBS 149.90 =GenBank L35286 =GenBank AF050268]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998); Herpotrichiellaceae (Untereiner & Naveau, Mycologia 91:67-83, 1999; Untereiner et al., Mycol. Res. 99:897-913, 1995) // culture conditions: rudimentary ascomata (Untereiner et al., Mycol. Res. 99:897-913, 1995).
- 8250 sputum, man Netherlands W. Pauw /W. Untereiner CBS 150.90 [=CBS 150.90]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998); Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995).
- 8251 sputum, man Germany B. Hoeverner /W. Untereiner CBS 154.90 [=CBS 154.90]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998); Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995).

- 8252 sputum, man Germany B. Hoevener /W. Untereiner CBS 156.90 [=CBS 156.90]. Molecular systematics: ITS1 sequence analysis (Uijthof et al., *Med. Mycol.* 36:143-151, 1998); Herpotrichiellaceae (Untereiner et al., *Mycol. Res.* 99:897-913, 1995).
- 8253 man Taiwan T.M. Jen /W. Untereiner CBS 577.76 [=CBS 577.76].
- 8254 man Tsai et al. /W. Untereiner CBS 578.76 [=CBS 578.76].
- 8290 nail, female 55 yr, DE- Edmonton, Alta J. Fielding /J. Fielding F 29094. Benomyl: sensitive // thermotolerant: good growth @ 40C.
- 8448 (T *Mycotorula schawii*) human faeces Switzerland M.J. Pereira-Filho /W. Untereiner CBS 292.49 [=CBS 292.49]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., *Med. Mycol.* 36:143-151, 1998; Uijthof, *Mycol. Res.* 100:1265-1271, 1996); Herpotrichiellaceae (Untereiner et al., *Mycol. Res.* 99:897-913, 1995).
- 8464 man Germany G. Haase /W. Untereiner CBS 148.90 [=CBS 148.90]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., *Med. Mycol.* 36:143-151, 1998); Herpotrichiellaceae (Untereiner et al., *Mycol. Res.* 99:897-913, 1995).
- 8465 man Germany B. Hoevener /W. Untereiner CBS 213.90 [=CBS 213.90]. Molecular systematics: ITS1 sequence analysis (Uijthof et al., *Med. Mycol.* 36:143-151, 1998).
- 8662 faeces France /W. Untereiner CBS 218.88 [=CBS 218.88]. Molecular systematics: ITS1 sequence comparison (Uijthof et al., *Med. Mycol.* 36:143-151, 1998); Herpotrichiellaceae (Untereiner et al., *Mycol. Res.* 99:897-913, 1995) // culture conditions: rudimentary ascomata (Untereiner et al., *Mycol. Res.* 99:897-913, 1995).
- 9343 sputum ex 29 yr female cystic fibrosis patient on itraconazole with repeated isolation of *Exophiala dermatitidis* & *Aspergillus fumigatus*, DE-; same patient as UAMH 9344 & 9478 Edmonton, Alta. C. Sand 15 Apr 1998 /R. Rennie MY 2324Brn [=UAMH 9344 =UAMH 9478]. Human/animal pathogen: colonizing cystic fibrosis patient (Diemert, Kunimoto, Sand & Rennie, *Scand. J. Infect. Dis.* 33:777-779, 2001).
- 9344 sputum ex 29 yr female cystic fibrosis patient on itraconazole with repeated isolation of *Exophiala dermatitidis* & *Aspergillus fumigatus*, DE-; same patient as UAMH 9343 Edmonton, Alta. C. Sand 15 Apr 1998 /R. Rennie MY 2324A [=UAMH 9343 =UAMH 9478]. Human/animal pathogen: colonizing cystic fibrosis patient // culture conditions: variant with *Cladophialophora synanamorph* predominant and lacking yeast stage; typical forms also isolated from this patient // molecular systematics: BLAST match 100% ITS similarity to AF050258 (CBS 207.35) & other isolates of *Exophiala dermatitidis* (fide UAMH 2010).
- 9478 sputum ex 29 yr female cystic fibrosis patient on itraconazole with repeated isolation of *Exophiala dermatitidis* & *Aspergillus fumigatus*, DE-; same patient as UAMH 9343, 9344 Edmonton, Alta. C. Sand 25 Jul 1998 /R. Rennie MY 4471B [=UAMH 9343 =UAMH 9344]. Human/animal pathogen: colonizing cystic fibrosis patient (Diemert, Kunimoto, Sand & Rennie, *Scand. J. Infect. Dis.* 33:777-779, 2001).
- 10194 variant expressing *Cladophialophora synanamorph*; from bronchial secretions, female 70 yr Quebec 05-02 /G. St-Germain MY 57399. Thermotolerant: grows @ 40C (fide submitting laboratory) // cycloheximide: slightly sensitive // culture conditions: nitrate negative; variant with *Cladophialophora synanamorph* predominant and lacking yeast stage; produces phialidic conidia on CER after 35 d // molecular systematics: 100% ITS similarity with UAMH 9344 (fide UAMH 2010).
- 10339 bronch wash ex male 76 yr; KOH -; several colonies isolated on multiple media Richmond Hospital, Richmond, B.C. 2003 /R. Rennie MY 3456 [=BC CDC A3MF1217]. Thermotolerant: grows @ 37C & 42C (fide submitting laboratory) // culture conditions: variant with *Cladophialophora synanamorph* predominant and lacking yeast stage // molecular systematics: 100% identical in pair-wise comparison with UAMH 9344 (fide UAMH 2010).
- Exophiala exophialae*** (de Hoog) de Hoog (syn. *Phaeococcomyces exophialae*)
- 4085 (T *Phaeococcomyces exophialae*) straw ex armadillo (*Dasypus septemcinctus*) burrow Ecuador J.E. MacKinnon /CDC B-2821 [=GenBank AY156973 SSU-ITS =CBS 668.76 =ATCC 26088 =IMH 1610]. Coenzyme Q-10 (Yamada et al., *Antonie van Leeuwenhoek* 56:349-356, 1989).
- Exophiala heteromorpha*** (Nannf.) de Hoog & Haase
- 570 sputum Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael [=CBS 648.76A].
- 2014 orig. from Areo Leo /Wm. Cooke PP-33 [=CBS 648.76B =CDC a693 =NIH 8589 =dH16123].
- 2634 wood ex cedar cooling tower Balsac, Alta. J.W. Carmichael May 1966 /J.W. Carmichael [=CBS 714.76 =dH16202].
- 3637 subcutaneous abscess ex arm of Senegalese patient Institut Pasteur strain Mariat Oct 1976 /J.E. Mackinnon IHM 1585 [=CBS 529.76]. Culture conditions: yeast form on PDA after 6d at 25C (fide UAMH).
- 3969 (T *Trichosporium heteromorphum*) wood Sweden E. Melin No. 389.28 1933 /M. McGinnis NCMH 17 [=VKM F-704 =GenBank AY857524 ITS =CBS 232.33 =CDC B2823 =MUCL 9894]. Coenzyme Q-10 (Yamada et al., *Antonie van Leeuwenhoek* 56:349-356, 1989). Molecular systematics: ITS sequence comparison (Uijthof et al., *Med. Mycol.* 36:143-151, 1998; Uijthof, *Mycol. Res.* 100:1265-1271, 1996; Rogers et al., *Stud. Mycol.* 43:122-133, 1999).
- 6769 creosote-treated southern pine pole Chester, NJ /C.J.K. Wang P-196 [=ATCC 66831]. Molecular systematics: ITS1 sequence analysis (Rogers et al., *Stud. Mycol.* 43:122-133, 1999).
- 8246 railway tie, wood of *Pinus banksiana* Ontario, Canada C.J.K. Wang 1964 /W. Untereiner CBS 633.69 [=GenBank AY857522 ITS =DAOM 75853k =MUCL 15475 =CBS 633.69].
- Exophiala jeanselmei*** (Langeron) McGinnis & Padhye
- 596 fluid from sternal puncture Edmonton, Alta. J.W. Carmichael Jan 1958 /J.W. Carmichael.
- 1207 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
- 1519 chlorinated cooling water tower Can. Chem., Edmonton J.W. Carmichael Dec 1962 /J.W. Carmichael. Mesophilic: NG @ 37C.
- 2633 wood ex cedar cooling tower Balsac, Alta. J.W. Carmichael May 1966 /J.W. Carmichael.
- 3006 multiple abscesses & sinus tracts, Rt buttock, black male 53 yr Augusta, GA A.F. DiSalvo /A. DiSalvo. Human/animal pathogen: phaeoophomycosis (DiSalvo et al., *Sabouraudia* 6:241-245, 1968).
- 3007 mycetoma, right foot, male 35 yr with 12 mo. history of swelling and lesions Durham, N. Carolina H.S. Nielson 1968 /H.S. Nielsen 3417 (?=3419) [=NCMH 0136]. Human/animal pathogen: mycetoma (Nielson et al., *Sabouraudia* 6:330-333, 1968).
- 3504 organs of frog Elkan & Philpot /C. Philpot 4616.
- 3635 hand, mycetoma U.S. Emmons 1945 /J.E. Mackinnon IHM 1072 [=ATCC 9541 =CBS 286.47 =IHM 1072]. Culture conditions: yeast-like in culture (Mackinnon et al. *Sabouraudia* 11:33-38, 1973).
- 3636 (T *Torula jeanselmei*) mycetoma, foot Martinique M. Langeron 1928 /J.E. Mackinnon IHM 283 [=ATCC 34123 =CBS 664.76 =IP 71 =UAMH 4750 =GenBank L35289 =GenBank AF050271 =Laboratoire de Parasitologie Paris

- (333) =IHM 283 =UAMH 3698]. Molecular systematics: Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995) // human/animal pathogen: mycetoma (Langeron M, Ann Parasitol Hum Comp 6:385-403, 1928).
- 3684 lung secretions Newton Army Med. Lab., Ft. McPherson, Ga. /CDC [=Duke 2533]. Human/animal pathogen: pulmonary (Nielson & Conant, Sabouraudia 5:283-294, 1967).
- 3686 hand, eczema Duke Hospital, Durham N.C. 1960 /CDC [=Duke 2976]. Human/animal pathogen: dermatomycosis (Nielson & Conant, Sabouraudia 5:283-294, 1967).
- 3690 neck Nash, Elizabeth City, N.C. /CDC [=Duke 2939].
- 3692 buttock Jacksonville, Florida Wallace /CDC [=Duke 3348].
- 3697 finger New Orleans Schneidau /CDC [=Duke 2492]. Thermotolerant: strongly inhibited @ 37C.
- 3698 (T Torula jeanselmei) mycetoma (maduromycosis) Martinique M. Langeron 1928 /CDC [=Duke 2405 =NCMH 123 =UAMH 3636]. Human/animal pathogen: mycetoma (Langeron M, Ann Parasitol Hum Comp 6:385-403, 1928).
- 3709 lung abscess Duke Hospital, Durham N.C. 1942 /CDC [=Duke 766].
- 4109 wood chips & bark from logging truck Westlock Alta. area L. Sigler 13 Mar 1978 /L. Sigler.
- 4629 bark ex Alpine fir (bark beetle infestation) Hinton, Alta. L. Sigler Sep 1982 /Y. Hiratsuka.
- 4750 (T Torula jeanselmei) mycetoma on foot Martinique M. Langeron 1928 /C. de Bievre IP 71 [=ATCC 34123 =CBS 664.76 =IHM 283 =UAMH 3636 =GenBank L35289]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: phylogeny of black yeasts (De Hoog, Vicente, Caligiorme, Kantarcioglu et al., J. Clin. Microbiol. 41:4767-4778, 2003).
- 5047 superficial skin infection, human Belgaum, India B. Hemashettar 1 Aug 1982 /B. Hemashettar M-36-82. Thermotolerant: range 25-37C, NG @ 40C.
- 5048 mycetoma foot Belgaum, India B. Hemashettar 28 Feb 1983 /B. Hemashettar M-15-83. Thermotolerant: range 25-37C, NG @ 40C.
- 6648 ex saturated solution EDTA Ste Foy, PQ G. Ouellette 1990 /G.B. Ouellette. Mesophilic: NG @ 37C.
- 7000 ex vesicular lesions on foot, female 36 yr; isolated from repeat specimen /G. St-Germain MY 2846. Benomyl: sensitive @ 1 ppm // mesophilic: NG @ 37C.
- 7260 ex male 60 yr Alberta 1992 /R. Rennie MY 3548. Culture conditions: Rhinocladiella synanamorph present.
- 7857 ex sputum, female 75 yr with long term bronchiectasis; isolated four times ex sputum Pensacola, FL West Florida Regional Medical Centre 1993 /M.G. Rinaldi UTHSC 92-1131 [=UTMB 3458]. Thermotolerant: growth equivalent at 25 & 37 C.
- 8344 indoor air ex RCS strip in honeybee (Apis mellifera) equipment cleaning facility Beaverlodge, Alta S.P. Abbott (OHS 420) 04-May-1994 /S.P. Abbott (OHS 420).
- 8444 oak wood (Quercus sp.) of a 17th century ship, bottom of the Baltic Sea Kiessling /W. Untereiner CBS 634.69 [=MUCL 15474 =CBS 634.69].
- 8445 C.J.K. Wang /W. Untereiner CBS 663.76 [=ENSAN 3412 =CBS 663.76].
- 10023 skin scraping, arm, female Toronto, ON Apr 2001 /R. Rennie MY 3636.

Exophiala jeanselmei var. *castellanii* see *Exophiala castellanii*

Exophiala jeanselmei var. *lecanii-corni* see *Exophiala lecanii-corni*

Exophiala lecanii-corni (Benedek & Specht) Haase & de Hoog (syn. *Hormodendrum negronii*, *Exophiala jeanselmei* var. *lecanii-corni*)

- 3970 (T Hormodendrum negronii) man, chromomycosis Tagnara, Rio Grande do Sul, Brazil P. Negroni /M. McGinnis NCMH 13 [=CBS 232.39]. Culture conditions: nitrate & nitrite + (fide de Hoog et al., JMVM 32:327-380, 1994) // molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996); 18S rDNA (Haase et al., Stud. Mycol. 43:80-97, 1999).
- 6792 Triticum aestivum (wheat) rhizosphere West Australia K. Sivasithamparam (WUFG 13) /ATCC 26436 [=CBS 679.76].
- 7914 ex lesion on Rt cheek, Japanese female 51 yr, DE+ Fukuoka, Japan T. (KU-A-0094) Madsuda Jan 1991 /CDC B-5588 [=CBS 638.91]. Human/animal pathogen: phaeohyphomycosis (de Hoog et al., J. Med. Vet. Mycol. 32:373-380, 1994).
- 8247 man Netherlands R.W. Vreede /W. Untereiner CBS 234.90 [=CBS 234.90].
- 8446 dog hair Netherlands /W. Untereiner CBS 681.76 [=CBS 681.76].
- 8447 (T Pullularia fermentans var. benedekii) Lecanium corni T. Benedek /W. Untereiner CBS 123.33 [=GenBank AY857528 ITS =ATCC 12734 =IMI 062462 =CBS 123.33]. Molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996); 18S rDNA (Haase et al., Stud. Mycol. 43:80-97, 1999).
- 8661 activated sludge Canada J.S. Davies (5E/3) /W. Untereiner CBS 680.76 [=CBS 680.76 =ATCC 26272]. Application: utilizes ethane, propane and n-butane components of natural gas (Can. J. Microbiol. 19:81-85, 1973).
- 8783 surface contaminant of ginger (Zingiber officinale) growing in tissue culture Jamaica, West Indies P. Reese /P. Reese [=IMI 312989]. Steroid biotransformations (dehydroisoandrosterone, pregnenolone, testosterone, cortisone, prednisone) (Porter et al, Steroids 64:770-779, 1999); redox reactions on alcohols & ketones (Porter et al, ibid.). Culture conditions: growth enhancer of Zingiber officinale plantlets (Porter et al, Steroids 64:770-779, 1999); strongly mucoid // application: hydroxylation of steroids (Peart PC, McCook KP, Russell FA, Reynolds WF, Reese PB, Steroids 76:1317-1330, 2011).

Exophiala mesophila Listemann & Freiesleben

- 10441 eye vitreous aqueous fluid, following trauma, male 54 yr, immunocompromised graft vs host disease Calgary, Alta. 13-1-03 /R. Rennie MY 181. Culture conditions: casein negative, tyrosine positive (fide submitting laboratory); *Exophiala* synanamorph present // thermotolerant: grows @ 35 C, NG @ 42 C // molecular systematics: BLAST match 99-100% ITS similarity with *Exophiala mesophila* (fide UAMH 2008).

Exophiala moniliae de Hoog

- 4083 cyst of human patient Paris /CDC B-2819 [=CBS 565.66 =NCMH 730]. Human/animal pathogen: subcutaneous (McGinnis et al, Mycopath. 73:69-72, 1981).
- 4086 (T *Exophiala moniliae*) branch of *Quercus* sp. Leningrad USSR G.S. de Hoog Jul 1975 /CDC B-2822 [=CBS 520.76]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996).
- 4948 submandibular lesion female 9 yr Nagasaki, Japan Feb 1970 /M. McGinnis NCMH 1212 [=KMU 1510 =CDC B3555]. Human/animal pathogen: phaeohyphomycosis (Matsumoto et al., Sabouraudia 22:17-26, 1984).
- 4949 vegetative tumor on left buttock, male surgeon 53 yrs Kagawa Japan Apr 1976 /M. McGinnis NCMH 1223 [=KMU 1917 =CDC B3566]. Human/animal pathogen: phaeohyphomycosis (Matsumoto et al., Sabouraudia 22:17-26, 1984).
- 5153 contaminant ex roots *Corallorhiza maculata* Castle River, Alta.

- (C) R. Currah 10 Jun 1985.
 8451 man Madura, India M. Sirsi /W. Untereiner CBS 468.70 [=CBS 468.70]. Human/animal pathogen: black-grain mycetoma in man.
 8452 decaying wood Le Roptai, Ardennes, Belgium W. Gams Jun 1975 /W. Untereiner CBS 521.76 [=CBS 521.76].

- Exophiala oligosperma*** Calendron ex de Hoog & Tintelnot
 2034 ex feet male 40 yrs Edmonton, Alta. J.W. Carmichael May 1964 /J.W. Carmichael [=CBS 718.76]. Benomyl: sensitive // molecular systematics: 99-100% ITS similarity with *Exophiala oligosperma* T CBS 725.88 and other strains (fide UAMH 2010); Formerly *E. jeanselmei* v. *heteromorpha*.
 2627 wood ex cedar cooling tower Balsac, Alta. J.W. Carmichael May 1966 /J.W. Carmichael [=CBS 715.76]. Molecular systematics: description of *Exophiala oligosperma* (De Hoog, Vicente, Caligiorno, Kantarcioglu et al., J. Clin. Microbiol. 41:4767-4778, 2003) // culture conditions: mucoid scant hyphae.
 3687 hand Brazil Fonseca (1989) /CDC [=Duke 892 =NCMH 248]. Molecular systematics: Blast match 99-100% ITS similarity to *Exophiala oligosperma* (fide UAMH 2010).
 3693 leg ulcer Newark, New Jersey /CDC [=Duke 3349]. Molecular systematics: Blast match 100% ITS similarity with *Exophiala oligosperma* (fide fungalITSdatabaseID).
 3708 bronchial aspiration Kingsbury /CDC [=Duke 2539]. Molecular systematics: Blast match 99-100% ITS similarity to *Exophiala oligosperma* (fide UAMH 2010).
 8245 polyvinyl alcohol (Elvanol 7005) Delft, Netherlands H.J. Hueck (192) /W. Untereiner CBS 637.69 [=MUCL 15463 =CBS 637.69].

Exophiala phaeomuriformis (Matsumoto, Padhye, Ajello & McGinnis) Matos, Haase & de Hoog

- 4278 (T *Sarcinomyces phaeomuriformis*) oral mucosa /M. McGinnis NCMH 151 [=GenBank AJ244259 ITS =GenBank X80710 =NCMH 1215 =Duke 3378 =CDC B3558 =CBS 131.88]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: ITS sequence comparison (Uijthof et al., Med. Mycol. 36:143-151, 1998; Uijthof, Mycol. Res. 100:1265-1271, 1996); *Sarcinomyces phaeomuriformis* (Matos T, Haase G, Gerrits van den Ende AHG, de Hoog GS, Antonie van Leeuwenhoek 83: 293-303, 2003).
 5899 human blood Toronto R.C. Summerbell Mar 1987 /R.C. Summerbell FR 247.87. Culture conditions: strongly mucoid // molecular systematics: Blast match 100% similarity with *Exophiala phaeomuriformis* but AJ244259 CBS 131.88 T is more divergent (fide UAMH 2010).
 5953 blood culture from female 61 yr with prosthetic mitral valve & history of fever, anorexia, leg pain Toronto A.E. Simor 18 Sep 1987 /R.C. Summerbell FR 452 [=CBS 710.95]. Benomyl: resistant @ 2 ppm, sensitive @ 10 ppm // culture conditions: nitrate + // thermotolerant: grows @ 40C // human/animal pathogen: prosthetic valve endocarditis (Gold et al., Clin. Infect. Dis. 19:339-341, 1994).
 6035 decaying lobe *Opuntia* sp. Cache Creek, B.C. J. & R. Summerbell Apr 1987 /R.C. Summerbell S2.
 6041 ex decaying *Opuntia* sp. Cache Creek, B.C. (C) J. & R. Summerbell Apr 1987 /R.C. Summerbell S1.
 6533 R.C. Summerbell FR 2450.89. Benomyl: resistant // thermotolerant: grows @ 37C, NG @ 42C.
 7048 sputum, female 62 yr, DE+ Samia, Ont. Mar 1991 /R.C. Summerbell FR 708 [=CBS 110170 =GHP 1822].
 7803 ex skin on foot Stockton, CA /M.G. Rinaldi UTHSC 94-839.
 8111 ex sputum, female 66 yr with bronchiectasis, DE- 18 May 1995 /P. Kibsey 95-138-0415 [=dH 12712 =GHP 1823 =CBS 110360]. Thermotolerant: grows @ 40C.
 8466 tile floor inside of swimming pool Germany G. Foitzik /W. Untereiner CBS 314.90 [=CBS 314.90]. Molecular

systematics: *Sarcinomyces phaeomuriformis* (Matos T, Haase G, Gerrits van den Ende AHG, de Hoog GS, Antonie van Leeuwenhoek 83: 293-303, 2003).

Exophiala pisciphila McGinnis & Ajello

- 2981 (T *Exophiala pisciphila*) channel catfish, pond Alabama N. Fijan 1968 /N. Fijan [=ATCC 24901 =CBS 537.73 =CDC B-1229 =IMI 176060 =NCMH 9 =GenBank AF050272]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996); *Herpotrichiellaceae* (Uithof et al., System. Appl. Microbiol. 20:585-594, 1997; Untereiner & Naveau, Mycologia 91:67-83, 1999; Untereiner et al., Mycol. Res. 99:897-913, 1995).
 6175 *Heterodera glycines* cyst Illinois L. Carris /ATCC 62192.
 6216 cranial lesion, *Salmo salar* Benalla, Victoria, Australia J. Langdon & W. McDonald 1987 /D. Muir AMMRL 54.36. Human/animal pathogen: cranial mycosis in salmon parr (Langdon & McDonald, Bull. Eur. Ass. Fish Pathol. 7:35, 1987).
 8256 skin of man Netherlands A.W. Sturm /W. Untereiner CBS 464.81 [=CBS 468.81 =GenBank AF050273]. Molecular systematics: *Herpotrichiellaceae* (Untereiner & Naveau, Mycologia 91:67-83, 1999; Untereiner et al., Mycol. Res. 99:897-913, 1995); rudimentary ascomata (Untereiner et al., Mycol. Res. 99:897-913, 1995) // culture conditions: rudimentary ascomata (Untereiner et al., Mycol. Res. 99:897-913, 1995).
 8453 egg from cyst of *Heterodera schachtii* recovered from soil Spalding, Great Britain H. T. Tribe /W. Untereiner CBS 661.76 [=CBS 661.76]. Molecular systematics: *Herpotrichiellaceae* (Uithof et al., System. Appl. Microbiol. 20:585-594, 1997).
 8455 *Pisum sativum* (garden peas) Netherlands J.E. van Emden /W. Untereiner CBS 100.68 [=CBS 100.68]. Molecular systematics: *Herpotrichiellaceae* (Uithof et al., System. Appl. Microbiol. 20:585-594, 1997).
 8456 soil Dolincu Nursery, Ontario, Canada O. Vaartaja /W. Untereiner CBS 515.76 [=CBS 515.76]. Molecular systematics: *Herpotrichiellaceae* (Uithof et al., System. Appl. Microbiol. 20:585-594, 1997).
 10488 ex focal black lesions in kidney of lumpfish (*Cyclopterus lumpus*) Woods Hole, MS M.J. Dykstra Nov-04 /M.J. Dykstra LUMP2. Human/animal pathogen: disseminated infection in lumpfish // mesophilic: NG @ 35C // molecular systematics: 95% ITS similarity with *Exophiala pisciphila* AF050272 *Exophiala pisciphila* CBS 537.73 T; 98% ITS similarity with *Exophiala* species (JF747058 = CBS 119917 and similar strains) (fide UAMH 2011); 95% ITS similarity with *Exophiala pisciphila* AF050272 = CBS 537.73 T (fide UAMH 2005).
 11288 ex juvenile zebra shark (*Stegostoma fasciatum*); UAMH 11289 *Mucor circinelloides* also isolated /D.A. Sutton UTHSC R-4280.

Exophiala psychrophila Pedersen & Langvad

- 8457 (T *Exophiala psychrophila*) kidney granuloma on farmed Atlantic salmon smolt (*Salmo salar*) Western Norway F. Langvad /W. Untereiner CBS 191.87 [=CBS 191.87]. Psychrophilic: maximum 23C, optimum 17-21C (Pedersen & Langvad, Mycol. Res. 92:153-156, 1986) // human/animal pathogen: pathogenic to fish (Pedersen & Langvad, Mycol. Res. 92:153-156, 1986; Langvad, Engjom & Pedersen, in Fish & Shellfish Pathology (A.E. Ellis, ed.), 1985) // molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996); *Herpotrichiellaceae* (Uithof et al., System. Appl. Microbiol. 20:585-594, 1997).

Exophiala salmonis Carmichael

- 34 (T *Exophiala salmonis*) brain of infected trout Calgary hatchery Alta. J.W. Carmichael 1 Mar 1949 /Prov. Lab. 1954 [=ATCC 16986 =CBS 157.67 =IMI 124165 =GenBank L35290 =GenBank AF050274 =GenBank EF413609 LSU =GenBank EF413608 SSU =GenBank FJ225745 mitSSU =GenBank EF413610 RBP1]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Human/animal pathogen: cerebral phaeohyphomycosis (Carmichael, Sabouraudia 5:122, 1966) // molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996; Rogers et al., Stud. Mycol. 43:122-133, 1999); Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995; Untereiner & Naveau, Mycologia 91:67-83, 1999; Untereiner WA, Angus A, Reblova M, Orr M-J, Botany 86:742-750, 2008) // culture conditions: rudimentary ascomata (Untereiner et al., Mycol. Res. 99:897-913, 1995).
- 622 brain diseased trout *Salmo clarkii* Calgary hatchery, Alta. Dec 1956 /; .

***Exophiala* sp.**

- 4841 wood litter Iowa L. Sigler Sep 1983 /L. Sigler [=NCMH 2158]. Molecular systematics: Groups within the Herpotrichiellaceae with closest match 88-89% with *Capronia* species (fide UAMH 2010).
- 5027 following i/t inoculation of guinea pig (substrate Talauma tree) Colonia Co., Uruguay 1984 /I. Conti 4046. Mesophilic: NG @ 37C // molecular systematics: Groups within the Herpotrichiellaceae but does not match *Exophiala jeanselmei* (fide UAMH 2010).
- 6793 *Triticum aestivum* (wheat) rhizosphere West Australia K. Sivasithamparam (WUFG 133) /ATCC 26440 [=CBS 678.76]. Molecular systematics: Blast match 94% similarity with *Exophiala salmonis* (fide UAMH 2010); Groups within the Herpotrichiellaceae but does not match *Exophiala lecanii-cornii* (fide UAMH 2010).
- 10060 shed skin ex milk snake (*Lampropeltis triangulum*), male 8yr Great Plains Zoo & Museum, Sioux Falls, South Dakota UAMH (UW121B-C) 1 Jun 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10603 industrial production line in an organic fruit spreads and industrial food products factory Parry Sound, ON J. Warner (1 & 3) Oct-2005 /J.E. Warner 1. Molecular systematics: ITS sequence similarity closest to *E. lecanii-cornii* (3.4% sequence divergence) // mesophilic: grows @ 30 C but not @ 35 C.
- 11286 colony growing deep within a cereal agar plate stored in the refrigerator (9C) UAMH C. Gibas 22-Sep-2010. Mesophilic: scant growth @ 35C // culture conditions: initially very mucoid.
- 11482 ex contaminated manufactured juice beverage Toronto, Ont. (C) M. Goldberg; (I) J.A. Scott 27-Nov-2009 /J. Scott SPORO 15001-35. Culture conditions: no yeast-like stage produced on PDA.
- 11483 ex contaminated manufactured juice beverage Toronto, Ont. (C) M. Goldberg; (I) J.A. Scott 27-Nov-2009 /J. Scott SPORO 15001-48A. Culture conditions: no yeast-like stage produced on PDA.
- 11484 ex contaminated manufactured juice beverage Toronto, Ont. (C) M. Goldberg; (I) J.A. Scott 27-Nov-2009 /J. Scott SPORO 15001-21D. Culture conditions: no yeast-like stage produced on PDA.

Exophiala spinifera (Nielsen & Conant) McGinnis

- 3009 (T *Phialophora spinifera*) granulomatous mass in nose, female Duke Univ. Med. Cen., Durham, N.C. Nielson & Conant /ATCC 18218 [=CBS 899.68 =Duke 3342 =UAMH 3695]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: ITS1 sequence

- analysis (de Hoog et al., Stud. Mycol. 43:133-142, 1999).
- 3634 bird nest Uruguay J.E. Mackinnon /J.E. Mackinnon IHM 1745 [=ATCC 26091 =CBS 670.76].
- 3695 (T *Phialophora spinifera*) granulomatous mass in nose, female Durham, N.C. Nielson & Conant /CDC [=UAMH 3009 =ATCC 18218 =CBS 899.68 =Duke 3342]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: ITS sequence comparison (Uijthof, Mycol. Res. 100:1265-1271, 1996); 100% ITS similarity with AY156976 *E. spinifera*.
- 4573 subcutaneous granuloma on leg of cat (spent 2 winters in Belize); DE hyaline budding yeast Ontario W. Dion /W. Dion ADRI 1347. Human/animal pathogen: phaeohyphomycosis.
- 5719 environment /A. Espinel [=NCMH 820]. Serology: exoantigen (Espinel-Ingroff & al., JCM 23:305-310, 1986) // molecular systematics: Blast match 98-100% ITS similarity with *Exophiala spinifera* (fide UAMH 2010).
- 5720 clinical material /A. Espinel [=NCMH 1361]. Serology: exoantigen (Espinel-Ingroff & al., JCM 23:305-310, 1986) // molecular systematics: 100% ITS similarity with UAMH 3695 T *Exophiala spinifera* (fide UAMH 2010).
- 5721 clinical material /A. Espinel [=NCMH 819].
- 7912 nodular & boggy lesion on Rt antromedial forearm, male 62 yr, DE + (brown sclerotic bodies), before treatment with itraconazole South Carolina /CDC B-5579 [=UAMH 7913]. Human/animal pathogen: chromoblastomycosis.
- 7913 repeat specimen ex same patient as UAMH 7912; nodular & boggy lesion on Rt antromedial forearm, male 62 yr, DE + (brown sclerotic bodies), after treatment with itraconazole (see UAMH 7912) South Carolina /CDC B-5580 [=UAMH 7212]. Human/animal pathogen: chromoblastomycosis confirmed by isolation from repeat specimen // molecular systematics: ITS1 sequence analysis (de Hoog et al., Stud. Mycol. 43:133-142, 1999).
- 8459 chromomycosis Kiel, Germany O. Gruetz /W. Untereiner CBS 269.28 [=CBS 269.28]. Molecular systematics: ITS1 sequence analysis (de Hoog et al., Stud. Mycol. 43:133-142, 1999).
- 8460 fallen palm tree trunk (*Butia yatay*) Uruguay J.E. MacKinnon (IHM 1611) /W. Untereiner CBS 667.76 [=CBS 667.76 =ATCC 26089 =IHM 1611]. Molecular systematics: ITS1 sequence analysis (de Hoog et al., Stud. Mycol. 43:133-142, 1999).

Exophiala tremulae W. Wang

- 10998 (T *Exophiala tremulae*) ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Lamont natural area, Alta. W. Wang /R.S. Currah MDL-15-44h [=GenBank FJ665274 ITS =CBS 129355]. Systematics/taxonomy: description (Wang W in Crous PW et al., Persoonia 26:113, 2011).

Exophiala werneckii see ***Hortaea werneckii******Exophiala xenobiotica*** de Hoog, Zeng, Harrak & D.A. Sutton

- 6191 phaeohyphomycotic cyst palmar surface finger, male 81 yr San Antonio, Texas 1986 /M.G. Rinaldi UTHSC R196. Human/animal pathogen: Originally determined as *Phaeoannellomyces elegans*; Phaeohyphomycotic cyst caused *Phaeoannellomyces elegans* (Engleberg, NC, Johnson J, Bluestein J, Madden K, Rinaldi MG, J Clin Microbiol 25:605-608, 1987) // molecular systematics: 100% ITS similarity to DQ182587 *Exophiala xenobiotica* strain CBS 118157 T (fide UAMH 2010).
- 8422 subcutaneous mass on Rt arm, kidney transplant patient on immunosuppressive drugs, male 66 yr, DE dematiaceous & toruloid mycelium New Zealand /A. Woodgyer 94-417 [=UAMH 8423]. Human/animal pathogen: subcutaneous infection confirmed by direct microscopy and repeat isolation // molecular systematics: 100% ITS similarity to DQ182587 *Exophiala xenobiotica* strain CBS 118157 T (fide UAMH 2010).

- 8423 repeat specimen ex same patient as UAMH 8422; subcutaneous mass on Rt arm, kidney transplant patient on immunosuppressive drugs, male 66 yr, DE dematiaceous & toruloid mycelium New Zealand /A. Woodgyer 94-372 [=UAMH 8422]. Human/animal pathogen: subcutaneous infection confirmed by direct microscopy and repeat isolation.

Farrowia longicolleae see *Chaetomium longicolleum*

Faurelina fimigena Locquin-Linard

- 9396 (T *Faurelina fimigena*) dung of herbivore Chad M. Locquin-Linard /CBS 352.78. Benomyl: sensitive (NG 2 ppm) // culture conditions: produces ascomata on OAT @ 22C.

Faurelina indica von Arx et. al.

- 4232 (T *Faurelina indica*) goat dung Nainital, Delhi, India K.G. Mukerji / N. Singh 1978 /CBS 126.78. Cellulolytic.
4235 cow dung Nainital, Delhi, India 1978 /CBS 301.78. Cellulolytic // culture conditions: produced anamorph only.

Fennellia flavipes see *Aspergillus flavipes*

Fennellia nivea see *Aspergillus niveus*

Filobasidiella bacillisporea Kwon-Chung (syn. *Filobasidiella neoformans* var. *bacillisporea*; morph *Cryptococcus gattii*)

- 4058 (T *Filobasidiella bacillisporea*) spinal fluid ex patient with cryptococcal meningitis Nat. Inst. Health, Bethesda /A.S. Sekhon PLM 561 [=NIH 191 =ATCC 32608 =CBS 6955 =CBS 6916 =MUCL 30454] - Kwon-Chung 1976, Mycologia 68:942-946. Serology: serotype C.
4059 (T *Filobasidiella bacillisporea*) sputum ex patient with disseminated cryptococcosis Nat. Inst. Health, Bethesda /A.S. Sekhon PLM 563 [=NIH 444 =ATCC 32609] + Kwon-Chung 1976, Mycologia 68:942-946.

Filobasidiella neoformans Kwon-Chung (syn. *Filobasidiella neoformans* var. *neoformans*; morph *Cryptococcus neoformans*)

- 4060 single basidiospore isol. ex ATCC 28957 x ATCC 28958 ATCC 28957 ex human bone lesion, ATCC 28958 ex pigeon droppings Kwon-Chung /A.S. Sekhon PLM 560 [=NIH 3502 =ATCC 34874 =CCRC 20533 =RV 71449 =CBS 6901] - Kwon-Chung, Mycologia 67:1197-1200, 1975. Serology: serotype D (Kwong-Chung, Mycologia 72:418-422, 1980).
4061 single basidiospore isol. ex ATCC 28957 x ATCC 28958 ATCC 28957 ex human bone lesion, ATCC 28958 ex pigeon droppings Kwon-Chung 1974 /A.S. Sekhon PLM 562 [=NIH 3501 =ATCC 34873 =CBS 6900 =CCRC 20532] + Kwong-Chung, Mycologia 66:1197-1200, 1975. Serology: serotype D (Kwong-Chung, Mycologia 72:418-422, 1980).

Filobasidiella neoformans see *Cryptococcus neoformans*

Filobasidiella neoformans var. *bacillisporea* see *Filobasidiella bacillisporea*

Filobasidiella neoformans var. *neoformans* see *Filobasidiella neoformans*

Filobasidium uniguttulatum see *Cryptococcus uniguttulatus*

Flammulina velutipes (Curtis : Fries) Karsten (syn. *Collybia velutipes*)

- 6214 L. Han-chan 2. Edible: cultivated mushroom.
7310 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. G.

- Paul Jun 1958 /L. Hutchison NOF 492. Pigment: brown.
7374 ex *Populus* sp. Colorado R. Davidson /L. Hutchison NOF 356.
8007 G. Gramss /S. Davies FC-310 [=ATCC 46203]. Edible: mushroom // culture conditions: clamps, arthroconidia.
8008 ex beech stump (*Fagus* sp.) Czechoslovakia I. Jablonsky (FV-1) /S. Davies FC-368 [=ATCC 46905]. Edible: cultivated mushroom (Ceska Mykol. 35:152-160, 1981) // culture conditions: clamps, arthroconidia.
8009 cultivated edible mushroom from S. Nagy Calgary, Alta. /S. Davies FC-381. Edible: mushroom.
8010 cultivated edible mushroom from J. Lu China /S. Davies FC-394. Edible: mushroom.
8303 tissue explant ex fruiting body on poplar (*Populus*) log Looma, Alta S.P. Abbott (SA 1016) 13-Jul-1994 /S.P. Abbott (SA 1016). Pigment: brown.

Fomes cajanderi see *Fomitopsis cajanderi*

Fomes fomentarius (L.:Fr.) Kickx.

- 11654 on dead birch High Park, Toronto, ON D. Tudor Aug-2010 /D Tudor DT418810 [=TRTC 167760].
Biodeteriogen/biodegradation: influence of pH on pigment formation by lignicolous fungi (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013) // culture conditions: no clamps // pigment: brown (fide UAMH 2012).

Fomes igniarius see *Phellinus igniarius*

Fomes pini see *Phellinus pini*

Fomes pinicola see *Fomitopsis pinicola*

Fomes robustus see *Phellinus robustus*

Fomes subroseus see *Fomitopsis cajanderi*

Fomitopsis cajanderi (Karsten) Kotl. & Pouz. (syn. *Fomes cajanderi*, *Fomes subroseus*)

- 8146 Alberta L.L. Kennedy (F-19) /S. Davies FC-064.
Biodeteriogen/biodegradation: brown rot // pigment: brown.
8147 *Picea glauca* Alberta D.E. Etheridge 21 Aug 1952 /S. Davies FC-180 [=NOF 40].

Fomitopsis pinicola (Swartz:Fries) Karsten (syn. *Fomes pinicola*)

- 8144 *Picea sitchensis* Alaska, USA 21 Aug 1938 /S. Davies FC-143 [=NOF 10]. Biodeteriogen/biodegradation: brown rot.
8145 Alberta L.L. Kennedy (T-533B) /S. Davies FC-317.
Biodeteriogen/biodegradation: brown rot.

Fomitopsis rosea (Alb. & Schw.:Fr.) Karsten

- 4787 fallen spruce (*Picea* sp.) Drayton Valley, Alta. R. Currah Jun 1983 /R.S. Currah.
8302 tissue explant ex fruiting body on black spruce (*Picea mariana*) Wagner Natural Area, Alta S.P. Abbott (SA 1110) 22-Aug-1995 /S.P. Abbott (SA 1110). Pigment: brown.

Fonsecaea compacta see *Fonsecaea pedrosoi*

Fonsecaea multimorphosa Najafzadeh, Vicente, Sun, Meis & de Hoog

- 7249 (T *Fonsecaea multimorphosa*) subcutaneous mycosis in cat, DE+ for short branched dematiaceous pseudohyphae & single-budding yeast cells Gold Coast, Queensland, Australia 1982 /M. McGinnis NCMH 1412 [=CBS 980.96 =GenBank JF311396 TEF1 =GenBank JF311396 =GenBank JF267657 ITS =GenBank HQ681121 BT2]. Molecular systematics: ITS sequence analysis (Gerrits van den Ende & de Hoog, Stud.

Mycol. 43:151-162, 1999); new species of Chaetothyriales isolated from a feline cerebral abscess (Najafzadeh MJ, Vicente VA, Sun J, Meis JF, de Hoog GS, Fungal Biol 115:1066-1076, 2011).

Fonsecaea pedrosoi (Brumpt) Negróni (syn. *Fonsecaea compacta*)

- 144 Received as *Hormodendrum compactum* (*Fonsecaea compactum*) /U. of Michigan [=NCMH 881].
- 145 Received as *Hormodendrum pedrosoi* (*Fonsecaea pedrosoi*) /U. of Michigan [=NCMH 882].
- 3965 (T *Hormodendroides pedrosoi*) sent to CBS by M. Moore 1937 Brumpt /M. McGinnis NCMH 12 [=CBS 270.37 =GenBank AF050276]. Molecular systematics: Herpotrichiellaceae (Untereiner & Naveau, Mycologia 91:67-83, 1999).
- 3966 (T isotype *Phialoconidiophora guggenheima*) sent to CBS by M. Moore 1937 M. Moore /M. McGinnis NCMH 14 [=GenBank AY366917 ITS =GenBank AY554290 SSU =CBS 272.37].
- 3968 (T *Rhinoclaadiella compacta*) man chromoblastomycosis Puerto Rico P. Negróni /M. McGinnis NCMH 10 [=GenBank EU938573 Tubulin =NCPF 2444 =RV 35006 =CDC 24 =IHEM 4441 =GenBank EU938627 actin =ATCC 10222 =CBS 285.47 =IMI 134454 =QM 260 =MUCL 9774 =GenBank AF050275 =GenBank EU938591 ITS]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: Herpotrichiellaceae (Untereiner & Naveau, Mycologia 91:67-83, 1999).
- 3971 (T Neotype *Rhinoclaadiella pedrosoi*) human chromoblastomycosis Argentina P. Negróni /M. McGinnis NCMH 11 [=GenBank EU938559 tubulin =GenBank AY366914 ITS =GenBank EU938613 actin =GenBank AB114127 SSU =ATCC 18658 =CBS 271.37 =IMI 134458]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: genetic diversity (Najafzadeh MJ, Gueidan C, Badali H, Gerrits van den Ende HG, Xi L, De Hoog GS, Med Mycol 47:17-25, 2009).
- 6130 abdomen, male 40 yr, infection acquired in S. Africa Sask. H. Congly 1988 /H. Congly 218M.

Fugomyces cyanescens see *Quambalaria cyanescens*

Fulvia fulva Ciferri

- 1432 greenhouse tomato leaves I.P.O. Wageningen, Netherlands G. Hennebert 722 /DAOM 88924. Pigment: dark purple.

Funalia gallica see *Coriopsis gallica*

Funalia trogii see *Trametes trogii*

Fusariella atrovirens Sacc.

- 1452 rabbit dung Jalisco, Mexico R.F. Cain Aug 1960 /DAOM 84265. Culture conditions: sporulates on CER without cellophane.

Fusarium acuminatum Ellis & Everhart sensu Gordon (morph *Gibberella acuminata*)

- 6730 ex grasshopper femur Mordiah, Mali M. Goettel 17 Jul 1990 /M. Goettel 2B-A [=ARSEF 3218].
- 7071 ex *Sonchus arvensis* (perennial sow thistle) Vegreville, Alta. R. Varma 1989 /R. Varma WD89 511.

Fusarium an. Haematonectria haematococca see *Haematonectria haematococca*

Fusarium anthophilum (A. Braun) Wollenw.

- 10024 outside air ex RCS strip Edmonton, AB L. Sigler 11-06-01 /L. Sigler. Pigment: brown.

Fusarium avenaceum (Fr.) Sacc. (morph *Gibberella avenacea*)

- 3341 single spore isolate /P.E. Nelson R-45.
- 4679 *Suillus tomentosus* Devon, Alta. J.W. Carmichael Oct 1982 /J.W. Carmichael.
- 7067 ex *Cirsium arvense* (Canada thistle) Vegreville, Alta. R. Varma 1988 /R. Varma WD88-29-I. Pigment: fuschia.
- 10014 roots of white spruce (*Picea glauca*) seedlings Woodmere Nursery Ltd. - Fairview Division, Fairview AB G. Kernaghan 28 Jun 1999 /G. Kernaghan. Molecular systematics: Blast match 100% ITS similarity with *F. avenaceum* EU255795.

Fusarium culmorum (W.G. Smith) Sacc.

- 3331 single spore isolate, originally isolated from wheat Washington, USA R.J. Cook /P.E. Nelson R-444 [=NRRL 29349]. Molecular systematics: MAT and TR15 sequence data from USDA-ARS blasted to *F. culmorum* (fide S. Sink, USDA-ARS, Peoria, IL).
- 7056 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 367) Aug 1990 /D. Inglis (MR 367). Pigment: cherry red // biodiversity: alfalfa leaf cutting bee microflora.

Fusarium dimerum Penzig (syn. *Microdochium dimerum*)

- 9796 tissue, omentum, male 51 yr Thunder Bay, ON 2000 /R. Rennie MY 913 [=CBS 109187 =OMH FR 0044]. Molecular systematics: taxonomy and phylogeny of *Fusarium dimerum* species group (Schroers H-J, O'Donnell K, Lamprecht SC et al, Mycologia 101 44-70, 2009).

Fusarium dimerum complex

- 3315 single spore isolate ex soil in Honduras /P.E. Nelson E-5. Evaluation of opine catabolism (Beauchamp et al, Appl. Environ. Microbiol. 56:150-155, 1990).

Fusarium graminearum Schwabe (morph *Gibberella zeae*)

- 3329 single spore isolate /P.E. Nelson R-461.
- 7215 ex 2 yr old moldy hay used as cattle feed resulting in illness & death of calves Saskatchewan H. Congly 1992 /H. Congly 1502M-92.

Fusarium graminum Corda

- 6356 seeds of *Bromus inermis* Peace River, Alta. L. Sigler (A) 7 Feb 1989 /G. Mazurenko. Pigment: wine red.

Fusarium lateritium Nees (morph *Gibberella baccata*)

- 2805 soil ex flower bed Edmonton, Alta. D. Remington Jul 1967 /D. Remington.
- 3332 single spore isolate /P.E. Nelson L-29.
- 3333 single spore isolate /P.E. Nelson L-17.

Fusarium lichenicola C. B. Massalongo

- 4896 (T *Cylindrocarpum tonkinense*) *Musa sapientum* Tonkin, North Vietnam F. Bugnicourt 1936 /B. Foster [=GenBank AY097325 LSU =CBS 115.40 =IMI 113868 =DAOM 155971]. Molecular systematics: CBS 115.40 shown to be in *Fusarium solani* complex based on LSU sequence (Summerbell & Schroers, J. Clin. Microbiol. 40:2866-2875, 2002); Sequence in GenBank for CBS 115.40 shows 99% similarity to *F. lichenicola*; UAMH 4896 was obtained from DAOM but original source was CBS 115.40.
- 7741 ex Lt great toe nail, female 22 yr Calgary, Alta. 16 Aug 1994 /R. Rennie MY 3573. Pigment: brown // culture conditions: macroconidia with protuberant hilum borne on long phialides.

Fusarium merismoides Corda

- 3327 single spore isolate ex soil in Honduras /P.E. Nelson E-3. Systematics/taxonomy: as *Fusarium merismoides* at Fusarium Research Center.

Fusarium moniliforme see *Fusarium verticillioides**Fusarium oxysporum* Schlech. emend Snyder & Hansen

- 530 soil ex sheep yard UA Farm, Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 3312 single spore isolate /P.E. Nelson 0-125.
- 3313 single spore isolate /P.E. Nelson 0-139. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 5692 leg ulcer, female 72 yr Saskatchewan H. Congly 1987 /H. Congly 70M. Human/animal pathogen.
- 9216 faba beans (*Vicia faba*) Lac St. Jean, Quebec R. Drapeau 11 Jul 1981 /P.D. Khasa SRSF 301. Pigment: red-brown.
- 10871 biopsy specimen ex Everglades rat snake (*Elaphe obsoleta rossalleni*) with chronic dyscedysis and skin lesions on tail; histopathology positive for hyphae; UAMH 10870 also grown Columbus Zoo and Aquarium, Powell, OH (I) L. Sigler (C) M.J. King 19-Nov-2007 /E. Klaphake 963562 [=GenBank FJ184276 ITS]. Biodiversity: associated with lesion on everglades rat snake // human/animal pathogen: opportunistic cutaneous mycosis in ratsnake with pituitary cystadenoma & enterolipidosis (Dadone LL, Klaphake E, Garner MM, Schwahn D, Sigler L, Trupkiewicz JG, Myers G, Barrie MT, J Zoo Wildl Med 41:538-541, 2010) // culture conditions: produces greenish sclerotial pustules in age // molecular systematics: BLAST match 100% ITS similarity with *Fusarium oxysporum* (fide UAMH 2008).

Fusarium oxysporum f. *udum* see *Fusarium udum**Fusarium oxysporum* var. *cubense* (E.F. Smith) Snyder & Hansen

- 9013 ex rhizome of banana plant (*Musae* sp.) showing symptoms of Panama disease (yellowing leaves) Kingston, Jamaica P. Reese /P. Reese [=IMI 326069]. Steroid biotransformations (dehydroisoandrosterone, pregnenolone, progesterone, testosterone, cortisone, prednisone, estrone) (Porter et al, Steroids 64:834-843, 1999); redox reactions of alcohols & ketones (Wilson et al, *ibid.*). Application: hydroxylation of steroids (Pearl PC, McCook KP, Russell FA, Reynolds WF, Reese PB, Steroids 76:1317-1330, 2011).

Fusarium proliferatum (Matsushima) Nirenberg

- 5788 disseminated infection ex immunosuppressed child Toronto R.C. Summerbell Feb 1986 /R.C. Summerbell FR 212.86 [=ATCC 64921]. Human/animal pathogen: hyalohyphomycosis (Summerbell et al., J. Clin. Microbiol. 26:82-87, 1988; Richardson et al., Rev. Infect. Dis. 10:1171-1181, 1988); antifungal susceptibility (Sekhon et al., Chemotherapy 40:239-244, 1994) // pigment: violet // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 9734 lung biopsy ex female 57 Y Sudbury, ON 1999 /R. Rennie MY 911/00. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).

Fusarium rigidiusculum (Brick) Snyder & Hansen (morph *Calonectria rigidiuscula*)

- 3340 single spore isolate /P.E. Nelson Rd 10.

Fusarium solani complex (Martius) Sacc.

- 521 soil ex pig pasture UA Farm, Edmonton, Alta. J.W. Carmichael Jun 1956 /J.W. Carmichael.
- 977 soil ex grassy field UA Campus, Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael. Molecular systematics: Blast match 100% ITS similarity with DAOM 215455 and other *F. solani* strains (fide UAMH 2012).

- 1952 soil Argentina Varsavsky 1961 /G.F. Orr EV 1M.
- 3316 single spore isolate /P.E. Nelson S-145.
- 3317 single spore isolate /P.E. Nelson S-121. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003); comparison of cytoplasmic proteins in *Fusarium solani* isolates (Mahnaz, F, Khosravi AR, Yadegari MH, Scientific-Research Iranian Veterinary Journal 4:42-48, 2009); antifungal activity of synthesized copper nanoparticles tested against selected fungi (Ghasemian E, Naghoni A, Tabaraie B, Tabaraie T, J Med Microbiol 22:322-328, 2012).
- 6174 biodisc contactor fed with clarified raw sewage Alberta I. Gaudet 1988 /I. Gaudet. Pigment: red on CER, tan on PDA // biodeteriogen/biodegradation: microbial removal of chromium from liquid waste.
- 6790 ex aortic graft, male with mycotic aneurysm Houston, TX 1990 /M.G. Rinaldi UTHSC 90-1023. Pigment: pink // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 7134 paint /R.C. Summerbell BB 1227.
- 7419 skin ex female, DE+ showing chlamydispores & arthroconidia, UAMH 7438 also isolated Edmonton, Alta. Stirrat Labs 8 Jul 1993 /R. Rennie MY 2861A. Pigment: red-brown // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003); comparison of cytoplasmic proteins in *Fusarium solani* isolates (Mahnaz, F, Khosravi AR, Yadegari MH, Scientific-Research Iranian Veterinary Journal 4:42-48, 2009).
- 7742 ex blood, male 77 yr British Columbia BC Prov. Lab. 14 Oct 1994 /R. Rennie MY 4418. Pigment: brown // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 9196 squash W.C. Snyder (SC 16) /ATCC 11712 [=ATCC 11712]. Application: transformations of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979) // pigment: red-brown.
- 10733 ex cornea, female 38 yr Gibsonsia, Panama /N. Isham MRL 8609. Thermotolerant: good growth @ 30C // molecular systematics: BLAST match 99-100% LSU and ITS similarity with *Fusarium solani* aggregate (fide UAMH).

Fusarium sp.

- 325 fluid ex spleen Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 342 sputum Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 447 urine Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 785 skin behind ears Edmonton, Alta. J.W. Carmichael 2 Mar 1960 /J.W. Carmichael.
- 825 white growth, partially engorged tick ex dog Edmonton, Alta. J.W. Carmichael 1960 /J.W. Carmichael.
- 978 soil ex ploughed field UA Campus, Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
- 979 soil ex grassy field UA Campus, Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
- 996 lung ex deer mouse Enilda, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 1068 soil ex burned out treed area near river bank Edmonton, Alta. J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
- 1072 soil ex leafy area on river bank Edmonton, Alta. J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
- 1213 soft rot of cedar cooling tower Toronto, Ont. J.W. Carmichael 1962 /J.W. Carmichael.
- 1220 soft rot of cedar cooling tower Toronto, Ont. J.W. Carmichael 1962 /J.W. Carmichael.
- 1285 tadpoles Zoo. Dept., U of A J.W. Carmichael Jun 1962 /J.W.

- Carmichael.
 1304 soil & quills ex porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1305 soil & quills, porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1578 commercial mushroom Edmonton, Alta. J.W. Carmichael Feb 1963 /J.W. Carmichael.
 1827 ex finger nails Edmonton, Alta. J.W. Carmichael 14 Nov 1963 /J.W. Carmichael.
 1912 soil Argentina Varsavsky (EV7A) 1961 /G.F. Orr EV7A.
 2057 ex Acacia melanoxylon E. Cape, S. Africa P. Martin Apr 1958 /P. Martin 185.
 2072 Palomer Mtn., Calif. P. Martin Mar 1958 /P. Martin 632.
 2194 Mojave Desert, Calif. P. Martin Sep 1962 /P. Martin 1487.
 2657 mould on mushrooms Spruce Grove, Alta. J.W. Carmichael Sep 1966 /J.W. Carmichael.
 2782 manure pile Cardston, Alta. D. Remington 27 Jun 1967 /D. Remington.
 2798 flower bed soil Edmonton, Alta. D. Remington Jul 1967 /D. Remington.
 3278 air Rabat, Morocco J. Chabert 1963 /J. Nicot U5B-C.
 7066 ex *Cirsium arvense* (Canada thistle) Vegreville, Alta. R. Varma 1988 /R. Varma WD88 15III. Pigment: red // molecular systematics: Blast match 100% ITS similarity to *Fusarium flocciferum*, *Fusarium tricinctum*, *Gibberella avenacea*; other genes need to confirm (fide S. Robinson, U of Toronto 2011) // biodeteriogen/biodegradation: assessment of production of red pigment (Robinson SC, Tudor D, Cooper PA, Can J For Res 41:1277-1728, 2011).
 7068 ex *Thlaspi arvense* (stinkweed) Vegreville, Alta. R. Varma 1989 /R. Varma WD89-108-II. Culture conditions: somewhat degenerate.
 10122 cuticle, coffee berry borer (*Hypothenemus hampei*) Finca La Alianza, Chiapas, Mexico J. Perez 16 Mar 2001 /F. Vega AL-CU R24-11.
 10835 ex juvenile chameleon with cutaneous crusty lesions; histopathology + at autopsy Toronto Zoo, Scarborough, Ont. J. Pare 29-Jul-2007 /J. Pare 025. Human/animal pathogen: disseminated infection in chameleon // molecular systematics: BLAST match highest D1D2 similarity to *Fusarium* species (fide UAMH 2008) // thermotolerant: grows slowly @ 35C.
 11426 swab ex fur of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 70 C.I. Biodiversity: mycobiota of bat caves.
- Fusarium sporotrichioides*** Sherb.
 5334 Eastern white pine seeds Algonquin Park, Ont. R. Mittal 9 Jan 1986 /R. Mittal R-63 [=GenBank DQ676591 rpb2H =GenBank DQ676616 tef1H =GenBank DQ680059 SSU]. Pigment: yellow/red // plant pathogen: on seed (pathogen?) (Mittal & Wang, Can. J. For. Res. 17:1026-1034, 1987) // molecular systematics: presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009).
 5367 seeds *Coralloriza maculata* (#163) Alberta L. Sigler Apr 1986 /L. Sigler. Pigment: red.
 6532 contaminant from right thumb, man Windsor, Ont. R.C. Summerbell 9 Aug 1989 /R.C. Summerbell FR 1784.89.
- Fusarium subglutinans*** (Wollenw. & Reinking) Nelson, Toussoun & Marasas (morph *Gibberella subglutinans*)
 5345 eastern white pine seeds Algonquin Park, Ont. R. Mittal 9 Jan 1986 /R. Mittal R-68 [=FRC M-4058]. Plant pathogen: on seed (pathogen?) (Mittal & Wang, Can. J. For. Res. 17:1026-1034, 1987).
- Fusarium tricinctum*** (Corda) Saccardo (morph *Gibberella tricincta*)
 860 decaying rushes ex bog near iron springs Edmonton, Alta. J.W. Carmichael Nov 1960 /J.W. Carmichael.
 1292 soil ex nursery paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 1319 sandy soil ex Canadian Lynx pen Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
 3308 single spore isolate /P.E. Nelson T-8.
 3309 single spore isolate /P.E. Nelson T-25.
- Fusarium udum*** Butler (syn. *Fusarium oxysporum* f. *udum*)
 906 vaginal swab Edmonton, Alta. J.W. Carmichael 8 Apr 1961 /J.W. Carmichael.
- Fusarium verticillioides*** (Sacc.) Nirenberg (syn. *Fusarium moniliforme*; morph *Gibberella moniliformis*)
 3310 single spore isolate /P.E. Nelson M-1.
 3311 single spore isolate /P.E. Nelson M-30.
 3330 single spore isolate /P.E. Nelson N-1.
 4950 mycotic pneumonia, lung Alligator mississippiensis at autopsy Calgary Zoo, Alta. S. Lundberg Jan 1984 /P. Frelier [=ATCC 60858]. Human/animal pathogen: chronic multifocal granulomatous pneumonia (Frelier et al, Sabouraudia 23:399-402, 1985).
 7931 ex nail, female 79 yr Alberta Provincial Laboratory for Southern Alberta 1 Jan 1995 /R. Rennie MY 0510.
 8336 deposited by J. Cunningham /Agrol Chemical Products PC 76. Culture conditions: nonsporulating.
 8337 deposited by J. Cunningham /Agrol Chemical Products PC 69. Culture conditions: nonsporulating.
 9436 deposited by J. Cunningham /Agrol Chemical Products PC80. Culture conditions: nonsporulating.
 9437 genetically modified deposited by J. Cunningham /Agrol Chemical Products PC83. Application: genetically modified to include hydromycin resistance marker along with other genes // culture conditions: nonsporulating.
- Fusoboletinus aeruginascens* see *Suillus laricinus*
Fusoboletinus paluster see *Suillus paluster*
Fusoboletinus serotinus see *Suillus serotinus*
Fusoboletinus sinuspaulianus see *Suillus sinuspaulianus*
Fusoboletinus spectabilis see *Suillus spectabilis*
Fusicoccum aesculi see *Botryosphaeria dothidea*
Fusicoccum dimidiatum see *Neoscytalidium dimidiatum*
- Fusidium griseum*** Link
 4718 litter under old Pinus Devonian Bot. Garden, Alta. L. Sigler Nov 1982 /L. Sigler.
- Fusidium terricola* see *Acremonium terricola*
Gabarnaudia fimicola see *Sphaeronaemella fimicola*
Galactomyces geotrichum (Butler & Petersen) Redhead & Malloch (syn. *Dipodascus geotrichum*; morph *Geotrichum candidum*)
 3290 soil Puerto Rico E.E. Butler /E.E. Butler BE. Cellulolytic.
 3291 soil Puerto Rico E.E. Butler /E.E. Butler BEA1. Cellulolytic.
 3292 soil Puerto Rico E.E. Butler /E.E. Butler BEA2.

- Galactomyces reessii*** (Van der Walt) Redhead & Malloch
(syn. *Dipodascus reessii*)
3287 E.E. Butler 60-21.
3288 E.E. Butler 60-21-A1. Cellulolytic.
3289 E.E. Butler 60-21-A2.
- Ganoderma applanatum*** (Persoon) Pat.
8168 Alberta L.L. Kennedy (KW62a) /S. Davies FC-043.
Biodeteriogen/biodegradation: white rot // application:
metabolism of polycyclic aromatic hydrocarbons (Pickard et
al., Applied Env. Microbiol. 65:3805-3809, 1999) // culture
conditions: clamps.
- Ganoderma lucidum*** (Curt.:Fries) Karsten
8026 cultivated edible mushroom from S. Nagy Calgary, Alta. /S.
Davies FC-382. Edible: medicinal mushroom known as lingzhi
(Chinese), reishi (Japanese) or yeongji (Korean) // culture
conditions: clamps.
8027 cultivated edible mushroom from S. Nagy Calgary, Alta. /S.
Davies FC-385. Edible: medicinal mushroom known as lingzhi
(Chinese), reishi (Japanese) or yeongji (Korean).
- Gautieria monticola*** (Harkn.) Harkn.
10032 Alberta, Canada R.M. Danielson 23 Jun 1976 /R.M. Danielson
RMD 2008.
- Gelasinospora bonaerensis*** Stchigel & Guarro
9614 (T *Gelasinospora bonaerensis*) garden soil Bernal, Quilmes,
Buenos Aires, Argentina A.M. Stchigel 10 Aug 1996 /J.
Guarro FMR 5962 [=IMI 375099 =CBS 102191].
- Gelasinospora brevispora*** Khan & Krug
7732 ex elephant dung Mt. Kilimanjaro, Tanzania H. Griffin & J.
Krug R. Cain 17 Aug 1966 /J.C. Krug 66.1738c [=IMI 364331
=CBS 548.94].
7733 (T) ex zebra dung Amboseli, Kenya H. Griffin & J. Krug
(66.1763w) R. Cain 17 Aug 1966 /J.C. Krug TRTC 51743
[=IMI 36327 =CBS 547.94].
- Gelasinospora calospora*** (Mouton) C. Moreau & M. Moreau
2752 C. Alexopoulos.
7725 ex soil at base of *Diopyros mespiliformis* (ebony) Okavango
Delta, Botswana D. Pearce 26 Oct 1986 /J.C. Krug TRTC
51529 [=IMI 36320 =ATCC 96171 =CBS 556.94]. Pigment:
black.
7726 ex soil adhering to rhizoids of *Campylopus umbellatus*
Pahang, Malaysia J. Eggers 15 Apr 1986 /J.C. Krug TRTC
51191 [=IMI 364323 =CBS 555.94].
- Gelasinospora cerealis*** Dowding
61 ?subculture ex type / .
- Gelasinospora cratophora*** Khan & Krug
6428 soil on *Rhacomitrium aquaticum* rhizoids Le Saut du Cerf Pres
de Vagny, Dep. Vosges, Le Hazelle, Frankreich, France (C)
J.-P. Frahm (884251) 16 May 1984 /R. Khan TRTC 51107
[=CBS 245.89].
7734 (T *Gelasinospora cratophora*) ex cow dung Tanzania H. Griffin
& J. Krug (66.3377k) R. Cain 9 Aug 1966 /J.C. Krug TRTC
51744 [=IMI 36328 =CBS 558.94].
- Gelasinospora dictyophora*** Khan & Krug
7735 (T *Gelasinospora dictyophora*) ex herbivore dung Tanzania H.
Griffin & J. Krug (66.3442e) ISOLATION R. Cain 14 Aug
1966 /J.C. Krug TRTC 51746.
- Gelasinospora endodonta*** (Malloch & Cain) von Arx
5611 soil of *Quercus ilex* Premia de Mar, Barcelona, Spain F. Fort 6
Jan 1983 /J. Guarro FMR 393 [=CBS 371.83].
6398 soil Prades, Spain Dec 1980 /J. Guarro FMR 166 [=CBS
224.89].
- Gelasinospora hapsidiophora*** Khan & Krug
7736 (T *Gelasinospora hapsidiophora*) ex cow dung Tanzania H.
Griffin & J. Krug (66.3377r) ISOLATION R. Cain 9 Aug
1966 /J.C. Krug TRTC 51745 [=IMI 364329 =CBS 557.94].
Pigment: black.
7910 ex soil among grass hummocks in open nr Bulawayo,
Zimbabwe J. Krug 20 Dec 1985 /J.C. Krug TRTC 51729
[=CBS 197.95].
8195 soil in an abandoned orchard of *Mangifera indica* Noabad,
India R.S. Khan 20-Aug-1987 /J.C. Krug TRTC 51911.
Pigment: black.
8196 soil under Neem tree (*Azadirachta indica*) Shahpure Forest
Conservation Area, Bidar, India R.S. Khan 17-Dec-1989 /J.C.
Krug TRTC 51609. Pigment: black.
- Gelasinospora hippopotama*** Krug, Khan & Jeng
7731 (T *Gelasinospora hippopotama*) ex soil near irrigation canal
Western Desert, Egypt A. Hollett 5 Feb 1987 /J.C. Krug TRTC
51352 [=IMI 364319 =CBS 561.94].
7738 ex Nile silt Khartoum, Sudan A. Hollett Dec 1986 /J.C. Krug
TRTC 51353 [=IMI 364325 =CBS 562.94]. Pigment: grey.
- Gelasinospora indica*** (Rai et al.) von Arx
3088 (T *Anixiella indica*) soil Lucknow, India J.N. Rai 1966 /IMI
120719 [=GenBank AJ579556 LSU]. Culture conditions:
produced ascomata with ascospores on OAT but non
sporulating.
7727 ex soil of dry woodland, Eucalyptus, Malaleuca Queensland,
Australia N.G. Dengler 20 Feb 1990 /J.C. Krug TRTC 51332
[=ATCC 76346 =CBS 263.91].
- Gelasinospora kobei*** Cailleux
5614 soil of *Quercus coccifera* Sierra de Colcerola, Barcelona,
Spain F. Fort 21 Nov 1982 /J. Guarro FMR 504.
- Gelasinospora novoguineensis*** Takada
5612 soil, Catalonia, Spain F. Fort 15 May 1983 /J. Guarro FMR
408.
- Gelasinospora pseudocalospora*** Udagawa
8825 soil Nigeria H.C. Gugnani Nov 1996 /J. Guarro FMR 5917.
- Gelasinospora reticulata*** (Booth & Ebben) Cailleux
1940 wheat grain Yamaguchi, Japan 1963 /S.-I. Udagawa NHL
2316.
6399 soil Chile Nov 1988 /J. Guarro FMR 2955 [=CBS 225.89].
6411 soil Chile Nov 1988 /J. Guarro FMR 3047.
7730 ex undisturbed forest soil Java, Indonesia J. Krug 13 Jan 1988
/J.C. Krug IJ-44b [=IMI 364318 =CBS 559.94 =ATCC
96172].
- Gelasinospora reticulispora*** see ***Gelasinospora retispora***
- Gelasinospora retispora*** Cain (syn. *Gelasinospora
reticulispora*)
6166 soil Cuba Oct 1986 /J. Guarro FMR 2081.
8473 garden soil Singapur, Australia J. Guarro Mar 1994 /J. Guarro
FMR 5513.
- Gelasinospora santi-florii*** Cailleux
8570 forest soil Cairns, Australia J. Guarro Mar 1994 /J. Guarro
FMR 5509.
8571 soil Singapore J. Guarro Mar 1994 /J. Guarro FMR 5556.

Gelasinospora seminuda Cailleux

- 7737 ex soil adhering to rhizoids of *Campylopus umbellatus* (ebony) Pahang, Malaysia J. Eggers 15 Apr 1986 /J.C. Krug TRTC 51578. Pigment: black.

***Gelasinospora* sp.**

- 8579 soil Cairns, Australia J. Guarro Mar 1994 /J. Guarro FMR 5554.

Gelasinospora tetrasperma Dowding

- 7729 ex coniferous duff in mixed forest Muskoka District, Ontario R.S. Khan 26 Aug 1990 /J.C. Krug TRTC 51209 [=IMI 364321 =CBS 560.94].
9372 burnt rotted wood of jack pine (*Pinus banksiana*) north of Mariana Lake, Alta S.P. Abbott (SA-M101) 6 Aug 1996 /S.P. Abbott (SA-M101). Pigment: brown // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Gelasinospora udagawae Khan & Krug

- 6419 (T) soil Karachi Dist., Sind Prov., Pakistan (C) R.S. Khan 9 Sep 1987 /R. Khan TRTC 51005.
7728 ex zebra dung Tanzania M. Keeling 24 Dec 1988 /J.C. Krug TRTC 51113. Pigment: grey.

Gelatinosporium griseo-lanatum Funk

- 6397 *Pseudotsuga menziesii* Nakusp, B.C. (C) D. Morrison & A. Johnson 2 Oct 1988 /A. Funk DAVFP 23874.

Geniculosporium serpens see ***Nemania serpens******Geniculosporium* sp.**

- 4468 contaminant ex culture L. Sigler Edmonton Sep 1981 /Player.

Geomyces asperulatus Sigler & Carmichael (syn. *Geomyces pannorum* v. *asperulatus*)

- 182 soil Harvard Forest, Mass. F. Raymond /F. Raymond III-4-1.
183 (*T. Geomyces asperulatus*) soil Harvard Forest, Mass. F. Raymond /F. Raymond II-1-9 [=ATCC 34521 =CBS 124.77 =IMI 211192 =NCMH 355 =DAOM 231159 =GenBank AJ390390 ITS =GenBank DQ117444 ITS]. Molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006).
2169 Puerto Vieho, Costa Rica Jun 1962 /G.L. Barron 10258.
2815 white pine soil ex A1 & H horizon St. William, Ont. G.H. Bhatt May 1967 /G.C. Bhatt UW 316.
4007 root tip region of eucalyptus Australia Griffen & G.C. Johnson /G.C. Johnson.
4276 A-1 soil at conifer site Huntingdon Wildlife Forest, Newcomb, N.Y. 31 Oct 1979 /C.J.K. Wang 15-SC-101.
4277 A-1 soil horizon at conifer site Huntingdon Wildlife Forest, Newcomb, N.Y. 28 Nov 1979 /C.J.K. Wang AP-2972.
4478 grass hay Bedfordshire, England /J. Lacey C2437.
7248 ex rabbit dung near Palgrave, Albion Twp., Peel Co., Ontario J. Scott 3 Jan 1990 /D. Malloch JS 145.
9032 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 10-4A) T. Lumley (EI-01-S1G 4 Oct 1996 /R.S. Currah EI-01-S1G, 10-4A [=GenBank DQ117449]. Pigment: brown // molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006).

Geomyces destructans Blehert & Gargas

- 10955 ex little brown bat (*Myotis lucifugus*) with white nose syndrome (WNS) Graphite Mine, New York W. Stone /D. Blehert 22274-1 [=GenBank EU854572 ITS =GenBank FJ231100 SSU]. Human/animal pathogen: associated with bat white-nose syndrome (Blehert DS, Hicks AC, Behr M,

Meteyer CU, et al, Scienceexpress online 30 October 2008; 10.1123/science.1163874; Gargas A, Trest MT, Christensen M, Volk TJ, Blehert DS, Mycotaxon 108:147-154, 2009) // cycloheximide: sensitive (no growth MYC) // psychrophilic: optimum 9C; poor growth at 18C.

- 10956 ex wing (#2, I1), little brown bat (*Myotis lucifugus*) with white nose syndrome (WNS) Aeolus Cave, VT /D. Blehert 20674-10 [=GenBank EU884922 ITS =GenBank FJ231102 SSU]. Human/animal pathogen: associated with bat white-nose syndrome (Blehert DS, Hicks AC, Behr M, Meteyer CU, et al, Scienceexpress online 30 October 2008; 10.1123/science.1163874; Gargas A, Trest MT, Christensen M, Volk TJ, Blehert DS, Mycotaxon 108:147-154, 2009) // cycloheximide: sensitive (no growth MYC) // psychrophilic: optimum 9C; poor growth at 18C.
10957 ex ear (I2), northern bat (*Myotis septentrionalis*) with white nose syndrome (WNS) Berkshire Co., MA /D. Blehert 20682-10 [=GenBank EU854569 ITS =GenBank FJ231095 SSU]. Human/animal pathogen: associated with bat white-nose syndrome (Blehert DS, Hicks AC, Behr M, Meteyer CU, et al, Scienceexpress online 30 October 2008; 10.1123/science.1163874; Gargas A, Trest MT, Christensen M, Volk TJ, Blehert DS, Mycotaxon 108:147-154, 2009) // cycloheximide: sensitive (no growth MYC) // psychrophilic: optimum 9C; poor growth at 18C.
10958 ex wing (II), little brown bat (*Myotis lucifugus*) Litchfield Co., CT /D. Blehert 22004-1 [=GenBank EU884924 ITS =GenBank FJ231093 SSU]. Human/animal pathogen: associated with bat white-nose syndrome (Blehert DS, Hicks AC, Behr M, Meteyer CU, et al, Scienceexpress online 30 October 2008; 10.1123/science.1163874; Gargas A, Trest MT, Christensen M, Volk TJ, Blehert DS, Mycotaxon 108:147-154, 2009) // cycloheximide: sensitive (no growth MYC) // psychrophilic: optimum 9C; poor growth at 18C.
11530 wing of dead bat, presumptive little brown bat *Myotis lucifugus* Berryton cave, New Brunswick K.J. Vanderwolf & D. Malloch 16-Mar-2011 /K.J. Vanderwolf. Molecular systematics: ITS sequence from growth on wing identical to *G. destructans* (fide S. Hambleton).
- Geomyces pannorum*** (Link) Sigler & Carmichael (syn. *Chrysosporium verrucosum*)
73 germinating fern spores; from CBS as *Geomyces vulgaris* Belgium /Farlow Herb 1042 [=CBS 163.48 =CDC B-319 =UAMH 717].
74 from CBS Feb 1952 as *Geomyces cretaceus* /Farlow Herb 1076.
241 hair from beard Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
242 skin from body Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
258 skin from foot Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
287 Dr. Munroe.
321 contaminant, skin from elbows Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
346 skin from neck Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
436 skin ex ankles & soles Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
449 skin ex forearm Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
494 hair ex beard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
512 sputum Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
513 skin ex neck Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
574 hair ex wrist Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.

- 584 hair & skin ex cat Edmonton, Alta. J.W. Carmichael Nov 1957 /J.W. Carmichael.
- 603 skin ex forearm Edmonton, Alta. J.W. Carmichael 1958 /J.W. Carmichael [=GenBank GU951687 partial LSU]. Pigment: yellow.
- 614 skin ex hands Edmonton, Alta. J.W. Carmichael 1958 /J.W. Carmichael.
- 650 plate contaminant Edmonton, Alta. J.W. Carmichael May 1959 /J.W. Carmichael.
- 668 lung ex *Peromyscus* Dixonville, Alta. J.W. Carmichael Aug 1959 /J.W. Carmichael.
- 674 sap rot ex *Abies balsamea* New Brunswick M.A. Stillwell /DAOM 64156.
- 698 commercial mushrooms in damp chamber Edmonton, Alta. J.W. Carmichael Feb 1960 /J.W. Carmichael.
- 702 skin ex wrist Edmonton, Alta. J.W. Carmichael 1960 /J.W. Carmichael.
- 709 soil ex chicken yard Edmonton, Alta. J.W. Carmichael Jan 1960 /J.W. Carmichael.
- 710 hairs ex barber shop Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael.
- 714 CBS strain DeVries, *Geomyces vulgaris* /CDC B-0316 [=GenBank DQ117446]. Molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, *Mycologia* 98:307-318, 2006).
- 715 CBS strain G. Camp, *Aleurisma carnis* /CDC B-0317.
- 716 CDC B-0318.
- 717 CBS strain *Geomyces vulgaris*; germinating fern spores /CDC B-0319 [=UAMH 73 =CBS 163.48?].
- 718 CBS strain 293, *Aleurisma carnis* /CDC B-0320.
- 719 CBS strain *Geomyces cretaceus* /CDC B-0321.
- 720 CBS strain *Aleurisma lugdunense* Vuill. /CDC B-0323.
- 721 CBS strain *Aleurisma flavissimum* Link /CDC B-0324.
- 722 CBS strain Boudet, *Aleurisma guillermondii* Grigoruki /CDC B-0325.
- 723 (T *Geomyces auratus*) soil Norway Traaen /CDC B-0326 [=CBS 108.14 =GenBank GU951688 partial LSU =GenBank AB015785 =GenBank AB040703 =DAOM 231157 =Georg G-13]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, *Mycoscience* 40:251-258, 1999; Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001).
- 725 spleen of weasel Fort Vermillion, Alta. J.W. Carmichael Aug 1959 /J.W. Carmichael.
- 726 lung ex *Citellus richardsoni* Bittern Lake, Alta. J.W. Carmichael May 1959 /J.W. Carmichael.
- 728 lung ex *Peromyscus* Dixonville, Alta. J.W. Carmichael Aug 1959 /J.W. Carmichael.
- 729 spleen ex Red squirrel Slave Lake, Alta. J.W. Carmichael Jul 1959.
- 730 lung ex meadow mouse Slave Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 733 mushrooms Japan /K. Tubaki [=GenBank GU951689 partial LSU]. Molecular systematics: comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. *PLoS One*. 2010; 5(5): e10783, May 24, doi: 10.1371).
- 751 wool ex sheep yard UA Farm, Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
- 776 soil baited with turkey feathers ex pig yard Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
- 783 skin Edmonton, Alta. J.W. Carmichael 9 Mar 1960 /J.W. Carmichael.
- 788 skin Edmonton, Alta. J.W. Carmichael 2 Feb 1960 /J.W. Carmichael.
- 875 (T *Chrysosporium verrucosum*) soil West Ongul Is., Antarctica R. Haga (C) 1960 /K. Tubaki NI 175-1 [=NI 175-1]. Systematics/taxonomy: description of *Chrysosporium verrucosum* (Tubaki K, *Special Publ. Seto Marine Biol. Lab. Biological results of Japanese Antarctic Res. Exp.* 14: 1-9, 1961).
- 890 meat stored at -6 C /K. Tubaki NI 16.
- 891 meat stored at -6 C /K. Tubaki NI 34.
- 970 soil ex grassy field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
- 1028 frozen foods 6 Jun 1961 /H.H. Kuehn 439.
- 1029 frozen foods 6 Jun 1961 /H.H. Kuehn 803.
- 1030 cold storage foods Kuehn /G.F. Orr K-56 [=GenBank GU951690 partial LSU =GenBank DQ117436]. Molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, *Mycologia* 98:307-318, 2006); comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. *PLoS One*. 2010; 5(5): e10783, May 24, doi: 10.1371).
- 1033 soil Riverside County, Calif. Orr /G.F. Orr O-2033.
- 1035 soil ex arid region Los Angeles Co., Calif. Orr /G.F. Orr O-2035.
- 1037 soil ex arid region Los Angeles County, Calif. Orr /G.F. Orr O-2037.
- 1038 pack rat dung Riverside County, Calif. Orr /G.F. Orr O-2049.
- 1053 coyote dung Riverside County, Calif. Orr /G.F. Orr O-785.
- 1059 coyote dung Riverside County, Calif. Orr /G.F. Orr O-2051.
- 1061 soil Kern County, Calif. Orr /G.F. Orr O-2040.
- 1062 soil Kern County, Calif. Orr /G.F. Orr O-2041 [=GenBank GU951691 partial LSU]. Molecular systematics: comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. *PLoS One*. 2010; 5(5): e10783, May 24, doi: 10.1371).
- 1088 frozen fruit pie fillings New Jersey H. Kuehn Aug 1961 /H.H. Kuehn K-723 [=GenBank GU951692 partial LSU =GenBank DQ117442 ITS]. Molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, *Mycologia* 98:307-318, 2006); comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. *PLoS One*. 2010; 5(5): e10783, May 24, doi: 10.1371).
- 1517 marsh soil G. Morgan-Jones /G. Morgan-Jones 158.
- 1561 blood transfusion flask Nov 1962 /CBS 117.
- 1568 soil Inuvik, N.W.T. K.C. Ivarson /K.C. Ivarson 1 [=Genbank GU951693 partial LSU]. Pigment: brown // molecular systematics: comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. *PLoS One*. 2010; 5(5): e10783, May 24, doi: 10.1371); identification of fungal enzymes for industrial and environmental applications (<https://fungalgenomics.concordia.ca/home/index.php>); Concordia Univ Fungal Genomics Project (<https://fungalgenomics.concordia.ca/fungi/Gpan.php>) // application: enzymatic abilities (<https://fungalgenomics.concordia.ca/fungi/Gpan.php>).
- 1643 "from original of G. Dal Vesco as *Geomyces vinaceus*" Torino, Italy G. Dal Vesco 1957 /H.H. Kuehn 1.
- 1860 soil Dugway, Utah /G.F. Orr 10 DM.
- 2399 contaminant in culture Edmonton, Alta. J.W. Carmichael 1965 /J.W. Carmichael.
- 2583 50-yr-old human feces Antarctica 1962 /Wm. Cooke SF 3 [=GenBank GU951694 partial LSU]. Molecular systematics: comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. *PLoS One*. 2010; 5(5): e10783, May 24, doi: 10.1371).
- 2584 50-yr-old human feces Antarctica 1962 /Wm. Cooke SF 4.
- 2585 50-yr-old human feces Antarctica 1962 /Wm. Cooke SF 6.
- 2586 aerobiological sample Antarctica 1962 /Wm. Cooke Ant 2 [=Genbank GU951695 partial LSU]. Pigment: brown // molecular systematics: comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. *PLoS One*. 2010; 5(5): e10783, May 24, doi: 10.1371).
- 2587 aerobiological sample Antarctica 1962 /Wm. Cooke Ant 3.

- 2650 decayed potatoes 1965 /G.B. Ouellette 10443.
 2732 nails Mar 1967 /E.P. Hodges 9633.
 2767 flower bed soil S. Edmonton, Alta. D. Remington May 1967 /D. Remington.
 2863 soil Dugway, Utah G.F. Orr 1967 /G.F. Orr O-3512.
 2882 virgin soil, 0-6in. depth using soil extract medium Matador, Sask. G.C. Bhatt Nov 1967 /G.C. Bhatt IBP 13.
 2883 virgin soil (0-6in. depth), isol. on peptone-dextrose agar with rose bengal & streptomycin Matador, Sask. G.C. Bhatt Nov 1967 /G.C. Bhatt IBP18.
 2884 virgin soil, 30-36in. depth, isolated on CZA Matador, Sask. G.C. Bhatt Nov 1967 /G.C. Bhatt. Pigment: red.
 2885 ex virgin soil (0-6in. depth) on CZA using soil wash techn. Matador, Sask. G.C. Bhatt Nov 1967 /G.C. Bhatt IPB72. Pigment: red.
 2886 virgin soil, 30-36in. depth on CZA, from humus particles, using soil washing technique Matador, Sask. G.C. Bhatt Nov 1967 /G.C. Bhatt IBP 81.
 3000 R. Morrall RM 2800, SSF 20.
 3003 R. Morrall RM1387, SSF210.
 3004 R. Morrall RM 2676, SSF 177 [=CBS 270.77].
 3175 soil Ohio P.V. Kurup 31 Oct 1968 /P.V. Kurup SY-SL-5.
 3177 soil Ohio P.V. Kurup 11 Nov 1968 /P.V. Kurup SY-SL-15.
 3775 woollen slipper R. Heim /CBS 298.49 [=ATCC 22730 =Orr O-1149 =UAMH 3869].
 3869 woolen slipper R. Heim /G.F. Orr O-1149 [=CBS 298.49 =ATCC 22730 =UAMH 3775].
 4771 dung Michel Reservoir, S. Alta. L. Sigler Apr 1983 /L. Sigler.
 5339 (*T. Chryso sporium merdarium* var. *roseum*) soil Netherlands J.W. Veenbaas-Rijks /CBS 388.68.
 5379 wool fibres ex grave J. Torrington Beechey Island, NWT L. Sigler 2 May 1986 /B. Schweger sample 2. Biodeteriogen/biodegradation: wool fabric from the grave of John Torrington, Franklin expedition (Schweger B, Kerr B, Biodeterioration Research 2:19-38, 1989); mycelium and conidia observed by SEM on wool fibres.
 7846 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Manning, Alta. S.P. Abbott (OHS 290) 21 Mar 1994 /S.P. Abbott (OHS 290). Pigment: yellow-brown.
 8688 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta. 12-14D) T. Lumley (EI-13-S2D 14 Dec 1995 /R.S. Currah EI-13-S2D, 12-14D. Pigment: brown // psychrophilic: grows well @ 18C.
 8779 mineral fines ("soil") at centre of a frost-sorted polygon in the fellfields at Jane Col, 150m above sea level Signy Island, South Orkney Islands, Antarctica R.N. Weinstein Dec 1994 /R.N. Weinstein 2. Pigment: brown.
 10469 ex biofilm on soil-buried pieces of polyester urethane after 44 da at 15-100% water holding capacity Manchester, UK S.R. Barratt 2002 /P. Handley S6-A2 [=EMBL AJ509872]. Biodeteriogen/biodegradation: polyester urethane; predominant fungus in biofilms of polyester urethane (Barrett et al., J. Appl. Microbiol. 95:78-85, 2003).
 10470 ex biofilm on soil-buried pieces of polyester urethane after 44 da at 15-100% water holding capacity Manchester, UK S.R. Barratt 2002 /P. Handley S6-A3P [=EMBL AJ509871]. Biodeteriogen/biodegradation: polyester urethane; predominant fungus in biofilms of polyester urethane (Barrett et al., J. Appl. Microbiol. 95:78-85, 2003).
 10471 ex biofilm on soil-buried pieces of polyester urethane after 44 da at 15-100% water holding capacity Manchester, UK S.R. Barratt 2002 /P. Handley S9-A3/2 [=EMBL AJ509869]. Biodeteriogen/biodegradation: predominant fungus in biofilms of polyester urethane (Barrett et al., J. Appl. Microbiol. 95:78-85, 2003); polyester urethane.
 10472 ex biofilm on soil-buried pieces of polyester urethane after 44 da at 15-100% water holding capacity Manchester, UK S.R. Barratt 2002 /P. Handley S9-A4 [=EMBL AJ509868]. Biodeteriogen/biodegradation: polyester urethane; predominant fungus in biofilms of polyester urethane (Barrett et al., J. Appl. Microbiol. 95:78-85, 2003).
 10473 ex biofilm on soil-buried pieces of polyester urethane after 44 da at 15-100% water holding capacity Manchester, UK S.R. Barratt 2002 /P. Handley S33-A1 [=GenBank GU951697 partial LSU =EMBL AJ509867]. Biodeteriogen/biodegradation: polyester urethane; predominant fungus in biofilms of polyester urethane (Barrett et al., J. Appl. Microbiol. 95:78-85, 2003) // molecular systematics: comparison with *Geomyces destructans* (Chaturvedi V, Springer DJ, Behr MJ, Ramani R, Li X, Peck MK, Ren P, Bopp DJ, Wood B, et al. PLoS One. 2010; 5(5): e10783, May 24, doi: 10.1371).

Geomyces pannorum v. *asperulatus* see *Geomyces asperulatus*

Geomyces pulvereus Hocking & Pitt

- 4753 (*T. Geomyces pulvereus*) moldy poultry feed stored sealed for several years at ambient temp. Sydney, Australia A. Hocking 1980 /J.I. Pitt FRR 2375 [=CBS 315.87 =DAOM 231158]. Osmophilic // pigment: red-brown.

Geomyces sp.

- 9107 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 5-2C) T. Lumley (EI-09-S2E 2 May 1996 /R.S. Currah EI-09-S2E, 5-2C [=GenBank DQ117450]. Pigment: brown // molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006).
 11159 swab ex fur of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 8 C.1. Biodiversity: mycobiota of bat caves.
 11160 swab ex skin of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 5 C.1. Biodiversity: mycobiota of bat caves.
 11161 swab ex skin of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 10 C.3 SS3. Biodiversity: mycobiota of bat caves.
 11162 swab ex skin of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 10 C.3 SS2. Biodiversity: mycobiota of bat caves.
 11163 swab ex skin of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 10 C.3 SS1. Biodiversity: mycobiota of bat caves.
 11164 swab ex skin of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 9 C.3. Biodiversity: mycobiota of bat caves.
 11182 swab ex fur of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 1 C.1. Biodiversity: mycobiota of bat caves.
 11183 swab ex skin of living bat (*Myotis* sp.) Underground Lake Cave, New Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 1 C.2. Biodiversity: mycobiota of bat caves.
 11184 swab ex living male bat (*Myotis lucifugus*) Jacquet River Protected Natural Area, near Antinouri Lake, New Brunswick K.J. Vanderwolf 13-Jun-2009 /K.J. Vanderwolf Bat 4 C.8. Biodiversity: mycobiota of bat caves.
 11499 swab ex skin of living Eastern Pipistrelle bat (*Pipistrellus subflavus*) (sex unknown) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 93 C.1. Mesophilic: grows better @ 18C than at 9C // biodiversity: mycobiota of bat caves.
 11500 swab ex fur of living female little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 86 C.4. Biodiversity: mycobiota of bat caves.

- 11514 swab ex skin of living male little brown bat (*Myotis lucifugus*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 22 C.2. Mesophilic: growth equivalent @ 18C and 22C // biodiversity: mycobiota of bat caves.
- 11669 rooting soil of chickpea Montreal, Que. W. Ellouze /W. Ellouze P295_D2_23 [=GenBank JF311972 ITS]. Biodiversity: soil microbial community associated with field-grown chickpea (Ellouze, O, Ph.D. dissertation, Univ Montreal, 2011).
- Geomyces vinaceus* see *Pseudogymnoascus roseus*
- Geosmithia argillacea* see *Rasamsonia argillacea*
- Geosmithia cylindrospora* see *Rasamsonia cylindrospora*
- Geosmithia lavendula* (Raper & Fennell) Pitt
5007 (T *Penicillium lavendulum*) culture contaminant Peoria, Ill. K.B. Raper 1947 /J.I. Pitt FRR 2146 [=ATCC 10463 =CBS 344.48 =IMI 40570 =NRRL 2146].
- Geosmithia putterillii* (Thom) Pitt
5008 (T *Geosmithia putterillii*) decaying timber New Zealand J.C. Neill /J.I. Pitt FRR 2024 [=ATCC 10487 =CBS 233.38 =IMI 40212 =NRRL 2024].
- Geosmithia swiftii* see *Talaromyces bacillisporus*
- Geosmithia viridis* Pitt & Hocking
5302 (T *Geosmithia viridis*) soil Little River, NSW Australia A. Hocking 1977 /A. Hocking FMR 1863 [=GenBank JN899314 ITS =ATCC 56972 =IMI 288716 =GenBank AB033527 18S =GenBank AB047228 28S =GenBank JN680284 RPB1 =GenBank JN121620 RPB2 =CBS 252.87]. Pigment: red // molecular systematics: phylogeny of *Talaromyces* and related *Penicillium* species (Samson et al, Stud Mycol 70:159-183, 2011).
- Geotrichopsis mycoparasitica* Tzean & Estey
7316 (T *Geotrichopsis mycoparasitica*) parasitic an nematode-trapping fungi (*Arthrobotrys* sp.) Montreal, Quebec S. Tzean (PPH8E) May 1974 /T.-Y. Liu CCRC 32451 [=CBS 669.92 =IMI 348371 (isotype)]. Hyperparasite: on 27 species of fungi (Tzean & Estey Mycol. Res. 96:263-269, 1992) // benomyl: resistant @ 2 ppm, slightly sensitive @ 10 ppm.
7764 antagonistic to *Verticillium fungicola* Pennsylvania, USA A. Bonnen 1994 /A. Bonnen. Cyanide (Fide A. Bonnen).
- Geotrichopsis* sp.
4837 ex blue stained sapwood in pine beetle galleries in *Pinus contorta* Waterton, Alta. A. Tsuneda Aug 1983 /P. Muruyama NFRC C853. Culture conditions: clamps, arthroconidia // crystals.
4919 mountain pine beetle galleries Waterton, Alta. /P. Muruyama C-854. Cycloheximide // culture conditions: arthroconidia.
6476 adult *Dendroctonus ponderosae* beetle Valemount, B.C. Y. Yamaoka 8 Aug 1988 /Y. Yamaoka NOF 1391. Pigment: tan // culture conditions: arthroconidia.
6477 adult *Dendroctonus ponderosae* beetle in Lindgren Funnel Trap Valemount, B.C. Y. Yamaoka 8 Aug 1988 /Y. Yamaoka NOF 1394. Pigment: tan // culture conditions: arthroconidia.
- Geotrichum an. Dipodascus albidus* see *Dipodascus albidus*
- Geotrichum candidum* Link (morph *Galactomyces geotrichum*)
41 sulfite waste Germany ? S. Windisch /S. Windisch 4.
- 42 cucumbers (Gurken) Bot. Inst. Munchen-Nymphenburg Dr. Bukatsch? /S. Windisch 6.
43 Authentic strain of *Oidium lactis* Germany (collection of Technische Hochschule, Munich) S. Windisch 1953 /S. Windisch 7 [=MUCL 15178 =VKM F-2925 =dH15478 =CBS 178.53].
44 skim milk Inst. f. Garungsgewerbe, Berlin S. Windisch /S. Windisch 8. Culture conditions: API profile # 6442004; ferments glucose, assimilates xylase, cellobiose - // thermotolerant: grows @ 35 C.
45 soil Hannover, Germany Dr. Rouschal ? /S. Windsich 12. Culture conditions: API profile # 6442004 // thermotolerant: grows @ 35 C.
46 Camembert cheese Inst. f. Garungsgewerbe, Berlin, Germany S. Windisch /S. Windisch 16.
47 dairy product /S. Windisch 17.
49 (T *Geotrichum javanense*) strain Verona *Geotrichum javanense*; yoghurt Italy /S. Windisch 19 [=UAMH 118 =CBS 182.33 =JCM 6263 =MUCL 15176 =dH15486].
77 cottage cheese Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
80 milk Farlow Herbarium, Cambridge, MA 1951 /Farlow Herb 1010.
85 human stool Edmonton, Alta. J.W. Carmichael 1951 /J.W. Carmichael.
86 sputum ex patient with pulmonary infection /O.A. Plunkett [=Bobrov 1].
90 sputum ex patient with pulmonary infection /O.A. Plunkett [=Bobrov 5].
91 sputum ex patient with pulmonary infection /O.A. Plunkett [=Bobrov 9].
92 sour cream Los Angeles /O.A. Plunkett [=Bobrov 12].
93 sputum ex patient with pulmonary infection CDC, Atlanta, GA /O.A. Plunkett [=Bobrov 13].
94 sputum ex patient with pulmonary infection Duke U Med. School /O.A. Plunkett [=Bobrov 14].
95 sputum ex patient with pseudotuberculosis County Hosp., L.A. /O.A. Plunkett [=Bobrov 16].
103 sputum ex female 28 yr Edmonton, Alta. A. Bakerspiegel Jul 1953 /A. Bakerspiegel.
105 S. Dreyfus 305. Cycloheximide: slightly sensitive.
111 S. Dreyfus 388.
112 CBS.
114 contaminant in *Dictyostelium* culture Harvard U. J.W. Carmichael /J.W. Carmichael.
118 (T *Geotrichum javanense*) strain Verona *Geotrichum javanense* /CBS 182.33 [=UAMH 49].
119 strain Castellani *Geotrichum matalense* A. Castellani 09-35 /CBS 195.35 [=JCM 6264 =MUCL 15180].
120 strain Castellani-Chapman *Geotrichum matalense* v. *chapmani* /CBS 180.33 [=JCM 6262 =MUCL 15174 =dH15482].
121 S. Dreyfus 395.
122 Nagao Institute NI 4248.
123 (T *Geotrichum versiforme*) strain Moore *Geotrichum versiforme*; man, sputum USA R.F. Moore 1934 /CBS 193.34 [=UAMH 48 =JCM 6266 =MUCL 15179].
150 swabs ex mouth ulcer Edmonton, Alta. J.W. Carmichael 1949 /J.W. Carmichael.
171 man, nail The Netherlands F.H. van Beyma 01-33 /CBS 181.33 [=MUCL 15175].
175 banana (*Musa*) fruit Utrecht strain Berkhout *Oospora fragrans* v. *minuta* /CBS 122.22 [=MUCL 15162].
177 strain Blakeslee *Oospora lactis* /CBS 109.12 [=MUCL 15159].
178 raw milk Bio. Labs, Harvard J.W. Carmichael Apr 1953 /J.W. Carmichael.
179 strain Kluyver *Oospora lactis* /CBS 132.24 [=MUCL 15166].
338 sputum, Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
374 Batista 105.
376 Batista 299.

- 401 sewage treatment filter England H.A. Painter /H.A. Painter D.I.A.
 402 sewage treatment filter England H.A. Painter /H.A. Painter D.I.B. [=CBS 101161].
 403 sewage treatment filter England H.A. Painter /H.A. Painter D.2.
 404 sewage treatment filter England H.A. Painter /H.A. Painter D.3.
 407 sewage treatment filter England H.A. Painter /H.A. Painter D.9.
 424 sputum Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 425 sputum Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 426 throat swab Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 427 skin ex Lt cheek Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 428 sputum Edmonton, Alta. J.W. Carmichael 1965 /J.W. Carmichael.
 435 Italy /R. Ciferri 1675.
 489 sputum Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 516 soil ex pig pasture UA Farm Edmonton, Alta. J.W. Carmichael Jun 1956.
 601 diseased tomatoes U of California E.E. Butler Mar 1958 /E.E. Butler 0-10.
 602 diseased tomatoes U of Calif. E.E. Butler Mar 1958 /E.E. Butler 0-24.
 626 fermenting cacao fruit Brazil R. de Camango /R. de Camango.
 1089 frozen food pie fillings Campbell Soup Co., N.J. H. Kuehn Aug 1961 /H.H. Kuehn K-1126.
 3091 IMI 17469.
 3978 sample ex sludge and sawdust compost heap Vancouver, Wash. A. Jobson 20 May 1976 /A. Jobson.
 5178 CBS 233.76. (R)-ethyl hydroxybutyrate (Wipf et al, Helvetica Chimica Acta 66:485, 1983).
 5748 sputum, female Edmonton, Alta. P. Kibsey Apr 1987 /P. Kibsey S1765.
 6270 water soluble wastes from olive oil production (alpechin) Andalusia, Spain A. Gonzalez /A. Gonzalez IJFM A 534.
 6952 sputum, F, infection after near drowning Cleveland, OH 1991 /M.G. Rinaldi UTHSC 91-598.
 7319 soil Iraq S. Abdullah /S.K. Abdullah BSRA 10280.
 7863 indoor air ex RCS strips, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 34) 2 Dec 1993 /S.P. Abbott (OHS 34) [=GenBank AF157596 =ATCC MYA-4515 =GenBank CS084469 Seq85 from patent EP1484416 =GenBank CS084470 Seq85 from Patent EP1484416 =GenBank CS084471 Seq85 from Patent EP1484416]. Molecular systematics: PCR Method of Identifying and Quantifying Specific Fungi and Bacteria (Haugland RA, Heckman JL, Molecular and Cellular Probes 12: 387-396, 1998; Haugland RA, Heckman JL, Wymer LJ, J. Microbiol. Methods 37:165-176, 1999; Haugland RA, Vesper S, Wymer LJ, Molecular and Cellular Probes 13: 332-340, 1999) // application: QC strain for PCR assay (cited in Patent #6387652); EPA Technology for Mold Identification and Enumeration; assay name: Geo - reference strain only (Brinkman NE et al, Appl Env Microbiol 69:1775-1782, 2003); quantitative PCR analysis of fungi in building materials (Pietarinen V, Rintala H, Hyvärinen A, Lignell U, Kärkkäinen P, and Nevalainen A, Journal of Environmental Monitoring 10:655-663, 2008); comparison of DNA extraction methodologies for dust samples (Rittenour WR, Park JH, Cox-Ganser JM, Beezhold DH, Green BJ, J Environ Monit 14:766-774, 2012).

Geotrichum candidum see *Galactomyces geotrichum*

- Geotrichum capitatum*** (Diddens & Lodder) von Arx (syn. *Blastoschizomyces pseudotrichosporon*, *Blastoschizomyces capitatus*; morph *Dipodascus capitatus*)
 375 Batista 129.
 515 stool Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Molecular systematics: Blast match 99-100% ITS similarity with *Dipodascus capitatus* (*Geotrichum capitatum*) (fide UAMH 2010).
 879 slant Edmonton, Alta. J.W. Carmichael 10 Jan 1961 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *Dipodascus capitatus* AF455443 // culture conditions: colony dry, soft.
 1271 sputum, chronic pulmonary infection Edmonton, Alta. J.W. Carmichael 1962 /J.W. Carmichael. Molecular systematics: BLAST match 100% ITS similarity with *Geotrichum capitatum* (fide UAMH); BLAST match 100% D1D2 similarity with *Geotrichum capitatum*.
 5092 (T *Trichosporon capitatus*) wood pulp Woodpulp Factory, Stockholm, Sweden E. Rennerfelt (No. 104) May 1938 /I. Salkin [=CBS 2364 =NRRL Y-1487 =ATCC 10663 =CBS 571.82 =IFO 1197 =JCM 6258 =MUCL 14473 =CBS H-14216 (lectotype)]. Thermotolerant: grows @ 42 C.
 10514 isolated 3 x from blood cultures from female 53 yr, with acute lymphoblastic leukemia (ALL) on chemotherapy Geelong Hospital, Melbourne, Australia A. Woodgyer 05-04 /A. Woodgyer 2004-09075 [=2004-09076]. Human/animal pathogen: disseminated infection in a patient with acute lymphoblastic leukemia. (Pimental JD, Baker M, Woodgyer AJ, Harris OC, Pathology 37:319-321, 2005).
 10845 ex blood culture, female 16 mo (now deceased); MRSA+ UAH, Edmonton, Alta. C. Sand /R. Rennie MY 6615. Molecular systematics: BLAST match 99% D1D2 similarity with AB083084 *Geotrichum capitatum*; 100% ITS similarity with *Geotrichum capitatum* UAMH 879 & 1271 (fide UAMH); BLAST match 100% ITS similarity with *Geotrichum capitatum*.

Geotrichum clavatum De Hoog, M.T. Smith & Guého (syn. *Saprochaete clavata*)

- 10701 repeat blood culture ex male Mount Sinai Hospital, Toronto, ON /S. Mohan E 9082329 [=OMH FR 0642]. Molecular systematics: 100% ITS similarity with *Geotrichum clavatum* Type CBS 425.71=UAMH 10844; ITS 9 bp difference with *Geotrichum capitatum* 879 & 1271 // culture conditions: No growth on D-xylose; Growth on D-galactose, cellobiose (fide OMH); API profile # 6040004 (*G. capitatum* 82.9%) (fide OMH) // thermotolerant: grows @ 42 C (fide OMH).
 10844 (T *Geotrichum clavatum*) ex lung tissue, female Baltimore, MD D. Ahearn /CBS 425.71. Molecular systematics: 100% ITS similarity with UAMH 10701; ITS sequence for *Geotrichum clavatum* ex-type (UAMH authentication project).

Geotrichum fici Goto, Yamakawa & Yokotsuka

- 173 strain Berkhout *Oospora fragrans* /CBS. Cycloheximide: resistant // odor: strong fragrant.
 4812 pulmonary infection female Delhi, India /H.S. Randhawa VPCI/F II-25/84 [=CBS 610.85]. Thermotolerant: grows @ 37C, NG @ 42C // odor: strong sweet scent.
 5039 (T *Geotrichum fici*) ex fruit *Ficus* sp. Kofu Japan S. Goto (RIFY F-2-9) 1968 /CBS 127.76. Thermotolerant: grows @ 37C, NG @ 40C.
 5392 sputum ex patient with undiagnosed bronchopulmonary disorder Delhi, India R.S. Randhawa Feb 1986 /R.S. Randhawa VPCI/GF-2/86 [=CBS 326.86].

Geotrichum fragrans (Berkhout) Morenz

- 174 CBS strain Krzemecki, *Oospora fragrans* /CBS 152.25 [=IFO 10825 =MUCL 15241 =MUCL 11756]. Cycloheximide: resistant // odor: fragrant // mesophilic: NG @ 37C.

Geotrichum klebahnii (Stautz) Morenz (syn. *Geotrichum penicillatum*, *Trichosporon penicillatum*)

4208 (T *Trichosporon penicillatum*) slime flux of elm (*Ulmus carpinifolia*) California, USA L. do Carmo-Sousa 1965 /M. McGinnis NCMH 345 [=ATCC 18019 =CBS 627.74 =CBS 5586 =MUCL 14477].

Geotrichum ludwigii see ***Dipodascus magnusii******Geotrichum microsporum*** see ***Scytalidium cuboideum******Geotrichum penicillatum*** see ***Geotrichum klebahnii******Geotrichum* sp.**

- 78 trickling filter beds with aureomycin wastes Lederly Labs, Pearl River, N.Y. /Farlow Herb FH 1021.
 96 406th Medical General Lab., Tokyo /Nagao Institute NI 4205.
 405 sewage treatment filter England H.A. Painter /H.A. Painter D.5.
 406 sewage treatment filter England H.A. Painter /H.A. Painter D.6.
 610 urine Edmonton, Alta. J.W. Carmichael Aug 1958 /J.W. Carmichael.
 1142 urine Edmonton, Alta. J.W. Carmichael 18 Nov 1961 /J.W. Carmichael.
 5322 arm Finland /CBS P85-276.
 8655 wood chips Chile F. Silver /D. Eboh 3MST.

Gibberella acuminata see ***Fusarium acuminatum******Gibberella avenacea*** see ***Fusarium avenaceum******Gibberella baccata*** see ***Fusarium lateritium******Gibberella fujikuroi*** (Sawada) Wollenweber (morph *Fusarium fujikuroi*)

- 8197 parent strain of UAMH 8198 (B-141a) /A. Jones GF1a. Gibberellin. Pigment: rose.
 8198 mutant blocked in gibberellin biosynthesis, derived from UAMH 8197 (GF1a) /A. Jones B1-41a. Blocked in gibberellin biosynthesis at step between ent-kaur-16-en-19-al & ent-kaur-16-en-19-oic acid.; mutant used extensively in studies on the conversion of steviol to novel gibberellin analogues..
 9877 wild type strain ex sugar cane (*Saccharum officinarum*) Taiwan /Nufarm Americas S1 [=IMI 58289 =CBS 195.34 =NRRL A-6831]. Gibberellic acid.
 9878 mutant of UAMH 9877 (IMI 58289) /Nufarm Americas S1deltaorf3-T23. Mixture of gibberellic acid precursors GA4 and GA1 (Fide B. Tudzynski, Oct 2000).
 9879 mutant of UAMH 9877 (IMI 58289) /Nufarm Americas S1deltaorf3-T33. Mixture of gibberellic acid precursors GA4 and GA1 (Fide B. Tudzynski, Oct 2000).
 9880 mutant of UAMH 9877 (IMI 58289) /Nufarm Americas S1deltaorf3-T55. Mixture of gibberellic acid precursors GA4 and GA1 (Fide B. Tudzynski, Oct 2000).
 9881 mutant from high gibberellin-producing strain M567 /Nufarm Americas 6314. Gibberellic acid precursor GA7 (Fide B. Tudzynski, Oct 2000).
 9882 mutant with genetically disrupted Orf3 gene /Nufarm Americas 6314deltaorf3-T1. Gibberellic acid precursor GA4 (Fide B. Tudzynski, Oct 2000).
 9883 mutant with genetically disrupted Orf3 gene /Nufarm Americas 6314deltaorf3-T2. Gibberellic acid precursor GA4 (Fide B. Tudzynski, Oct 2000).
 9884 mutant with genetically disrupted Orf3 gene /Nufarm Americas 6314deltaorf3-T8. Gibberellic acid precursor GA4 (Fide B. Tudzynski, Oct 2000).

Gibberella tricincta see ***Fusarium tricinctum******Gibberella zeae*** see ***Fusarium graminearum******Gilmaniella humicola*** Barron

- 1428 sludge Dayton, OH W.B. (294) Cooke Apr 1952 /DAOM 35429.
 1565 C.L. Kramer K-10.
 4112 soil United Arab Republic H.M. Yusef 1965 /IMI 112083.
 4967 K. Ulfig 13.
 7336 T tube site (abdominal drain) liver transplant patient Edmonton, Alta. C. Sand Apr 1993 /R. Rennie MY 1392-93. Pigment: black.
 7430 sputum, male 53 yr Edmonton, Alta. Misericordia Hospital 23 Jul 1993 /R. Rennie MY 3048E. Mesophilic: NG @ 37C.
 8120 contaminated straw from mushroom grower Alberta S. Davies /S. Davies FC-422. Benomyl: sensitive.

Gliocephalotrichum bulbilium Ellis & Hesseltine

- 8670 non-termite soil close to Termite Mound 8 Mahale Mountains, Tanzania D. Malloch Dec 1995 /D. Malloch 8-control. Cycloheximide: sensitive // benomyl: sensitive // pigment: brown.

Gliocladium* an. *Nectria pallidula see ***Nectria pallidula******Gliocladium* an. *Roumegueriella rufula*** see ***Roumegueriella rufula******Gliocladium aurifilum*** (Gerard) Seifert, Samuels & Gams (syn. *Dendrostilbella aurifila*; morph *Sphaerostilbella lutea*)

- 6012 old fruit bodies Cerrena unicolor Gatineau Park, Quebec G. Thorn 9 Nov 1986 /K. Seifert FRT 675B [=ATCC 62927].

Gliocladium viride Matruchot (morph *Hypocrea lutea*)

- 1365 Populus sp. Ontario K. Shields (C160) Oct 1958 /DAOM 67245.
 1609 C.L. Kramer K-6. Pigment: tan.
 6758 creosote-treated southern pine pole Binghamton, NY /C.J.K. Wang EP-76 [=ATCC 66682]. Pigment: brown.

Gliomastix cerealis see ***Acremonium cereale******Gliomastix guttuliformis*** see ***Acremonium cereale******Gliomastix murorum*** (Corda) S. Hughes (syn. *Acremonium murorum*)

- 947 from G. Smith as *Scopulariopsis zonata* /G. Smith Sc. 11. Mesophilic: grows @ 30 C but not @ 35 C.
 1476 seed oats Belfast J.P. Malone (19a-47) 1948 /IMI 43610.
 9115 nail, male 49 yr, DE+ for atypical hyphae; isolated on 2 occasions Australia A. Woodgyer 1996 /A. Woodgyer 9627255. Pigment: brown.
 10198 probable contaminant ex male 58 yr; DE+ Wellington Medlab, Wellington, New Zealand 2002 /K. Rogers MR 2062. Mesophilic: growth strongly inhibited @ 30 C // pigment: tan/orange.

Gliomastix polychroma (J.F.H. Beyma) Matsush. (syn. *Acremonium polychromum*)

- 703 scalp hairs ex barber shop Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael. Cellulolytic.
 8594 nail, male 30 yr Alberta Provincial Lab for Southern Alberta 12 Apr 1996 /R. Rennie MY 2125. Pigment: brown.
 8974 slightly decayed wood (stage 1 decay), aspen log (*Populus tremuloides*) in 3 yr post-harvest site Slave Lake, Alta. 4-10C T. Lumley (H953-01-S1D 10 Apr 1997 /R.S. Currah

H953-01-S1D-4-10C. Benomyl: sensitive to slightly tolerant (growth restricted at 2 ppm).

Gloeocoryneum cinereum see *Leptomelanconium cinereum*

Gloeophyllum sepiarium (Wulf. in Jacq.:Fr.) Karst. (syn.

Lenzites sepiaria)

1253 K. Nobles N 21 [=DAOM 22442].

Biodeteriogen/biodegradation: brown rot.

8263 Alberta L.L. Kennedy (31) /S. Davies FC-039.

Biodeteriogen/biodegradation: brown rot // pigment: brown.

Gloeophyllum trabeum (Persoon: Fries) Murrill

7375 ex *Picea* sp. Alberta R. Jeffrey 1961 /L. Hutchison NOF 13.

Pigment: strong brown // culture conditions: arthroconidia, no clamps.

Glomerella acutata see *Colletotrichum acutatum*

Glomerella cingulata (Stonem.) Spaulding & Schrenk

(morph *Colletotrichum gloeosporioides*)

7200 ex roots of epiphytic orchid *Maxillaria neglecta* growing on *Pentaclethra macroleba* (Leguminosae) La Selva, Heredia Prov., Costa Rica K. Richardson 26 Oct 1991 /R.S. Currah K393e. Mycorrhizae: root endophyte epiphytic orchid *Maxillaria neglecta*.

7201 ex roots of epiphytic orchid *Catasetum maculatum* growing on *Bactris gasipaes* La Selva, Heredia Prov., Costa Rica K. Richardson 31 Oct 1991 /R.S. Currah K442e. Mycorrhizae: root endophyte epiphytic orchid *Catasetum maculatum*.

7241 ex roots of epiphytic orchid *Sobralia* sp. on fallen moss-covered log La Selva, Heredia Prov., Costa Rica K. Richardson 28 Mar 1991 /R.S. Currah K168c. Mycorrhizae: root endophyte epiphytic orchid *Sobralia* sp..

7275 ex roots of epiphytic orchid *Encyclia fragrans* La Selva, Heredia Prov., Costa Rica K. Richardson 2 Apr 1991 /R.S. Currah K193e. Mycorrhizae: root endophyte epiphytic orchid *Encyclia fragrans*.

10318 isolated three times ex elbow bursa, male 77 yr; DE + Tauranga Hospital, New Zealand 2003 /K. Rogers MR 3194. Culture conditions: produces ascospores at 25 C; produces perithecia on TAK and on TWA with wood (toothpick) // mesophilic: NG @ 35C.

Glutinoaggar fibulatus Sivanesan & Watling

4402 (T *Glutinoaggar fibulatus*) ex *Trabutia cocoicola* in *Cocos nucifera* Seychelles J. Belmont 1978 /IMI 226584 [=ATCC 42772 =IMI 226584b].

Godronia cassandrae Peck

6386 *Vaccinium corymbosum* (high bush blueberry) D. Ramsdell /W.A. Ayer [=ATCC 32305]. Plant pathogen: blueberry (Phytopathol. 65:105-110, 1975).

6493 ex *Oxycoccus macrocarpos* (bog cranberry) C. Shear /W.A. Ayer [=CBS 197.32]. Pigment: green.

Godronia multisporea Groves

5845 *Betula papyrifera* Nakusp, B.C. (C) J. Vallentgoed 1 Jul 1987 /A. Funk DAVFP 23525. Pigment: green.

Gonatobotryum apiculatum (Peck) Hughes

2814 soil, A1 & H Horizon under white pine St. Williams, Ontario G.C. Bhatt Jul 1966 /G.C. Bhatt UW200.

Gonytrichum macrocladum (Sacc.) Hughes

1434 wheat rhizosphere Ithaca, N.Y. Jooster Jun 1962 /DAOM 89165.

1546 G.L. Barron 10805.

Graphilbum tsugae J. Reid & Georg Hausner

11698 ex stained wood adjacent to beetle galleries in felled log of *Tsuga heterophylla* Hwy 1, Annis Mountain, near Salmon Arm, BC (C) J & B Reid; (I) J Reid 21-Sep-1987 /G. Hausner WIN(M) 1387 A [=UAMH 11699 B variant]. Mesophilic: opt. 20-25C // biodiversity: ophiostomatoid bark beetle associated fungus from *Tsuga heterophylla* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015) // systematics/taxonomy: description of ophiostomatoid fungus *Graphilbum tsugae* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015) // culture conditions: culture variant of UAMH 11699.

11699 ex stained wood adjacent to bark beetle galleries in felled log of *Tsuga heterophylla* Hwy 1, Annis Mountain, near Salmon Arm, BC (C) J & B Reid; (I) J Reid /G. Hausner WIN(M) 1387 B [=UAMH 11698 A variant]. Mesophilic: opt. 20-25C // biodiversity: ophiostomatoid bark beetle associated fungus from *Tsuga heterophylla* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015) // systematics/taxonomy: description of ophiostomatoid fungus *Graphilbum tsugae* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015).

11700 ex perithecia in beetle galleries in felled log of *Tsuga heterophylla* Hwy 1, Annis Mountain, near Salmon Arm, BC (C) J & B Reid; (I) J Reid /G. Hausner WIN(M) 1384. Mesophilic: opt. 20-25C // systematics/taxonomy: description of ophiostomatoid fungus *Graphilbum tsugae* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015) // biodiversity: ophiostomatoid bark beetle associated fungus from *Tsuga heterophylla* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015).

11701 (T *Graphilbum tsugae*) ex perithecial spore drop on perithecium in unidentified bark beetle gallery in felled log of *Tsuga heterophylla* Annis Mountain, near Salmon Arm, BC (C) J & B Reid; (I) J Reid 21-Sep-1987 /G. Hausner WIN(M) 1391 [=GenBank HQ634824 SSU =WIN(M) 1391 =GenBank KJ661745 ITS]. Mesophilic: NG @ 10C or @ 35C; opt. 20-25C // systematics/taxonomy: description of ophiostomatoid fungus *Graphilbum tsugae* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015) // biodiversity: ophiostomatoid bark beetle associated fungus from *Tsuga heterophylla* (Reid J, Hausner G, Mycotaxon 130:399-419, 2015).

Graphiothecium phyllogenum (Desm.) Sacc.

6019 ex leaf *Fragaria* sp. Ottawa, Ont. K. Seifert Sep 1987 /K. Seifert.

Graphium an. *Petriella boulangeri* see *Petriella boulangeri*

Graphium an. *Petriella guttulata* see *Petriella guttulata*

Graphium an. *Petriella sordida* see *Petriella sordida*

Graphium basitruncatum (Mats.) Seifert & Okada

8494 (T *Stilbum basitruncatum*) forest soil Solomon Islands T. Matsushima (MFC 2097) /T. Nakase JCM 9300 [=CBS 320.72 =MFC-2997 =GenBank AB038427 ITS =GenBank AB007653 SSU]. Systematics/taxonomy: *Graphium penicillioides* complex (Okada G, Jacobs K, Kirisits T et al, Stud. Mycol. 45:169-188, 2000; Kumar D, Sigler L, Gibas CFC, Mohan S, Schuh A, Medeiros BC, Peckham K, Humar A, J Clin Microbiol 45:1644-1645, 2007; Cruywagen EM, de Beer ZW, Wingfield MJ, Persoonia 25:61-71, 2010).

10611 blood culture, male 71 yr; isolated eight times; same patient as 10620 Mount Sinai Hospital, Toronto, ON /S. Mohan E5032269 [(see also OMH FR 39 and FR 40) =OMH FR 49 =UAMH 10620 =GenBank EF165016 ITS]. Thermotolerant:

- good growth @ 35 C // human/animal pathogen: fungemia in patient with leukemia (Kumar D, Sigler L, Gibas CFC, Mohan S, Schuh A, Medeiros BC, Peckham K, Humar A, J Clin Microbiol 45:1644-1645, 2007) // molecular systematics: BLAST match 99% ITS similarity with AB038427 (ex-type) *Stilbum basitruncatum* (fide Kumar et al).
- 10620 ex blood, male 70 yr; isolated eight times; same patient as UAMH 10611 Royal Victoria Hospital, Barrie, ON 10 Feb 2006 /R. Rennie MY 1071 [=OMH FR 40 =see also OMH FR 49 =UAMH 10611]. Human/animal pathogen: fungemia in patient with leukemia (Kumar D, Sigler L, Gibas CFC, Mohan S, Schuh A, Medeiros BC, Peckham K, Humar A, J Clin Microbiol 45:1644-1645, 2007) // thermotolerant: grows better @ 25C than at 30 C (fide UAH) // cycloheximide: sensitive (no growth MYC).
- 11332 ex blood of immunosuppressed female child, 2 yr, with fungemia following stem cell transplantation; + for hyphae in Gram stain St. Louis Childrens Hospital, St. Louis, MO 2010 /D.A. Sutton UTHSC 10-2205 [=UTHSC R-4613 =GenBank HQ857746 ITS =GenBank HQ857747 D1D2]. Human/animal pathogen: fungemia in immunosuppressed child refractory to therapy with amphotericin and anidulafungin (El Feghaly RE, Sutton DA, Thompson EH, Fu J, Wickes BL et al, Med Mycol Case Reports 1:35-38, 2012).

Graphium calicioides see *Exophiala calicioides*

Graphium cuneiferum see *Parascedosporium putredinis*

Graphium eumorphum see *Petriella boulangeri*

Graphium graminum see *Cephalotrichum microsporium*

***Graphium penicillioides* Corda**

- 9646 Monterey pine (*Pinus radiata*) Compartment 2, Kaingaroa State Forest, Taupo, NZ J. & B. Reid (88-457A1) 1988 /J. Reid UM 613.
- 9704 Monterey pine (*Pinus radiata*) Compartment 1212, Kaingaroa State Forest, Taupo, NZ J. & B. Reid (88-319A1) 17 Feb 1988 /J. Reid UM 612. Culture conditions: non sporulating on deposit; no conidia obtained.

***Graphium pseudormiticum* M. Mouton & M. J. Wingfield**

- 8495 South Africa M.J. Wingfield /T. Nakase JCM 9331 [=CBS 781.85 =GenBank AB038429 ITS =GenBank AB007682 SSU]. Systematics/taxonomy: *Graphium penicillioides* complex (Okada G, Jacobs K, Kirisits T et al, Stud. Mycol. 45:169-188, 2000; Cruywagen EM, de Beer ZW, Wingfield MJ, Persoonia 25:61-71, 2010); *Graphium pseudormiticum* in Cruywagen et al 2010.

***Graphium* sp.**

- 11642 swab ex fur of bat Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 36 C.1 fur S [=Untereiner WUC G36]. Culture conditions: phialoconidial ascomycete with reduced phialides // biodiversity: mycobiota of bat caves // cycloheximide: sensitive (growth strongly inhibited) // benomyl: sensitive (fide UAMH 2012).

***Graphium* sp. 1**

- 10636 ex *Ips perturbatus* (northern spruce engraver) Haines Junction, Yukon S. Alamouti /C. Breuil 3YT3P.1-G1 [=GenBank DQ268586 ITS]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: *Graphium penicillioides* complex (Cruywagen EM, de Beer ZW, Wingfield MJ, Persoonia 25:61-71, 2010); Genbank DQ256586 as *Graphium*

sp..

- 10637 ex *Ips perturbatus* (northern spruce engraver) Haines Junction, Yukon S. Alamouti /C. Breuil 3YT3P.2-G1 [=GenBank GQ266169 SSU =GenBank DQ268587 ITS]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: *Graphium penicillioides* complex (Cruywagen EM, de Beer ZW, Wingfield MJ, Persoonia 25:61-71, 2010); Genbank DQ256587 as *Graphium* sp..

***Graphium* sp. 2**

- 10638 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 3PG8P.1-G2 [=GenBank DQ268588 ITS]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: *Graphium penicillioides* complex (Cruywagen EM, de Beer ZW, Wingfield MJ, Persoonia 25:61-71, 2010); GenBank DQ268588 as *Graphium* sp..
- 10702 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 3PG8P.4-G2 [=GenBank DQ268589 SSU]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007) // molecular systematics: GenBank DQ268589 as *Graphium* sp..

***Graphium* sp. 3**

- 9801 lodgepole pine (*Pinus contorta*) Hwy 14, Sooke, Vancouver Island, BC J. B. Reid (87-3F) /J. Reid WIN(M) 718 [=GenBank HM244373 ITS =WIN(M)718 =UM 718]. Culture conditions: grows best on OAT, more restricted on malt extract agar (fide J. Reid) // molecular systematics: GenBank HM244373 as *Graphium* sp..

***Graphium* sp. 4**

- 8493 elm (*Ulmus procera*) United Kingdom M.J. Wingfield /T. Nakase JCM 7440 [=CBS 506.86 =GenBank AB038424 ITS =GenBank AB007652 SSU =GenBank AF027384 LSU =GenBank DQ470938 RPB2 =GenBank DQ47110 EFla =GenBank DQ471184 RPB1 =GenBank DQ471038 SSU]. Systematics/taxonomy: *Graphium penicillioides* complex (Okada G, Jacobs K, Kirisits T et al, Stud. Mycol. 45:169-188, 2000; Cruywagen EM, de Beer ZW, Wingfield MJ, Persoonia 25:61-71, 2010); *Graphium* species 4 in Cruywagen et al 2010.

***Graphium* sp. 5**

- 11696 ex lodgepole pine (*Pinus contorta*) Hwy 14, ca. 10 miles W of Sooke, Vancouver Island, BC (C) J & B Reid; (I) J Reid /G. Hausner WIN(M) 1490 [=GenBank HQ202315 SSU =GenBank HM244373 ITS]. Molecular systematics: GenBank HM244373 as *Graphium* sp..
- 11697 ex beetle galleries in lodgepole pine (*Pinus contorta*) Taylor Lake hiking trail, Banff National Park, AB (C) J & B Reid; (I) J Reid. /G. Hausner WIN(M) 1389 [=GenBank HM244374 ITS]. Molecular systematics: GenBank HM244374 as *Graphium* sp.; *Graphium* novel species (Reid, J., Iranpour, M., Mullineux, T., Hausner, G.).

Graphium tectonae see *Parascedosporium tectonae*

***Gremmeniella abietina* (Lagerb.) Morelet (morph *Brunchorstia pinea*)**

- 5038 *Pinus resinosa* New Brunswick S. Pond 1 Jun 1968 /L. Browne

C-699 [=NFRC C699].

Grifola frondosa Dicks.:Fries

- 8129 H. Burdsall /S. Davies FC-386 [=ATCC 60303 =USFPL 15552-sp]. Edible: cultivated mushroom.
 8130 H. Burdsall /S. Davies FC-387 [=ATCC 60302 =USFPL 105867-sp]. Edible: cultivated mushroom.
 8131 oak (*Quercus*) stump Maryland, USA W.F. Jeffers /S. Davies FC-388 [=ATCC 11936]. Edible.
 8132 S. Davies FC-389 [=USFPL 47462]. Edible: cultivated mushroom.
 8133 H. Burdsall /S. Davies FC-390 [=ATCC 60301 =USFPL 103424-s]. Edible: cultivated mushroom.
 8134 H. Burdsall /S. Davies FC-391 [=USFPL RLG-6889-s]. Edible: cultivated mushroom.
 8135 H. Burdsall /S. Davies FC-392 [=ATCC 60305 =USFPL RLG-6889-sp]. Edible: cultivated mushroom.
 8136 Western Biologicals (strain #49) /S. Davies FC-410. Edible: cultivated mushroom.

Grosmannia abiocarpa (R.W. Davidson) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ophiostoma abiocarpum*; morph *Letographium an. of Grosmannia abiocarpa*)

- 10650 ex *Ips tridens* in spruce Fort St. James, Yukon S. Alamouti /C. Breuil 2FJ1T-Oa [=GenBank DQ097850 SSU =GenBank DQ097858 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
 10651 gallery of *Ips tridens* in spruce Fort St. James, B.C. S. Alamouti /C. Breuil 2FJ3GT-Oa [=GenBank DQ268603 SSU =GenBank DQ268633 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
 10652 gallery of *Ips tridens* in spruce Prince George, B.C. S. Alamouti /C. Breuil 3PG6GT-Oa [=GenBank DQ268634 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).

Grosmannia alacris T.A. Duong, Z.W. de Beer, M.J. Wingf. (morph *Leptographium an. Grosmannia alacris*)

- 10160 (*T. Verticicladiella alacris*) roots of *Pinus pinaster* Tokai, Cape Town, South Africa M. J. Wingfield 1 May 1978 /J. Reid UM 1214 [=CMW 2844 =DAOM 173660 =ATCC 42810 =CBS 591.79 =PREM 45483, holotype specimen =GenBank JN135313 ITS =GenBank JN135296 calmodulin =GenBank JN135329 btub =GenBank JN135304 Tef1 alpha]. Molecular systematics: phylogeny of the *Grosmannia serpens* complex (Duong TA, de Beer AW, Wingfield BD, Wingfield MJ, Mycologia 104:715-732, 2012); microsatellite markers for *Grosmannia alacris* (Duong TA, de Beer ZW, Zanzot JW, Wingfield MJ, Wingfield BD, Am J Bot. 99:e216-9. 2012 Epub Apr 26.; Duong TA, de Beer ZW, Zanzot JW, Wingfield MJ, Wingfield BD, Am J Bot. 99:e216-9. 2012 Epub Apr 26 (as CMW 2844)).

Grosmannia aurea (Rob.-Jeffer. & R.W. Davidson) Zipfel, Z.W. de Beer & M.J. Wingf. (syn. *Ophiostoma aureum*; morph *Leptographium aureum*)

- 10965 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta x banksiana*; moderate bluestain present Fox Creek, Alta. A. Rice 23-Apr-2007 /A. Rice M001-03-03-06-UC03DL06 [=GenBank GU370181 beta tubulin =GenBank GU370224 EF1 alpha =GenBank GU370310 UFM =GenBank GU370138 actin =GenBank

GU370267 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011).

- 10966 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta x banksiana*; from B. Cooke overwintering study(FC-3-1) Fox Creek, Alta. A. Rice 23-Apr-2007 /A. Rice M001-03-03-08-UC06G11 [=GenBank GU370185 beta tubulin =GenBank GU370228 EF1 alpha =GenBank GU370314 UFM =GenBank GU370142 actin =GenBank GU370271 ITS2]. Molecular systematics: ITS genotype haplotype AI2 (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011) // biodiversity: mountain pine beetle genomics project.
 10967 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; larval size variable, 50-60% larval survival Harvie Heights, Canmore, Alta. A. Rice 15-Feb-2007 /A. Rice M001-06-02-10-UC38DL47 [=GenBank GU370179 beta tubulin =GenBank GU370222 EF1 alpha =GenBank GU370308 UFM =GenBank GU370136 actin =GenBank GU370265 ITS2]. Molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011) // biodiversity: mountain pine beetle genomics project.
 10968 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta x banksiana* Lingrell, Grande Prairie, Alta. A. Rice 05-Mar-2008 /A. Rice M002-01-03-03-UC12DL18 [=GenBank GU370205 beta tubulin =GenBank GU370248 EF1 alpha =GenBank GU370334 UFM =GenBank GU370162 actin =GenBank GU370291 ITS2]. Molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011) // biodiversity: mountain pine beetle genomics project.
 10969 ex flame-sterilized wood in mountain pine beetle (*Dendroctonus ponderosae*) gallery in *Pinus contorta x banksiana* Valleyview, Fox Creek, Alta. A. Rice 17-Jan-2008 /A. Rice M002-03-01-12-UC16G21 [=GenBank GU370207 beta tubulin =GenBank GU370250 EF1 alpha =GenBank GU370336 UFM =GenBank GU370164 actin =GenBank GU370293 ITS2]. Molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011) // biodiversity: mountain pine beetle genomics project.
 10970 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta*; moderate bluestain, multiple insect species present Spray Lakes West, Canmore, Alta. A. Rice 26-Sep-2007 /A. Rice M002-06-01-08-UL05DL39 [=GenBank GU370217 EF1 alpha =GenBank GU370303 UFM =GenBank GU370131 Actin =GenBank GU370260

- ITS2 =GenBank GU370174 beta tubulin]. Molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011) // biodiversity: mountain pine beetle genomics project.
- Grossmannia cainii*** (Olchow. & J. Reid) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ophiostoma cainii*; morph *Pesotum an. Grossmannia cainii*)
- 9715 (T *Ceratocystis cainii*) black spruce (*Picea mariana*) Sandilands Forest Reserve, Manitoba A. Olchowecki 24 Apr 1971 /J. Reid UM 46 [=WIN (M) 71-13 =GenBank AF155681]. Systematics/taxonomy: descriptions & relationships of *Ceratocystis* spp. In Manitoba (Olchowecki & Reid, Can. J. Bot. 52:1675-1711 plus plates, 1974) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000) // culture conditions: degenerate poorly sporulating.
- Grossmannia clavigera*** (R.C. Rob-Jeffr. & R.W. Davidson) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ophiostoma clavigerum*, *Ceratocystis clavigera*; morph *Leptographium clavigerum*)
- 4585 ascocarps on sapwood surface ex lodgepole pine attacked by *Dendroctonus ponderosae* & *Ips* sp. B.C. L. Sigler Jun 1982 /H.S. Whitney [=GenBank AY 263206 (Btubulin)]. Molecular systematics: PCR-RFLP marker using beta-tubulin gene (Lee, Kim, Fung & Breuil, Can. J. Bot. 81:1104-1112, 2003); identification by padlock probes (Tsui CK, Wang B, Khadempour L, Alamouti SM, Bohlmann J, Murray BW, Hamelin RC, J Microbiol Methods. 83(1):26-33, 2010).
- 4818 sapwood between beetle galleries ex *Pinus contorta* Westcastle, Alta. A. Tsuneda Jul 1983 /A. Tsuneda NFRC C837 [=ATCC 64700 =GenBank AY263207 (Btubulin)]. 3-phenyl-1,2-propanediol + various other metabolites (Ayer & al., Can. J. Chem. 64:904-909, 1986). Plant pathogen: blue stain fungus (Zambino & Harrington, Mycologia 84:12-25, 1992 (isoenzymes)) // molecular systematics: PCR-RFLP marker using beta-tubulin gene (Lee, Kim, Fung & Breuil, Can. J. Bot. 81:1104-1112, 2003).
- 4819 sapwood between beetle galleries ex *Pinus contorta* Carbondale, Alta. A. Tsuneda Jul 1983 /A. Tsuneda NFRC C-838. Plant pathogen: blue stain fungus (Yamaoka & al., Can. J. For. Res. 20:31-36, 1990).
- 4836 sapwood between beetle galleries ex *Pinus contorta* Belly R., Alta. A. Tsuneda Aug 1983 /P. Muruyama NFRC C-841.
- 4843 sapwood between beetle galleries ex *Pinus contorta* Carbondale-Lynx, Alta. A. Tsuneda Aug 1983 /P. Muruyama NFRC C-842.
- 4882 base of beetle gallery ex *Pinus contorta* Blairmore, Alta. L. Sigler Oct 1983 /L. Sigler.
- 4918 mountain pine beetle galleries Beaver Mines, Alta. /P. Muruyama NFRC C-846.
- 4924 mountain pine beetle galleries /P. Muruyama NFRC C-843 [=GenBank AY 263196]. Molecular systematics: PCR-RFLP marker using beta-tubulin gene (Lee, Kim, Fung & Breuil, Can. J. Bot. 81:1104-1112, 2003).
- 10627 ex bark *Pinus contorta* var. *latifolia* infested with *Dendroctonus ponderosae* Banff, Alta. S. Lee July 2003 /C. Breuil SL-B6. Molecular systematics: Genetic diversity in *Ophiostoma clavigerum* associated with mountain pine beetle.
- 10628 ex bark *Pinus contorta* var. *latifolia* infested with *Dendroctonus ponderosae* Banff, Alta. S. Lee July 2003 /C. Breuil SL-B9. Molecular systematics: Genetic diversity in *Ophiostoma clavigerum* associated with mountain pine beetle.
- 10629 ex bark *Pinus contorta* var. *latifolia* bark infested with *Dendroctonus ponderosae* Banff, Alta. S. Lee July 2003 /C. Breuil SL-B13 [=B13 =GenBank JX402933]. Molecular systematics: Genetic diversity in *Ophiostoma clavigerum* associated with mountain pine beetle; mating-type loci in *Grossmannia clavigera* and relatives (Tsui CKM, diGuistini S, Wang Y, Feau N, Dhillon B, Bohlmann J, Hamelin RC, G3 (Bethesda) 3:465-480, 2013); Idiomorph MAT1-2 (Tsui et al 2013).
- 10630 ex bark *Pinus contorta* var. *latifolia* infested with *Dendroctonus ponderosae* Banff, Alta. S. Lee July 2003 /C. Breuil SL-B26. Molecular systematics: Genetic diversity in *Ophiostoma clavigerum* associated with mountain pine beetle.
- 11139 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana*; lots of bluestain Wilmore-Kakwa, B.C. A. Rice 10-May-2007 /A. Rice M001-02-03-05-UC17DL22 [=GenBank GU370187 beta tubulin =GenBank GU370230 EF1 alpha =GenBank GU370316 UFM =GenBank GU370144 actin =GenBank GU370273 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011).
- 11140 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Pinto Creek, Grande Prairie, Alta. A. Rice 28-Feb-2008 /A. Rice M002-01-02-06-UC35DL49 [=GenBank GU370202 beta tubulin =GenBank GU370245 EF1 alpha =GenBank GU370331 UFM =GenBank GU370159 actin =GenBank GU370288 ITS2]. Biodiversity: mountain pine beetle genomics project // odor: fruity // molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011).
- 11141 ex larvae in mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Pinto Creek, Grande Prairie, Alta. A. Rice 28-Feb-2008 /A. Rice M002-01-02-09-UC48DL70 [=GenBank GU370204 beta tubulin =GenBank GU370247 EF1 alpha =GenBank GU370333 UFM =GenBank GU370161 actin =GenBank GU370290 ITS2]. Odor: fruity // molecular systematics: multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011) // biodiversity: mountain pine beetle genomics project.
- 11142 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta* Lingrell, Grande Prairie, Alta. A. Rice 5-Mar-2008 /A. Rice M002-01-03-05-UC23G32 [=GenBank GU370203 beta tubulin =GenBank GU370246 EF1 alpha =GenBank GU370332 UFM =GenBank GU370160 actin =GenBank GU370289 ITS2]. Biodiversity: mountain pine beetle genomics project // odor: fruity // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species

- identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11143 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta*; minimal bluestain Spray Lakes West, Canmore, Alta. A. Rice 25-Sep-2007 /A. Rice M002-06-01-03-UM01G12 [=GenBank GU370188 beta tubulin =GenBank GU370231 EF1 alpha =GenBank GU370317 UFM =GenBank GU370145 actin =GenBank GU370274 ITS2]. Biodiversity: mountain pine beetle genomics project // odor: fruity // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11144 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta* Wind Valley, Canmore, Alta. A. Rice 11-Dec-2007 /A. Rice M002-06-03-07-UM31G61 [=GenBank GU370192 beta tubulin =GenBank GU370235 EF1 alpha =GenBank GU370321 UFM =GenBank GU370149 actin =GenBank GU370278 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11145 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta* Harvie Heights, Canmore, Alta. A. Rice 31-Jan-2008 /A. Rice M002-06-05-03-UC13G15 [=GenBank GU370200 beta tubulin =GenBank GU370243 EF1 alpha =GenBank GU370329 UFM =GenBank GU370157 actin =GenBank GU370286 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11146 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta* Harvie Heights, Canmore, Alta. A. Rice 31-Jan-2008 /A. Rice M002-06-05-11-UC81G86 [=GenBank GU370201 beta tubulin =GenBank GU370244 EF1 alpha =GenBank GU370330 UFM =GenBank GU370158 actin =GenBank GU370287 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11147 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta* Brule Creek, Sparwood, Alta. A. Rice 12-Apr-2008 /A. Rice M002-12-03-03-UC10G11 [=GenBank GU370212 beta tubulin =GenBank GU370255 EF1 alpha =GenBank GU370341 UFM =GenBank GU370169 actin =GenBank GU370298 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11148 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta* Mount Wardle, Kootenay-Yoho, B.C. A. Rice 5-Dec-2007 /A. Rice M002-16-01-02-UC10G11 [=GenBank GU370215 beta tubulin =GenBank GU370258 EF1 alpha =GenBank GU370344 UFM =GenBank GU370172 actin =GenBank GU370301 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11149 ex wood from mountain pine beetle (*Dendroctonus ponderosae*) galleries in *Pinus contorta* Mount Wardle, Kootenay-Yoho, B.C. A. Rice 5-Dec-2007 /A. Rice M002-16-01-05-UC32G34 [=GenBank GU370210 beta tubulin =GenBank GU370253 EF1 alpha =GenBank GU370339 UFM =GenBank GU370167 actin =GenBank GU370296 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype CII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11150 mountain pine beetle (*Dendroctonus ponderosae*) gallery in *Pinus contorta* (Lodgepole pine) Kamloops, BC (C) S. Lee 2003 /C. Breuil KW1407 [=GenBank dbEST GT571599-GT607265 =GenBank dbEST GT610085-GT615878. =SLKW 1407 [original assigned number] =Genbank ACYC01000000 =Genbank ACXQ00000000 =Genbank ACXQ01001232 [obsolete version] =Genbank AY544615 ITS2 =GenBank AY263195 beta-tubulin =Genbank AY544597 actin =Genbank AY544638 EF1alpha =NCBI Taxonomy ID: 655863] heterothallic. Biodiversity: mountain pine beetle genomics project // molecular systematics: expressed sequence tags from the blue-stain fungus, *Grosmannia clavigera*, a mountain pine beetle-associated pathogen (DiGuistini S, Ralph SG, Lim YW, Holt R, Jones S, Bohlmann J, Breuil C, FEMS Microbiol Lett 267(2): 151-158, 2007; Hesse-Orce U, DiGuistini S, Keeling CI, Wang Y, Li M, Henderson H, Docking TR, Liao NY, Robertson G, et al. *BMC Genomics*. 11:536, 2010); genome sequence (DiGuistini S, Liao NY, Platt D, Robertson G, Seidel

- M, Chan SK, Docking TR, Birol I, Holt RA, Hirst M, et al, *Genome Biol.* 10(9):R94, 2009; <http://genomebiology.com/2009/10/9/R94>); identification by padlock probes (Tsui CK, Wang B, Khadempour L, Alamouti SM, Bohlmann J, Murray BW, Hamelin RC, *J Microbiol Methods.* 83(1):26-33, 2010); target specific PCR primers (Khadempour L, Massoumi Alamouti S, Hamelin R, Bohlmann J, Breuil C, *Fungal Biol* 114(10):825-833, 2010); National Center for Biotechnology Information Genome Project 39847; genome and transcriptome analyses (DiGuistini AS, Wang Y, Liao NY, Taylor G et al, *PNAS* 108:2504-2509, 2011; Haridas S, Wang Y, Lim L, Massoumi Alamouti S, Jackman S, Docking R, Robertson G, Birol I, Bohlmann J, Breuil C, *BMC Genomics* 2013, 14:373.); identification and phylogenetic classification of cytochromes P450 (Lah L, Haridas S, Bohlmann J, Breuil C, *Fungal Genet Biol* 50:72-81, 2013).
- 11151 ex perithecia on mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* (Lodgepole pine) Kamloops, BC (C) S. Lee 2004 /C. Breuil 200_1_14 [=GenBank GT607266-GT610084 (pooled isolates)]. Molecular systematics: expressed sequence tags from the blue-stain fungus, *Grosmannia clavigera*, a mountain pine beetle-associated pathogen (Hesse-Orce U, DiGuistini S, Keeling CI, Wang Y, Li M, Henderson H, Docking TR, Liao NY, Robertson G, et al, *BMC Genomics.* 11:536, 2010); genome and transcriptome analyses (DiGuistini AS, Wang Y, Liao NY, Taylor G et al, *PNAS* 108:2504-2509, 2011); National Center for Biotechnology Information Genome Project 39847 // biodiversity: mountain pine beetle genomics project.
- 11152 adult mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* (Lodgepole pine) Kelowna, BC (C) S. M. Alamouti 2007 /C. Breuil DPLKGT1B [=GenBank GT607266-GT610084 (pooled isolates)]. Biodiversity: mountain pine beetle genomics project // molecular systematics: expressed sequence tags from the blue-stain fungus, *Grosmannia clavigera*, a mountain pine beetle-associated pathogen (Hesse-Orce U, DiGuistini S, Keeling CI, Wang Y, Li M, Henderson H, Docking TR, Liao NY, Robertson G, et al, *BMC Genomics.* 11:536, 2010); genome and transcriptome analyses (DiGuistini AS, Wang Y, Liao NY, Taylor G et al, *PNAS* 108:2504-2509, 2011); National Center for Biotechnology Information Genome Project 39847.
- 11153 adult mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* (Lodgepole pine) Houston, BC (C) S. Lee 2003 /C. Breuil H55 [=GenBank GT607266-GT610084 (pooled isolates)]. Molecular systematics: expressed sequence tags from the blue-stain fungus, *Grosmannia clavigera*, a mountain pine beetle-associated pathogen (Hesse-Orce U, DiGuistini S, Keeling CI, Wang Y, Li M, Henderson H, Docking TR, Liao NY, Robertson G, et al, *BMC Genomics.* 11:536, 2010); identification by padlock probes (Tsui CK, Wang B, Khadempour L, Alamouti SM, Bohlmann J, Murray BW, Hamelin RC, *J Microbiol Methods.* 83(1):26-33, 2010); target specific PCR primers (Khadempour L, Massoumi Alamouti S, Hamelin R, Bohlmann J, Breuil C, *Fungal Biol* 114(10):825-833, 2010); genome and transcriptome analyses (DiGuistini AS, Wang Y, Liao NY, Taylor G et al, *PNAS* 108:2504-2509, 2011); National Center for Biotechnology Information Genome Project 39847 // biodiversity: mountain pine beetle genomics project.
- 11154 adult mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* (Lodgepole pine) Banff, Alta. (C) S. Lee 2003 /C. Breuil B5 [=GenBank GT607266-GT610084 (pooled isolates)]. Molecular systematics: expressed sequence tags from the blue-stain fungus, *Grosmannia clavigera*, a mountain pine beetle-associated pathogen (Hesse-Orce U, DiGuistini S, Keeling CI, Wang Y, Li M, Henderson H, Docking TR, Liao NY, Robertson G, et al, *BMC Genomics.* 11:536, 2010); genome and transcriptome analyses (DiGuistini AS, Wang Y, Liao NY, Taylor G et al, *PNAS* 108:2504-2509, 2011); National Center for Biotechnology Information Genome Project 39847 // biodiversity: mountain pine beetle genomics project.
- 11155 adult mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* (Lodgepole pine) Banff, Alta. (C) S. Lee 2003 /C. Breuil B10 [=GenBank GT607266-GT610084 (pooled isolates)]. Molecular systematics: expressed sequence tags from the blue-stain fungus, *Grosmannia clavigera*, a mountain pine beetle-associated pathogen (Hesse-Orce U, DiGuistini S, Keeling CI, Wang Y, Li M, Henderson H, Docking TR, Liao NY, Robertson G, et al, *BMC Genomics.* 11:536, 2010); target specific PCR primers (Khadempour L, Massoumi Alamouti S, Hamelin R, Bohlmann J, Breuil C, *Fungal Biol* 114(10):825-833, 2010); genome and transcriptome analyses (DiGuistini AS, Wang Y, Liao NY, Taylor G et al, *PNAS* 108:2504-2509, 2011); National Center for Biotechnology Information Genome Project 39847 // biodiversity: mountain pine beetle genomics project.
- 11156 adult mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* (Lodgepole pine) Hidden Valley, Montana (C) D. Six 2003 /C. Breuil HV15. Biodiversity: mountain pine beetle genomics project // molecular systematics: genome and transcriptome analyses (DiGuistini AS, Wang Y, Liao NY, Taylor G et al, *PNAS* 108:2504-2509, 2011); National Center for Biotechnology Information Genome Project 39847.
- 11347 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Cypress Hills, Alta. S. M. Alamouti 2007 /C. Breuil CHMC3.
- 11348 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Houston, B.C. S. Lee 2003 /C. Breuil H19.
- 11349 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Sierra Nevada, CA S. M. Alamouti 2009 /C. Breuil 12G13.
- 11350 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Sierra Nevada, CA S. M. Alamouti 2009 /C. Breuil 55B11.
- 11351 ex Jeffrey pine beetle (*Dendroctonus jeffreyi*) in *Pinus jeffreyi* San Bernardino Mountains, CA A. Hansen (DLS 1575) 2006 /C. Breuil DLS 1575.
- 11352 ex Jeffrey pine beetle (*Dendroctonus jeffreyi*) in *Pinus jeffreyi* San Bernardino Mountains, CA A. Hansen (DLS 1588) 2006 /C. Breuil DLS 1588.
- 11353 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *Pinus Banksiana* Fox Creek, Alta. A. Rice 2007 /C. Breuil M001-03-02-02 UM07DL04 [=UM07DL04].
- 11354 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *Pinus Banksiana* Fox Creek, Alta. A. Rice 2007 /C. Breuil M001-03-01-01 UC01G01 [=UC01G01].
- 11355 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Cypress Hills, Alta. S. M. Alamouti 2007 /C. Breuil CHDSC7.
- 11356 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Cypress Hills, Alta. S. M. Alamouti 2007 /C. Breuil CHEBC10.
- 11357 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Hidden Valley, MT D. Six (HV30) 2003 /C. Breuil HV30.
- 11358 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Hidden Valley, MT D. Six (HV9) 2003 /C. Breuil HV9.
- 11359 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Hell Roaring, ID D. Six (D1128) 2002 /C. Breuil D1128.
- 11360 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Hell Roaring, ID D. Six (D1151) 2002 /C. Breuil D1151.
- 11361 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus*

- contorta Sierra Nevada, CA S. M. Alamouti 2009 /C. Breuil 68B21.
- 11362 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Sierra Nevada, CA S. M. Alamouti 2009 /C. Breuil 710G16.
- 11363 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus albicaulis* Nelson, B.C. K. Blaiker 2007 /C. Breuil Pa-9.
- 11364 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus albicaulis* Nelson, B.C. K. Blaiker 2007 /C. Breuil Pa-6.
- 11365 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus strobiformis* Pinaleno Mountains, AZ D. Six (GCA02) 2009 /C. Breuil GCA02.
- 11366 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus strobiformis* Pinaleno Mountains, AZ D. Six (GCA04) 2009 /C. Breuil GCA04.
- 11367 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* Kamloops, B.C. S. M. Alamouti 2007 /C. Breuil PY2-3b.
- 11368 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* Kamloops, B.C. S. M. Alamouti 2007 /C. Breuil PY8-8.
- 11369 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* Black Hills, SD K. Blaiker 2009 /C. Breuil 15B29C1.
- 11370 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* Black Hills, SD K. Blaiker 2009 /C. Breuil 34B94C6.
- 11371 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* Black Hills, SD K. Blaiker 2009 /C. Breuil 24B166C8.
- 11372 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* Sierra Nevada, CA D. Six (DLS 15) 1993 /C. Breuil DLS 15.
- 11373 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* Lassen, CA D. Six (DLS 24) 1993 /C. Breuil DLS 24.
- 11374 ex mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus ponderosae* x *Pinus jeffreyi* Lassen, CA D. Six (DLS 56) 1993 /C. Breuil DLS 56.
- 11375 ex Jeffrey pine beetle (*Dendroctonus jeffreyi*) in *Pinus jeffreyi* Sierra Nevada, CA D. Six (DLS 554) 1999 /C. Breuil DLS 554 [=CMW 15398]. Culture conditions: non sporulating on deposit; no ascomata produced.
- 11376 ex Jeffrey pine beetle (*Dendroctonus jeffreyi*) in *Pinus jeffreyi* Sierra Nevada, CA D. Six (DLS 833) 1999 /C. Breuil DLS 833.
- 11377 ex Jeffrey pine beetle (*Dendroctonus jeffreyi*) in *Pinus jeffreyi* Lassen, CA D. Six (DLS 173) 1999 /C. Breuil DLS 173 [=CMW 15395].
- 11378 ex Jeffrey pine beetle (*Dendroctonus jeffreyi*) in *Pinus jeffreyi* Lassen, CA D. Six (DLS 237) 1999 /C. Breuil DLS 237.
- 11801 transformant from parental strain KW1407 (UAMH 11150) University of British Columbia, Vancouver, B. C. /C. Breuil Gc-4184 [=GenBank EFX06115 ABC transporter]. Application: expression of GcABC transporter genes in response to terpenoids (Wang et al 2013); monoterpene resistance of *Grosmannia clavigera* conferred by specialized ABC efflux transporter (GcABC-G1) gene (Wang et al 2013; Wang Y, Lim L, DiGiustini S, Robertson G, Bohlmann J, Breuil C, New Phytologist 197:886-889, 2013).
- 11802 transformant from parental strain KW1408 (UAMH 11150) University of British Columbia, Vancouver, B. C. /C. Breuil GC-6956 [=GenBank EFX06635 cyclohexanone monooxygenase]. Application: limonene utilization by the pathogen *Grosmannia clavigera*.
- 11803 transformant from parental strain KW1409 (UAMH 11150) University of British Columbia, Vancouver, B. C. /C. Breuil GC_7007 [=GenBank EFX06686 CPMO]. Application: limonene utilization by the pathogen *Grosmannia clavigera*.
- 11804 transformant from parental strain KW1410 (UAMH 11150) University of British Columbia, Vancouver, B. C. /C. Breuil GC_6887 [=GenBank EFX06566 3oxo_ACP_reduc]. Application: limonene utilization by the pathogen *Grosmannia clavigera*.
- 11805 transformant from parental strain KW1411 (UAMH 11150) University of British Columbia, Vancouver, B. C. /C. Breuil GC_7009 [=GenBank EFX06688 epoxide hydrolase]. Application: limonene utilization by the pathogen *Grosmannia clavigera*.
- 11806 transformant from parental strain KW1412 (UAMH 11150) University of British Columbia, Vancouver, B. C. /C. Breuil GC_4626 [=GenBank EFW98774 enoyl-hydratase isomerase]. Application: limonene utilization by the pathogen *Grosmannia clavigera*.
- 11807 transformant from parental strain KW1413 University of British Columbia, Vancouver, B. C. /C. Breuil GC_1732 [=GenBank EFX04804 cytochrome p450 monooxygenase]. Application: limonene utilization by the pathogen *Grosmannia clavigera*.
- 11808 transformant from parental strain KW1407 (UAMH 11150) University of British Columbia, Vancouver, B. C. /C. Breuil Gc-Tri [=GenBank EFX06635 cyclohexanone monooxygenase =GenBank EFX06686 cyclopentanone monooxygenase =GenBank EFX06566 3oxo_ACP_reduc]. Application: limonene utilization by the pathogen *Grosmannia clavigera*.
- Grosmannia crassivaginata*** (H.D. Griffin) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ceratocystis crassivaginata*, *Ophiostoma crassivaginum*; morph *Leptographium crassivaginum*)
- 7004 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-2-11i) 28 Sep 1990 /L. Hutchison NOF 1509 [=WIN(M)918 =GenBank HQ634833 SSU intron =GenBank L05960 =GenBank L05961 =GenBank L05962 =GenBank AF525311]. Biocontrol: inhibited by *Stachybotrys cylindrospora* (UAMH 7122) & its metabolites trichodermin & trichodermol (Hiratsuka et al, Can. J. For. Res. 24:174-179, 1994); inhibited by *Lecythophora hoffmannii* (UAMH 7001) in vitro (Chakravarty & Hiratsuka, J. Plant Diseases & Protection 101:74-79, 1994) // pigment: black // molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012) // cycloheximide: resistant (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993).
- Grosmannia cucullata*** (H. Solheim) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ophiostoma cucullatum*; morph *Pesotum an. of Grosmannia cucullatum*)
- 9720 (T ?ex-type *Ophiostoma cucullatum*) Norway spruce (*Picea abies*) ex beetle *Ips typographus* As, Akershus, Norway H. Solheim /J. Reid UM 447. Systematics/taxonomy: description of *Ophiostoma cucullatum* (Solheim H, Nord. J. Bot. 6:199-207, 1986).
- Grosmannia huntii*** (R.C. Rob.-Jeffer.) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ophiostoma huntii*; morph *Leptographium huntii*)
- 4825 blue stain on sapwood between beetle galleries ex *Pinus contorta* Westcastle, Alta. A. Tsuneda Jul 1983 /A. Tsuneda NFR C-840 [=GenBank AY544600 =GenBank AY544618 =GenBank AY544625 =GenBank AY816709 (GPD)]. 2,3-dihydroxybenzoic acid + various other metabolites (Ayer & al., Can. J. Chem. 64:904-909, 1986). Plant pathogen: blue stain fungus (Yamaoka et al., Can. J. For. Res. 20:31-36, 1990; Zambino & Harrington, Mycologia 84:12-25, 1992 (isoenzymes)).

4997 (*T Ceratocystis huntii*) bark beetle galleries in *Pinus contorta* Toby Creek, nr Invermere, B.C. R.C. Jeffrey Aug 1962 /L. Browne [=ATCC 64699 =DAOM 90235 =NFRC C451 =GenBank AY544599 =GenBank AY544617 =GenBank DQ082861 (GPD) =GenBank AY349023 Btubulin =GenBank AY349023]. 2,3-dihydroxybenzoic acid + various other metabolites (Ayer & al., Can. J. Chem. 64:904-909, 1986). Molecular systematics: ophiostomatoid fungi (Lee S, Kim JJ, Breuil C, Mycol Res 109:1162-1170, 2005).

Grossmannia olivacea (Mathiesen) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ophiostoma olivaceum*; morph *Pesotum an. Grossmannia olivacea*)

6976 *Picea* sp. sapwood lumber MacKenzie, BC B. Grylls & K. Seifert 22 Jun 1990 /K. Seifert A32 [=DAOM 212725 =GenBank AY672917]. Cycloheximide: resistant @ 100 ppm // pigment: brown.

Grossmannia penicillata (Grossman) Goid. (syn. *Ophiostoma penicillatum*, *Ceratocystis penicillata*; morph *Leptographium penicillatum*)

- 9581 (T neotype of *Ceratocystis penicillata*) Norway spruce (*Picea abies*) infested with bark beetles (*Ips typographus*) Jamtland, Stromsund, Sweden A. Kaarik (1.1.58) 1-Jan-58 /J. Reid UM 27 [=GenBank HQ634822 SSU intron =NFRI 60-21 =ATCC 62333 =WIN(M) 27 =GenBank AY275138 mt-ml U11 =GenBank AY935623 ITS]. Molecular systematics: identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012).
- 9582 Norway spruce log (*Picea abies*) with bark beetle galleries (*Ips* sp.) Fjellsteen, Ostfold, Norway J. Reid Sep 1974 /J. Reid UM 135 [=GenBank DQ097860 Btub =UM 74-42 =NOR 42]. Culture conditions: produced ascospores.
- 9583 Norway spruce log (*Picea abies*) with beetle galleries (*Ips* sp.) Fjellsteen, Ostfold, Norway J. Reid Sep 1974 /J. Reid UM 136 [=UM 74-43 =NOR 43].
- 9776 Norway spruce (*Picea abies*) Nannestad, Akershus, Norway 1958 /J. Reid UM 166 [=NFRI 1716/3]. Molecular systematics: molecular variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993).
- 9806 Norway spruce (*Picea abies*) Nannestad, Norway 1958 /J. Reid UM 13 [=NFRI 1715/3 =GenBank AF155674 =GenBank AF148920 =GenBank AF148921]. Molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000) // culture conditions: produced ascospores.
- 9963 spruce (*Picea* sp.) Boda (Oland), Sweden A. Mathiesen-Kaarik Jul 1958 /J. Reid UM 544 [=DAOM 63691 =ATCC 60840 =WIN(M) 544 =GenBank AY935624 ITS]. Culture conditions: non sporulating after 5 mo on CMA + spruce.

Grossmannia piceaperda (Rumbold) Goid. (syn. *Ophiostoma piceaperdum*; morph *Leptographium piceaperdum*)

- 9784 beetle galleries in Monterey pine (*Pinus radiata*) Compartment 7, Riverhead State Forest, Auckland, NZ J. Reid & W.S. Reid (82-201c) 1952 /J. Reid UM 975. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988).
- 9785 beetle galleries in Monterey pine (*Pinus radiata*) Compartment 1108, Kaingaroa State Forest, Taupo, NZ J. & W.S. Reid (82-163a) 10 Jun 1982 /J. Reid UM 976. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) //

biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // pigment: black // culture conditions: produced anamorph only.

- 9786 beetle galleries in Monterey pine (*Pinus radiata*) Compartment 97, Woodhill State Forest, Auckland, NZ J. & W.S. Reid (82-43) 25 May 1982 /J. Reid UM 978. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988).
- 9787 Austrian pine (*Pinus nigra*) Compartment 1091, Kaingaroa State Forest, Taupo, NZ J. & W.S. Reid (82-174c) 10 Jun 1982 /J. Reid UM 979. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988).
- 9788 beetle galleries in Monterey pine (*Pinus radiata*) Tairua State Forest, Coromandel, NZ J. & W.S. Reid 21 May 1982 /J. Reid UM 980 [=GenBank HQ595733 SSU =WIN(M)980]. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // molecular systematics: identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98-111, 2012).
- 9809 Monterey pine (*Pinus radiata*) Woodhill State Forest, Auckland, NZ J. Reid & B. Reid (88-8A) 7 Feb 1988 /J. Reid UM 988. Pigment: black.
- 9810 Monterey pine (*Pinus radiata*) Woodhill State Forest, Auckland, NZ J. Reid & B. Reid (88-7B) 7 Feb 1988 /J. Reid UM 989.
- 9964 Monterey pine (*Pinus radiata*) Woodhill State Forest, Auckland, New Zealand J. Reid & B. Reid (88-87) 9 Feb 1988 /J. Reid UM 1055.
- 10656 gallery of *Ips perturbatus* (northern spruce engraver) Haines Junction, Yukon S. Alamouti /C. Breuil 3YT2P-Op [=GenBank DQ268611 SSU =GenBank DQ268642 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
- 10657 ex *Dryocoetes affaber* Prince George, B.C. S. Alamouti /C. Breuil 3PG4A-Op [=GenBank DQ268613 ITS]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).

Grossmannia sagmatospora (E.F. Wright & Cain) Zipfel, Z.W. de Beer & MJ Wingf. (syn. *Ophiostoma sagmatosporum*; morph *Pesotum sagmatosporum*)

- 6971 *Pinus strobus* sapwood lumber Braeside, Ont. B. Grylls & K. Seifert 27 Sep 1990 /K. Seifert A31 [=DAOM 212704]. Cycloheximide: resistant.
- 6972 *Picea* sp. sapwood lumber St. Therese, PQ B. Grylls & K. Seifert 7 Sep 1990 /K. Seifert B21 [=DAOM 212727]. Cycloheximide: resistant.

***Grossmannia* sp.**

- 9814 lodgepole pine (*Pinus contorta*) Hwy 14, Sooke, Vancouver Island, BC J. & B. Reid 17 Sep 1987 /J. Reid UM 478

[=WIN(M) 478 =GenBank EU879130 ITS]. Molecular systematics: sequence in Genbank as *Pesotum* sp.; Genbank EU879130 named as *Pesotum* sp. WIN(M)478; phylogeny of *Grosmanina* and *Leptographium* (Mullineux & Hausner, Fungal Gen Biol 46:855-867, 2009); groups with *Grosmanina davidsonii* and *G. cucullata* (fide Mullineux & Hausner 2009).

Guehomyces pullulans Fell & Scorzetti

- 97 sputum Mass. Gen. Hosp., Boston J.W. Carmichael Dec 1952.
3948 (T *Trichosporon pullulans*) ex air P. Lindner /I. Salkin [=CBS 2532 =ATCC 10677 =IFO 1232 =NRRL Y-1522 =UAMH 7672 =GenBank AF105394]. Molecular systematics: phylogeny of *Trichosporon* (Fell, J.W. & G. Scorzetti, Int. J. Syst. Evol. Microbiol. 54:995-998, 2004) // culture conditions: produces arthroconidia and some budding.
7672 (T *Trichosporon pullulans*) ex air P. Lindner /CBS 2532 [=ATCC 10677 =CCRC 22318 =IFO 1232 =NCYC 477 =NRRL Y-1522 =UAMH 3948 =GenBank AF105394]. Molecular systematics: phylogeny of *Trichosporon* (Fell, J.W. & G. Scorzetti, Int. J. Syst. Evol. Microbiol. 54:995-998, 2004) // culture conditions: produces arthroconidia.

Guignardia mangiferae A.J. Roy (morph *Phyllosticta capitalensis*)

- 11098 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB07. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae).
11099 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB06. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae).
11208 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB05. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae).
11209 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB08. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // molecular systematics: Blast match 100% ITS similarity to sequences confirmed as *Guignardia mangiferae* (fide UAMH 2010; see Meyer L, Sanders GM, Jacobs R, Korsten L, Plant Dis 90:97-101, 2006) // culture conditions: colony diam on OAT 28 mm and on 2%MEA 30 mm after 7 d at 22C in dark (see Baayen, R.P. et al, Phytopathology 92:464-477, 2002); no diffusible pigment // mesophilic: grows better @ 25C than at 22C.
11210 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVHR01A. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae).

Gymnascella aflamentosa (Orr & Kuehn) Currah

- 3427 (T *Petalosporus aflamentosus*) soil Utah 1963 /G.F. Orr O-2601 [=ATCC 18901 =DPG 115 =NRRL 3717].

Gymnascella aurantiaca Peck (syn. *Arachniotus verruculosus*)

- 3138 lizard dung Montezuma, Chihuahua, Mexico R.K. Benjamin 4 Jul 1969 /R.K. Benjamin RSA 1483 [=GenBank AJ315834 (ITS)].
3529 (T *Pseudoarachniotus aurantiacus*) soil Russia L.A. Beljakova /CBS 603.67 [=ATCC 22394 =NRRL A-18287 =VKM F-1140 =GenBank AY176747]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
3814 soil India /G.F. Orr O-1130.

Gymnascella citrina (Masse & Salmon) Orr, Ghosh & Roy (syn. *Arachniotus citrinis*)

- 3073 soil Tennessee B. West /IMI 76604 [=ATCC 12090 =CBS 323.58 =NRRL 5949].
3545 soil U.S.A. L. Ajello /CBS 114.54 [=ATCC 22850 =DAOM 195976 =IMI 56774]. Mycorrhizae: non-mycorrhizal with

Vaccinium angustifolium seedlings (Dalpe, New Phytol. 113:523-527, 1989) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989).

3839 G.F. Orr O-2604.

Gymnascella confluens (Sartory & Bainier) Currah (syn.

- Arachniotus confluens*, *Arachniotus desertorum*)
3565 (T *Arachniotus confluens*) dung A.E. Apinis /CBS 352.66 [=ATCC 22220 =BDUN 375 =IMI 100873 =NRRL 5979 =Orr O-3559].
3763 (T *Arachniotus desertorum*) halomorph soil Kuwait /G.F. Orr O-1160.

Gymnascella dankaliensis (Castellani) Currah (syn.

- Arachniotus dankaliensis*, *Arachniotus flavoluteus*)
1602 G.F. Orr [=IMI 93401].
1919 soil Tokyo, Japan Feb 1962 /S.-I. Udagawa NHL 2271.
1969 G.F. Orr [=IMI 83285].
1995 (T *Pseudoarachniotus roseus*) ulcerated gizzard of chicken Tucson, Ariz. 1932 /G.F. Orr NRRL 1677 [=CBS 323.58 =IMI 76605 =O-902].
3531 (T *Arachniotus flavoluteus*) soil Arizona C.W. Emmons /CBS 627.71 [=DAOM 198941 =NRRL 1243]. Mycorrhizae: ericoid mycorrhiza with *Vaccinium angustifolium* seedlings (Dalpe, New Phytol. 113:523-527, 1989); no mycorrhiza formation with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989).
3532 soil Sudan /CDC.
3552 (T *Arachniotus dankaliensis*) camel C.W. Dodge /CBS 117.38.
3855 (T *Pseudoarachniotus flavoluteus*) soil Arizona Emmons /G.F. Orr O-728 [=GenBank AB075335 D1D2 =NRRL 1243 =CBS 627.71 =ATCC 28364].
5388 infected toenail Toronto, Ont. R.C. Summerbell 1986 /R.C. Summerbell F 3507. Human/animal pathogen: dermatomycosis, Canadian record (Summerbell et al, Mycoses 32:609-619, 1989).

Gymnascella devroeyi (Orr) Currah (syn. *Disarticulatus devroeyi*, *Arachniotus devroeyi*)

- 3136 rabbit dung Montezuma R.K. Benjamin (D12662) 21 Aug 1964 /R.K. Benjamin RSA 1481. Pigment: brown.
3864 (T *Disarticulatus devroeyi*) soil Somalia De Vroey /G.F. Orr O-3485 [=De Vroey RN19682 =NRRL 5543 =UAMH 4018].
4018 (T *Disarticulatus devroeyi*) soil Republic of Somalia /G.F. Orr O-3485 [=UAMH 3864 =NRRL 5543 =DeVroey RN 19682].
6831 camel feces South Quargla, Sahara, Algeria M. Locquin-Linard /M. Locquin-Linard L-180, S-2355.
6832 human feces Tamanrasset, Hoggar, Algeria M. Locquin-Linard /M. Locquin-Linard L-207, S-970.
6833 gazelle feces Kebir, Egypt M. Locquin-Linard /M. Locquin-Linard L-371, S-2597.
6834 hyrax dung Darfur, Sudan M. Locquin-Linard /M. Locquin-Linard L-376, S-2670.
8280 indoor air ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M61) 30-Aug-1995 /S.P. Abbott (SA-M61).

Gymnascella hyalinospora (Kuehn, G.F. Orr & G.R. Ghosh)

- Currah (syn. *Pseudoarachniotus hyalinosporus*, *Arachniotus hyalinosporus*, *Narasimhella hyalinospora*)
1123 skin ex foot Los Angeles, Calif. /G.F. Orr O-2067.
1605 soil Blythe, Calif. G.F. Orr 1959 /G.F. Orr O-688.
2516 soil Italy Varsavsky (I-13) 1961 /G.F. Orr.
3120 lizard(?) dung (D11722) San Quintin, Baja, Calif. R.K. Benjamin 6 Jun 1963 /R.K. Benjamin RSA 1437.
3125 lizard dung (D12875-A) Moctezuma, Chihuahua, Mexico R.K. Benjamin 4 Jul 1964 /R.K. Benjamin RSA 1442.
3126 lizard dung (D12876-A) Moctezuma, Chihuahua, Mexico R.K. Benjamin 4 Jul 1964 /R.K. Benjamin RSA 1443.
3127 lizard dung (D12255) Imperial Co., Calif. R.K. Benjamin 11

- Oct 1963 /R.K. Benjamin RSA 1444.
- 3137 lizard dung (D12866-B) Moctezuma, Chihuahau, Mexico R.K. Benjamin 4 Jul 1964 /R.K. Benjamin RSA 1482.
- 3141 lizard dung (D12847-E) Chihuahau, Mexico R.K. Benjamin 3 Jul 1964 /R.K. Benjamin RSA 1486.
- 3148 lizard dung Villa Ahumada, Chihuahua, Mex. R.K. Benjamin (D1288/10-A) 4 Jul 1969 /R.K. Benjamin RSA 1502.
- 3155 (T *Pseudoarachniotus hyalinosporus*) guinea pig dung India /R.K. Benjamin RSA 1529 [=NRRL 2881 =CBS 548.72 =GenBank AB015775 =GenBank AB040687]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, *Mycoscience* 40:251-258, 1999; Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001).
- 3160 soil Mercy Hot Springs, Fresno Co., CA /R.K. Benjamin RSA 1550 [=NRRL A-10226?].
- 6510 poultry comb lesion India G. Ghosh /G. Ghosh S-10. Pigment: tan.
- 7366 repeatedly isolated ex respiratory system of immunosuppressed patient New York, NY I. Weitzman /I. Weitzman F 49044 [=GenBank AF 129853 (ITS)]. Thermotolerant: good growth @ 37C // human/animal pathogen: suspicious by isolation from several specimens but not proven by positive histopathology (Iwen, Sigler, Tarantolo et al. *J. Clin. Microbiol.* 38:375-381, 2000).
- 9359 sputum, female 39 yr, with acute mycelogenous leukemia & lung nodules; biopsy histopathology + for hyphae; treated with Amphotericin B then itraconazole Nebraska P. Iwen /M.G. Rinaldi UTHSC 98-1356 [=ATCC 204275 =GenBank AF 129854]. Pigment: brown // culture conditions: GenProbe + for *Blastomyces dermatitidis* on 2 occasions (Iwen, Sigler, Tarantolo et al. *J. Clin. Microbiol.* 38:375-381, 2000) // human/animal pathogen: invasive pulmonary infection in adult female with acute myelogenous leukemia (Iwen, Sigler, Tarantolo et al. *J. Clin. Microbiol.* 38:375-381, 2000) // thermotolerant: good growth @ 37C.
- 10254 pleuropericardial drainage ex 12 yr old boy with acute myeloid leukemia; KOH + for irregularly septate hyphae Memorial Sloan Kettering Cancer Center, New York 2001 /T.E. Kiehn M20628. Human/animal pathogen: letter re identification (Kiehn, *Clin. Inf. Dis.*; Kiehn, *Clin. Inf. Dis.* 2003); pleuropericarditis complicating pneumonia in a child with acute myeloid leukemia (Heath, Kiehn, Brown, et al., *Clin. Inf. Dis.* 35:e60-64, 2002) // cycloheximide: tolerant.
- Gymnascella littoralis*** (Orr) Currah (syn. *Plunkettomyces littoralis*, *Arachniotus littoralis*)
- 1900 G.F. Orr [=RSA 426].
- 1903 rat dung Mt. San Antonia, L.A. County, Calif. 1 Nov 1963 /G.F. Orr [=RSA 202].
- 3781 pig dung Guadalcanal Island S.I. (NS-1094-1) Udagawa /G.F. Orr O-1251 [=ATCC 26695 =CBS 375.74 =NRRL 5964].
- 3797 contaminant ex cross 1708 x 2849 (Malbranchea) UAMH L. Sigler /L. Sigler.
- 3863 sea anemone Mexico O.A. Plunkett /G.F. Orr O-3055.
- 3865 soil Italy Varsavsky (I-6a) /G.F. Orr O-3360 [=ATCC 34430 =NRRL A-16962].
- 3885 (T *Plunkettomyces littoralis*) conch shell April Point Quadra Is., B.C. O.A. Plunkett /G.F. Orr O-3053 [=NRRL 5539 =ATCC 34436]. Culture conditions: good sporulation on TAK.
- 9999 shed dorsal midbody skin ex European glass lizard (*Ophiosaurus apodus*), female 18yr Buffalo Zoological Gardens, Buffalo, NY J. Pare Mar 2001 /J. Pare UW118A-C. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, *J. Herpetol. Med. Surg.* 13:10-15, 2003).
- 10347 ex BAL, female 25 yr Columbus, Ohio /M. Burleson 03004238. Pigment: yellow // mesophilic: growth restricted @ 36 C (fide submitting laboratory) // odor: musty.
- Gymnascella marginospora*** (Kuehn & Orr) Currah (syn. *Pseudoarachniotus marginosporus*, *Arachniotus marginosporus*, *Narasimhella poonensis*)
- 1639 soil chicken feeding grounds Tonasi Panama G.F. Orr /G.F. Orr O-2509.
- 1642 soil Oklahoma City J.M. Hale /E.S. Keeping 7. Pigment: green.
- 1901 G.F. Orr [=RSA 430 =NRRL A-3692].
- 1902 G.F. Orr [=RSA 430 =RSA 431 =NRRL A3868].
- 3163 (T *Pseudoarachniotus marginosporus*) buried cable /R.K. Benjamin RSA 1553 [=UAMH 3533 =ATCC 15314 =CBS 115.54 =NRRL 2850].
- 3428 CBS 336.65.
- 3533 (T *Pseudoarachniotus marginosporus*) buried cable /CBS 115.54 [=ATCC 15314 =NRRL 2850 =RSA 1553 =UAMH 3163 =QM 1327].
- 3534 (T *Narasimhella poonensis*) soil India M.J. Thirumalachar (HACC 171) /CBS 393.71 [=CBS 336.65 =ATCC 16197 =ATCC 16593 =IMI 113696 =GenBank AJ315824 ITS =GenBank AJ315168 18S =GenBank AB075339 28S]. Culture conditions: produces green to orange exudate.
- 3779 G.F. Orr O-3591.
- 4480 raw sewage sludge USA /S. Pippin. Biodeteriogen/biodegradation: survives radiation.
- 6007 dry fish Pradesh, India S. Girisham 4 Jul 1987 /IMI 320129A.
- 8732 garden soil Amman, Jordan J. Guarro Mar 1995 /J. Guarro FMR 5570. Pigment: green.
- 9934 shed dorsal/right flank skin ex Solomon Island skink (*Corucia zeburata*), female Steinhart Aquarium, San Francisco CA UAMH 22 Jan 2001 /J. Pare UW014A-B. Cycloheximide: resistant // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, *J. Herpetol. Med. Surg.* 13:10-15, 2003).
- 9935 shed side of tail skin ex Mexican beaded lizard (*Helodema horridum*), female >11yr Staten Island Zoo, Staten Island NY UAMH (UW019B-E) 28 Nov 2000. Cycloheximide: resistant // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, *J. Herpetol. Med. Surg.* 13:10-15, 2003).
- Gymnascella nodulosa*** (Ghosh, Orr & Kuehn) Currah (syn. *Petalosporus nodulosa*, *Petalosporus anodosus*)
- 1985 rodent Arizona C. Emmons (E5006) /G.F. Orr E 5006 [=ATCC 28556 =CBS 629.72 =NRRL 5544 =UAMH 3769].
- 3161 fox dung Palo Verde, Calif. G. Orr /R.K. Benjamin RSA 1551 [=NRRL A10013 =Orr O-579 =ATCC 18491 =CBS 517.68 =IMI 168758].
- 3162 (T *Petalosporus nodulosus*) guinea pig dung Cuttack, Orissa, India G.R. Ghosh (G2) 1959 /R.K. Benjamin RSA 1552 [=ATCC 15318 =CBS 577.63 =IMI 168760 =NRRL 2882 =UAMH 1984].
- 3769 rodent Arizona C. Emmons (5006) /G.F. Orr O-2060 [=UAMH 1985 =CBS 629.72 =NRRL 5544 =ATCC 28556].
- 3780 G.F. Orr O-1083.
- Gymnascella punctata*** (Dutta & Ghosh) Currah (syn. *Pseudoarachniotus punctatus*, *Arachniotus punctatus*)
- 3164 (T *Pseudoarachniotus punctatus*) rice paddy field soil Cuttack India G. Orr /R.K. Benjamin RSA 1554 [=ATCC 22851 =CBS 279.64 =NRRL A12061 =UAMH 3530].
- Gymnascella* sp.**
- 3976 (T *Torula chrysosperma*) ex *Opio orientalo* Schonberg J. Paul 1873 /J.L. Crane 36346.
- Gymnascella udagawae*** (von Arx) Currah (syn. *Gymnoascus udagawae*)
- 5726 (T *Gymnoascus udagawae*) soil Japan /CBS 950.69 [=ATCC 24072].

Gymnoascoideus petalosporus Orr, Roy & Ghosh (syn.*Gymnoascus petalosporus*)

- 1665 (T *Gymnoascoideus petalosporus*) human skin lesion School Trop. Med., Calcutta Bose (503) /G.F. Orr O-3325 [=ATCC 34351 =NRRL 12173 =NRRL 6001 =GenBank AY176748]. Molecular systematics: human pathogenic fungi & relatives (Bowman et al., Mol. Phylogenetics Evolution 6:89-96, 1996; Bowman & Taylor, The Fungal Holomorph, (Reynolds & Taylor, eds.), CAB International, 1993); phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
- 1712 soil Guatemala H. Peck Puri /G.F. Orr O-3352 [=CBS 252.72? =GenBank AB015773 =GenBank AB040685]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
- 1777 ex UAMH 1712 UAMH Jul 1963 /; .
- 3478 soil Chile /L. Zaror T54.
- 3525 horn India G. Ghosh (GR 62) /G.F. Orr O-1177 [=UAMH 3639].
- 3591 contaminant ex UAMH 3527 UAMH 1973 / .
- 3592 hair ex ringworm lesion, horse Bluffdale, Utah /G.F. Orr O-1505.
- 3593 tinea pedis, human Salt Lake City /G.F. Orr O-3552.
- 3639 soil India Ghosh (GR 62) /G.F. Orr O-1177 [=UAMH 3525].
- 3656 hair ex ringworm lesion, horse Riverton, Utah /G.F. Orr O-3473 [=IMI 183752].
- 3766 sputum Kansas /G.F. Orr O-3212.
- 3798 soil India Garg (1045) /G.F. Orr O-2013.
- 3831 rat dung India /G.F. Orr O-1163.
- 3860 feathers Passer domesticus S.R. Macedonia, Yugoslavia Hubalek (140 B) May 1968 /G.F. Orr O-1299.
- 3908 soil Pavia, Italy /G.F. Orr O-1321.
- 4152 beach sand Italy M. Bianchedi (926) /CDC Y-413.
- 4153 flower bed on sea beach Italy M. Bianchedi (8) /CDC Y-415.
- 4154 flower bed on sea beach Italy M. Bianchedi (22C) /CDC Y-416.
- 5031 soil Spain Guarro /J. Guarro FMR 737.
- 5351 J. Guarro FRR 817.
- 5352 J. Guarro FRR 727.
- 8587 sputum, female 30 yr Alberta /R. Rennie MY 2445.

Gymnoascus arxii see ***Aphanoascus orissae****Gymnoascus dugwayensis* see ***Gymnoascus reessii******Gymnoascus intermedius*** Orr

- 3833 soil Italy /G.F. Orr O-3139 [=NRRL A-16935 =Varsavsky 1-13 =IFM 47418 =GenBank AB361641 ITS =GenBank AB359431 LSU]. Molecular systematics: Genbank AB361641 supposedly representing *Gymnoascus intermedius* IFB 47418 = UAMH 3833 is incorrect (fide L. Sigler).
- 11472 swab ex skin of living female little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 86 C.3. Biodiversity: mycobiota of bat caves // molecular systematics: Blast match 89-90% ITS similarity with *Gymnoascus* species (fide UAMH 2012).

Gymnoascus longitrichus see ***Gymnoascus reessii****Gymnoascus petalosporus* see ***Gymnoascoideus petalosporus******Gymnoascus reessii*** Baranetzky (syn. *Gymnoascus dugwayensis*, *Gymnoascus longitrichus*)

- 1603 lizard dung N New Idria, Calif. G.F. Orr 1958 /G.F. Orr O-304.

- 1604 pack rat dung California G.F. Orr 1960 /G.F. Orr O-146.
- 1606 G.F. Orr O-656.
- 3129 rabbit dung Los Mochis, Sinaloa, Mexico R.K. Benjamin 20 Jun 1964 /R.K. Benjamin RSA 1446.
- 3140 lizard dung (D12882-B) Villa Ahumada, Chihauhau, Mexico R.K. Benjamin 7 Jul 1964 /R.K. Benjamin RSA 1485.
- 3158 (T *Gymnoascus corniculatus*) soil Loalinga, Fresno Co., Calif. G.F. Orr /R.K. Benjamin RSA 1548 [=NRRL A10099 =CBS 410.72 =GenBank AB015774 =GenBank AB040686 =GenBank AY176749]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 42:413-421, 2001; Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
- 3159 soil Inyoken, Kern Co., Calif. /R.K. Benjamin RSA 1549 [=NRRL A10076]. Pigment: yellow.
- 4416 leg scrapings ex female Red Deer, Alta. S. Brown Apr 1981 /S. Brown 107524. Pigment: yellow.
- 4809 coyote dung Lost River Canyon, Alta. L. Sigler Jul 1983 /L. Sigler.
- 7703 bronchial washing Manitoba Provincial Lab /R.C. Summerbell FR 919.
- 7927 ex Lt palm, female 44 yr, DE- Alberta Prov. Lab. for Southern Alberta 1994 /R. Rennie MY 5350.
- 8530 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. T. Lumley (EI-01-S1F) Jul 1995 /R.S. Currah EI-01-S1F. Biodeteriogen/biodegradation: from decayed wood (Lumley & Currah, Rep. Tottori Mycol. Inst. 33:7-13, 1995) // pigment: yellow // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 8531 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 2-3C) T. Lumley (EI-01-S2E Jul 1995 /R.S. Currah EI-01-S2E, 2-3C. Biodeteriogen/biodegradation: from decayed wood (Lumley & Currah, Rep. Tottori Mycol. Inst. 33:7-13, 1995) // pigment: yellow // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 9421 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-02-S1C) 14 Sep 1998 /R.S. Currah EI-02-S1C. Cycloheximide: resistant (MYC) // pigment: yellow // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 9575 nail, female 59 yr, DE - Alberta Prov. Lab for Southern Alberta 14 May 1999 /R. Rennie MY 3390.

Gymnoascus sp.

- 6116 garden soil L'Adzulia, Alicante, Spain J. Guarro Feb 1986 /J. Guarro FMR 918 [=ATCC 64723].
- 6167 soil Vallibona, Castellon, Spain Apr 1987 /J. Guarro FMR 2226 [=IFM 47423 =CBS 626.88 =GenBank AB361640 (seq incorrect)]. Molecular systematics: GenBank AB361640 supposedly representing IFM 47423 = UAMH 6167 is incorrect (fide L. Sigler).

Gymnoascus udagawae see ***Gymnascella udagawae******Gymnoascus uncinatus*** Eidam (syn. *Uncinocarpus uncinatus*; morph *Chrysosporium an. Gymnoascus uncinatus*)

- 3913 (T Neotype *Gymnoascus uncinatus*) dung S. California R.K. Benjamin /G.F. Orr O-3215 [=CBS 408.72 =NRRL 3610]. Molecular systematics: revision (Hambleton, University of Alberta Ph.D. thesis, 1998).

Gymnostellatospora alpina (E. Muller & Arx) Udagawa (syn. *Pseudogymnoascus alpinus*)

- 9430 (T *Pseudogymnoascus alpinus*) rhizosphere of *Erica carnea*

(Ericaceae) Graubünden, Fläsch, 800 m alt. Mt. Nauwald, Switzerland E. Müller (Pd E 5/c) 30 Oct 1978 /CBS 620.81 [=GenBank DQ117459]. Psychrophilic: grows better @ 18C; restricted @ 25C // molecular systematics: phylogeny of Pseudogymnoascus and Gymnostellatospora (Rice AV, Currah RS, Mycologia 98:307-318, 2006).

Gymnostellatospora canadensis Lumley, Sigler & Currah
(morph *Malbranchea an. Gymnostellatospora canadensis*)

- 8899 (T *Gymnostellatospora canadensis*) extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*), 29 yr post-fire site Slave Lake, Alta. 3-7G) T. Lumley (F681-03-S1E 7 Mar 1997 /R.S. Currah F681-03-S1E, 3-7G [=GenBank AF062818 (ITS) =GenBank DQ117448]. Molecular systematics: phylogenetic relationships in Oidiodendron and Myxotrichaceae (Hambleton et al., Mycologia 90:854-869, 1998); phylogeny of Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006) // psychrophilic: grows better @ 18 C than at 25 C // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000) // pigment: yellow // culture conditions: produces arthroconidia.
- 9238 (T paratype *Gymnostellatospora canadensis*) extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 10-9C) T. Lumley (ML-05-S1H 9 Oct 1997 /R.S. Currah TCL 038 [=GenBank DQ1174453]. Pigment: brown // psychrophilic: grows better @ 18 C than at 25 C // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000) // molecular systematics: phylogeny of Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006) // culture conditions: produces arthroconidia.

Gymnostellatospora frigida Uchiyama, Kamiya & Udagawa

- 9304 (T *Gymnostellatospora frigida*) forest soil Mt. Daisetsu, Kamikawa-cho, Kamikawa-gun, Hokaido, Japan 2 Aug 1993 /R.S. Currah BF 44675 [=GenBank DQ117457]. Psychrophilic: grows better @ 18 C than at 25 C // molecular systematics: phylogeny of Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006) // pigment: yellow.

Gymnostellatospora japonica Udagawa, Uchiyama & Kamiya

- 9239 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 10-17A) T. Lumley (ML-05-S3J 17 Oct 1997 /R.S. Currah TCL 039 [=GenBank DQ117454]. Pigment: yellow-brown // psychrophilic: grows better @ 18 C than at 25 C // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000) // molecular systematics: phylogeny of Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006) // culture conditions: ascospores produced.
- 9240 slightly decayed wood (stage 1 decay), aspen log (*Populus tremuloides*) with some burn in 2 yr post-fire site Mariana Lake, Alta. 7-16A) T. Lumley (F953-03-S2C 16 Jul 1997 /R.S. Currah TCL 040 [=GenBank DQ117455]. Pigment: yellow-brown // psychrophilic: grows better @ 18 C than at 25 C // molecular systematics: phylogeny of Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006).

Gymnostellatospora sp.

- 9339 forest soil at altitude 4200 m Mt. Kenya, Kenya S.-I. Udagawa /R.S. Currah SUM 3062 [=GenBank DQ117458]. Psychrophilic: grows better @ 18C; restricted @ 25C // molecular systematics: phylogeny of Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia

98:307-318, 2006); ITS sequence differs from *Gymnostellatospora alpina* Type (fide S. Hambleton).

- 11337 swab ex fur of living male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 99 C.8. Molecular systematics: ITS sequences identical for UAMH 9339 and 11337 (fide S. Hambleton); BLAST match ITS similarity places with *Gymnostellatospora* species (fide UAMH 2011) // culture conditions: produces arthroconidia.
- 11344 swab ex fur of living male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 96 C.1. Culture conditions: ascospores produced on OATC after 2 months (fide UAMH 2011) // molecular systematics: ITS sequence closest to UAMH 9339 (fide S. Hambleton).

Gymnostellatospora subnuda Sigler, Lumley & Currah

- 9241 (T *Gymnostellatospora subnuda*) extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 10-16A) T. Lumley (ML-05-S2A 16 Oct 1997 /R.S. Currah TCL 032. Pigment: brown // psychrophilic: grows better @ 18C; restricted @ 25C // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 9242 (T paratype *Gymnostellatospora subnuda*) decayed wood (stage 3 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 10-30D) T. Lumley (ML-06-S4I 30 Oct 1997 /R.S. Currah TCL 041 [=GenBank DQ117456]. Pigment: brown // psychrophilic: grows better @ 18C; restricted @ 25C // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000) // molecular systematics: phylogeny of Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006).

Gyrodon meruloides (Schw.) Singer

- 6275 scattered on lawn under Fraxinus St. Catherines, Ont. (C) G. Alm 22 Sep 1987 /L. Hutchison LH-29-87 [=TRTC LH-29-87]. Pigment: brown // mycorrhizae.

Gyromitra esculenta (Persoon) Fries

- 7350 ex fruiting body solitary on ground with woody debris under *Populus tremuloides*, *Picea glauca*, *Betula papyrifera*, *Rosa acicularis*, *Rubus idaea* & *Cornus canadensis* North Saskatchewan River valley near Devon, Alta S.P. Abbott (SA 645) 15 May 1992 /S.P. Abbott (SA 645). Pigment: brown.

Gyromitra infula (Schaeffer: Fries) Quelet

- 7349 ex ascocarps on *Picea glauca* & debris on ground William A. Switzer Provincial Park, Alta. S.P. Abbott (SA 395) 1991 /S.P. Abbott (SA 395). Pigment: brown.

Haematonectria haematococca (Berk. & Broome) Samuels & Nirenberg (syn. *Nectria haematococca*; morph *Fusarium an. Haematonectria haematococca*)

- 7204 ex roots of epiphytic orchid *Scaphyglottis gracilis* La Selva, Heredia Prov., Costa Rica K. Richardson 18 Mar 1991 /R.S. Currah K105b. Mycorrhizae: root endophyte epiphytic orchid *Scaphyglottis gracilis*.
- 7205 ex roots of epiphytic orchid *Stelis endresii* La Selva, Heredia Prov., Costa Rica K. Richardson 19 Mar 1991 /R.S. Currah K121b. Mycorrhizae: root endophyte epiphytic orchid *Stelis endresii*.
- 7206 ex roots of epiphytic orchid *Sobralia sp.* La Selva, Heredia Prov., Costa Rica K. Richardson 16 Apr 1991 /R.S. Currah K239Bb.
- 7207 ex roots of epiphytic orchid *Pleurothallis phyllocardioides* La Selva, Heredia Prov., Costa Rica K. Richardson 16 Apr 1991 /R.S. Currah K255a. Mycorrhizae: root endophyte epiphytic orchid *Pleurothallis phyllocardioides*.

- Hainesia lythri** (Desm.) Hohnel (morph *Discohainesia oenotherae*, *Pilidium concavum*)
6578 ex small black fungus (Geoglossum?) on wet lawn Sunfish Lake, Waterloo Co., Ont. B. Hudgins 23 Sep 1989 /G. Thorn Hudgins 7.
- Halosphaeria appendiculata** Linder
9398 driftwood Washington, USA J. Kohlmeyer (Ko 17) /CBS 197.60. Benomyl: sensitive (NG 2 ppm).
- Halosphaeria mediosetigera** see **Halosphaeriopsis mediosetigera**
- Halosphaeriopsis mediosetigera** (A.B. & J.W. Cribb) T.W. Johnson (syn. *Halosphaeria mediosetigera*)
9399 driftwood California, USA J. Kohlmeyer (Ko 34) /CBS 245.62 [=ATCC 16934]. Benomyl: sensitive (NG 2 ppm).
- Halysiomycetes saxatilis** Simmons
4398 (T *Halysiomycetes saxatilis*) air Sonoran desert, Phoenix, Arizona J. Staley & F. Palmer Feb 1980 /E. Simmons.
7635 ex desert rock Valley of Fire, Las Vegas, Nevada L. Sigler (Rock 3) May 1994 /L. Sigler (Rock 3).
- Hamigera striata** see **Talaromyces striatus**
- Hansenula capsulata** see **Kuraishia capsulata**
- Hansenula holstii** see **Nakazawaea holstii**
- Hansenula mrakii** see **Williopsis mrakii**
- Hansfordia parasitica** see **Dicyma parasitica**
- Hansfordia pulvinata** see **Dicyma pulvinata**
- Haplographium sp.** Berk. & Broome (morph *Hyaloscypha*)
5084 carbonated beverage Puerto Rico /C. Betancourt 1. Pigment: brown on PYE.
- Hapsidospora irregularis** Malloch & Cain (morph *Acremonium an. Hapsidospora irregularis*)
5613 sheep dung Spain M. Valldosera 3 Apr 1984 /J. Guarro FMR 721. Pigment: yellow.
- Haptocillium balanoides** (Drechsler) Zare & W. Gams (syn. *Verticillium balanoides*, *Tolypocladium balanoides*)
5256 (T Neotype *Cephalosporium balanoides*) moribund nematodes Manitoba J.A. Dowsett & al. /DAOM 185098 [=ARSEF 2483 =ATCC 46576 =CBS 250.82]. Nematode-trapping: see ref. (Dowsett & al. *Mycologia* 74:687-680, 1982).
6961 Pinus & long leafed pine (*Pinus palustris*) litter /B. Katz S-209. Pigment: brown // nematode-trapping.
9931 living willow roots (*Salix plantifolia*) nr Perryvale, AB (54D28'N, 113D14'W) M.N. Thormann Sep 1997 /R.S. Currah MNT 90 [=ALTA 12299].
- Harzia acremonioides** (Harz) Costantin
1326 feather and hairs ex nursery paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
2463 contaminant ex clinical specimen Edmonton, Alta. J.W. Carmichael 3 May 1965 /J.W. Carmichael.
2762 cow corral Univ. Farm, Edmonton, Alta. D. Remington 29 May 1967 /D. Remington.
4196 barley in field Stonyplain, Alta. S. Davies 1978 /S. Davies.
5332 Eastern white pine seeds Algonquin Park, Ont. R. Mittal 9 Jan 1986 /R. Mittal R-75. Plant pathogen: on seed (pathogen?)
- (Mittal & Wang, *Can. J. For. Res.* 17:1026-1034, 1987).
- Hebeloma crustuliniforme complex** (Bull.) Quel.
5247 *Picea glauca* woods Lac La Biche Forest, Alta. 4 Sep 1985 /; . Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khasa, *Restoration Ecology* 10:43-51, 2002; Bois G, Bigras FJ, Bertrand A, Piche Y, Fung MY, Khasa DP, *Tree Physiology* 26:1185-1196, 2006; candidate for inoculation of tree seedlings in salt-affected soil; Bois G, Bertrand A, Piche Y, Fung M, Khasa DP, *Mycorrhiza* 16:99-109, 2006); responses of ectomycorrhizal *Ulmus americana* seedlings to salinity and soil compaction (Calvo Polanco M, Zwiazek JJ, Voicu MC, *Plant Soil* 308:189-200, 2008; Calvo Polanco M, Jones MD, Zwiazek JJ, *Acta Physiol Plant* 31:515-522, 2009); effects on growth and water relations of balsam poplar (Siemens JA, Zwiazek JJ, *Mycorrhiza* 18:393-401, 2008); role of ectomycorrhizal associations in nitrogen assimilation of *Populus tremuloides* seedlings (Siemens JA, Zwiazek JJ, *Tree Physiol* 2011 Epub 6 Sep); increased root hydraulic conductivity in inoculated *Populus tremuloides* seedlings (Siemens JA, Zwiazek JJ, *Plant & Soil* 345:247-256, 2011) // culture conditions: clamps present in original mounts, but absent in later subcultures; clamps present (fide UAMH 2014) // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5248 *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5249 *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5250 *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5251 *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /; . Mycorrhizae // odor // molecular systematics: microsatellite markers for *Hebeloma* species (Jany, Bousquet & Khasa, *Molecular Ecology Notes* 3:659-661, 2003); ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5252 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5253 *Picea glauca* woods Grande Prairie Forest, Alta. 9 Sep 1985 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5254 *Pinus contorta* woods Edson Forest, Alta. 9 Sep 1985 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5255 *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, *Persoonia* 18:285-316, 2004).
- 5257 *Pinus contorta* woods Grande Prairie Forest, Alta. 4 Sep 1985

- /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5310 *Pinus contorta* & *Picea glauca* woods Grande Prairie Forest, Alta. 9 Sep 1985 /; . Mycorrhizae: ergosterol & chitin as estimates of mycorrhizal infection (Johnson & McGill, Can. J. For. Res. 20:1125-1131, 1990) // odor // molecular systematics: microsatellite markers for *Hebeloma* species (Jany, Bousquet & Khasa, Molecular Ecology Notes 3:659-661, 2003); ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5311 *Pinus contorta* & *Pseudotsuga menziesii* woods Starkey Exp. Forest, Union Co., Ore. R. Molina 15 Oct 1976 /R. Molina S-260 [=Herb. Trappe 4762]. Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5454 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5455 mixed *Picea glauca*, *P. mariana*, *Populus* and *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /; . Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khasa, Restoration Ecology 10:43-51, 2002) // molecular systematics: microsatellite markers for *Hebeloma* species (Jany, Bousquet & Khasa, Molecular Ecology Notes 3:659-661, 2003); ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004) // culture conditions: no clamps.
- 5456 mixed *Picea glauca*, *P. mariana*, *Populus* and *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5459 mixed *Picea glauca*, *P. mariana*, *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986. Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5460 mixed *Picea mariana*, *P. glauca*, *Pinus contorta*, *Populus* woods Rocky-Clearwater, Alta. 3 Sep 1986 /; . Proteinase (Zhu et al., Appl. Environ. Microbiol. 56:837-843, 1990). Mycorrhizae: proteinase production (Zhu et al., Mycologia 86 (2):227-234, 1994) // molecular systematics: microsatellite markers for *Hebeloma* species (Jany, Bousquet & Khasa, Molecular Ecology Notes 3:659-661, 2003); ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5541 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5542 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5543 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /; [=1]. Mycorrhizae // molecular systematics: microsatellite markers for *Hebeloma* species (Jany, Bousquet & Khasa, Molecular Ecology Notes 3:659-661, 2003); ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5544 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986 /; . Mycorrhizae // molecular systematics: microsatellite markers for *Hebeloma* species (Jany, Bousquet & Khasa, Molecular Ecology Notes 3:659-661, 2003); ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 5569 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /; . Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 6064 gregarious in *Pleurozium* carpet under *Picea mariana*, *Larix laricina*, *Salix* sp. & *Alnus rugosa* Schefferville Airport, Nouveau Quebec, PQ (C) D. Malloch 25 Aug 1984 /L. Hutchison DM437 [=TRTC DM437]. Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 6149 gregarious in *Pleurozium* carpet under *Picea mariana* & *Salix Schefferville* airport, Nouveau Quebec, P.Q. (C) D. Malloch 26 Aug 1984 /L. Hutchison DM420 [=TRTC Malloch 26.8.84/11]. Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 6243 *Picea engelmannii* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 6244 *Pinus contorta* & *Alnus crispa* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 6246 *Pinus contorta* & *Picea engelmannii* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khasa, Restoration Ecology 10:43-51, 2002) // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 7945 L. Hutchison /D. Malloch. Mycorrhizae // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004).
- 9317 Norway spruce as *Hebeloma longicaudum* Uppsala, Sweden P. Chakravarty Aug 1984 /P. Chakravarty NOF 2298. Sesquiterpenes, hebelophyllenes D, E, F (Wichlacz et al., J. Nat. Prod. 62:484-486, 1999; Wichlacz et al., Phytochemistry 52: 1421-1425, 1999); sesquiterpenes, hebelophyllenes G & H & an alloaromadendrane, hebelodendrol. Mycorrhizae: assessment of biological control potential (Chakravarty et al., J. Plant Diseases and Protection 106:342-352, 1999); effects of fertilization levels on growth & mycorrhizal colonization of container-grown conifer seedlings (Khasa, Sigler, Chakravarty, Dancik, et al., New Forests 22:179-197, 2001); salt tolerant (Kernaghan, Hambling, Fung & Khasa, Restoration Ecology 10:43-51, 2002); persistence of introduced ectomycorrhizal fungi in outplanted seedlings (Gagne A, Jany J-L, Bousquet J, Khasa PD, Can J For Res

36:1684-1694, 2006); assessment of mycorrhizal inoculation in aspen and balsam poplar in the nursery (Quoreshi AM, Khasa DP, Biomass and Bioenergy 32:381-391, 2008) // molecular systematics: ectomycorrhizal fungi associated with deciduous and coniferous trees probably represent *Hebeloma velutipes* (Aanen DK, Kuyper TW, Persoonia 18:285-316, 2004); ectomycorrhizal fungal communities after outplanting of nursery-inoculated seedlings.

Hebeloma sinapizans (Paulet:Fr.) Gillet

- 5452 mixed Picea woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /; . Mycorrhizae // culture conditions: clamps.
5495 Picea & Populus woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /; . Mycorrhizae // culture conditions: no clamps.

Hebeloma sp.

- 8320 roots of 2-3 yr old Pinus strobus (Eastern White Pine) seedlings Ontario Ministry of Natural Resources Nursery, St. Williams, Ont. M. Kronick-Ursic 1994 /R.L. Peterson. Mycorrhizae: ectomycorrhizal on Pinus strobus in field (Kronick-Ursic, M., pers. comm.); ectomycorrhizal on Pinus strobus in nursery.
9053 sporocarp among bearberry in cleared area by road, pine seedling 1.5 m Mildred Lake, Alta. R.M. Danielson (RMD 2657) /R.M. Danielson RMD 2657 [=DAOM 176622 =CCFC 3668 =CCFC 3669]. Mycorrhizae: responses of ectomycorrhizal jackpine seedlings to salt and boron (Calvo Polanco M, Zwiazek JJ, Jones MD, MacKinnon MD, Trees 22:825-834, 2008) // culture conditions: clamps.
9087 sporocarp solitary on cutline with bearberry & jackpine seedlings Mildred Lake, Alta. R.M. Danielson (RMD 2865) 19 Sep 1978 /R.M. Danielson RMD 2865. Mycorrhizae.
10019 sporocarp, along road in cleared area, in bearberry & pine seedling Mildred Lake, AB R.M. Danielson 21 Sep 1977 /R.M. Danielson RMD 2667.
10503 urea amended soil nr Elk Island Park, Alta. A. Suzuki 30-08-04 /A. Suzuki 1014. Culture conditions: clamps // pigment: tan on PDA // biodiversity: urea amended soil // biodeterioration/biodegradation: ammonia fungus.

Hebeloma truncatum (Schff.:Fr.) Kummer

- 6241 Pinus contorta & Picea engelmannii woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Mycorrhizae.

Helicodendron articulatum Glen-Bott

- 8686 decaying Quercus spp. leaves submerged in stream Cantallops, Alt Emporda, Catalonia, Spain S.K. Abdullah Nov 1995 /J. Guarro FMR 5499. Pigment: brown.

Helicodendron conglomeratum Glen-Bott

- 8472 decaying oak leaves submerged in stream Cantallops, Alt Emporda, Catalonia, Spain S.K. Abdullah Nov 1995 /J. Guarro FMR 5497 [=GenBank AY85943 SSU =GenBank AY856901 LSU]. Culture conditions: sporulates on 0.1%MEA @ 22C; sporulates on 0.1% MEA @ 22C // molecular systematics: phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).

Helicodendron fractum Fisher

- 8755 decaying pine needle submerged in stream Cantallops, Alt Emporda, Catalonia, Spain S.K. Abdullah Nov 1995 /J. Guarro FMR 5500.

Helicodendron paradoxum Peyronel

- 8758 decaying Quercus spp. leaves submerged in river Dera River, Soberpera, Alt Emporda, Catalonia, Spain S.K. Abdullah Nov 1995 /J. Guarro FMR 5498 [=AY856945 SSU]. Pigment: brown // culture conditions: sporulates on 0.1% MEA @ 18C

// molecular systematics: phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).

Helicodendron pinicola see *Tyrannosorus pinicola*

Helicodendron sp.

- 7088 ex black sclerotia in stream drift 6 Mile lake, Muskoka District, Ont. D. Malloch Mar 1991 /D. Malloch Ceno L.

Helicodendron tubulosum (Reiss) Linder

- 8567 decaying Betula sp. leaves submerged in stream Cantallops, Alt Emporda, Catalonia, Spain S.K. Abdullah Nov 1995 /J. Guarro FMR 5502 [=GenBank AY856944 SSU]. Pigment: black // culture conditions: sporulates on 0.1%MEA @ 22C; sporulates on 0.1% MEA @ 22C // molecular systematics: phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).

Helicoma ambiens Morgan

- 10533 decaying litter South Arm Wildlife Management Area, Ladner, B.C. P. Inderbitzin (P 503) /M.L. Berbee 41 [=GenBank AY916451 (ITS) =UBC F15000 =GenBank AY856955 (SSU) =GenBank AY856916 (LSU)]. Culture conditions: sporulates on PDA (fide C. Tsui) // molecular systematics: helicoide anamorphs of Tubeufia and allied genera (Tsui CKM, Sivichai S, Berbee ML, Mycologia 98:94-104, 2006; Tsui CK, Berbee ML, Phylogenet Evol 39:587-597, 2006).

Helicoma conicodentatum Linder

- 10534 decaying bark of Salix sp. Harbour Park, Ladner, B.C. K.M. Tsui May 2003 /M.L. Berbee CT 42 [=GenBank AY916450 (ITS) =UBC F14998 =GenBank AY856918 (SSU) =GenBank AY856869 (LSU)]. Culture conditions: sporulates on oatmeal salts and cereal agar // molecular systematics: helicoide anamorphs of Tubeufia and allied genera (Tsui CKM, Sivichai S, Berbee ML, Mycologia 98:94-104, 2006; Tsui CK, Berbee ML, Phylogenet Evol 39:587-597, 2006).

Helicoma isiola Moore

- 1359 air New Jersey N. Shaffer /DAOM 64347 [=GenBank DQ341099 ITS =GenBank AY856890 LSU =GenBank AY856935 SSU]. Culture conditions: sporulates on 0.1% MEA @ 22C // molecular systematics: phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).

Helicoma sp.

- 7209 decorticated log Cornell Plantation, Cornell Univ., Ithaca, NY K. Hodge Sep 1991 /K. Hodge KTH 6.

Helicoon fuscosporum Linder

- 8757 decaying oak (Quercus spp.) leaves submerged in stream Cantallops, Alt Emporda, Catalonia, Spain S.K. Abdullah 7 Nov 1995 /J. Guarro FMR 5494 [=GenBank AY856946 SSU =GenBank AY856901 LSU]. Molecular systematics: phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).

Helicosporina venonae Rambelli

- 2646 soil, cedar (Thuja sp.) swamp Campbellville, Ontario G.L. Barron Apr 1964 /G.L. Barron 10328 [=CBS 643.66 =ATCC 16252 =ATHUM 2875 =IMI 114458 =MUCL 15021 =MUCL15693 =OAC 10328].

Helicosporium griseum Berk. & Curt.

- 1694 Alnus log Fort Langely, B.C. J.W. Carmichael 11 Jun 1963 [=GenBank AY916473 (ITS) =GenBank AY856902 (LSU)]. Culture conditions: sporulates on 0.1% MEA @ 22C //

- molecular systematics: helicoid anamorphs of Tubeufia and allied genera (Tsui CKM, Sivichai S, Berbee ML, Mycologia 98:94-104, 2006); phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).
- 1696 fallen branch Fort Langely, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael.

***Helicosporium guianensis* Linder**

- 1699 Douglas fir timber Fort Langely, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael [=GenBank AY916479 (ITS) =GenBank AY856891 (LSU) =GenBank AY856936]. Molecular systematics: helicoid anamorphs of Tubeufia and allied genera (Tsui CKM, Sivichai S, Berbee ML, Mycologia 98:94-104, 2006); phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).

***Helicosporium pallidum* Cesati**

- 10535 decaying wood Sumiyoshi, Kobe, Japan K.M. Tsui Dec 2003 /M.L. Berbee CT 126 [=GenBank AY916462 (ITS) =UBC F15001 =GenBank AY856913 (LSU)]. Culture conditions: sporulates on oatmeal salts and cereal agar // molecular systematics: helicoid anamorphs of Tubeufia and allied genera (Tsui CKM, Sivichai S, Berbee ML, Mycologia 98:94-104, 2006; Tsui CK, Berbee ML, Phylogenet Evol 39:587-597, 2006).

Helminthophora sphaerocephala* see *Cladobotryum sphaerocephalum

***Helminthosporium solani* Dur. & Mont.**

- 4172 ex *Solanum tuberosum* U.K. G.J. Jellis 1969 /M. McGinnis NCMH 833 [=IMI 169783].

***Helotiaceae* sp.**

- 10330 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Jan. 1999 /M.L. Berbee UBCtra 1439C [=GenBank AY219879]. Culture conditions: no arthroconidia // molecular systematics: DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, New Phytologist 160:255-272, 2003); 100% ITS similarity with AY219881 UBCtra1436C (=UAMH 10338).
- 10338 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Jan. 1999 /M.L. Berbee UBCtra 1436C [=GenBank AY219881 (ITS)]. Culture conditions: no arthroconidia // molecular systematics: DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, New Phytologist 160:255-272, 2003); 100% ITS similarity with AY219879 UBCtra1439C (UAMH 10330).
- 10354 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Jan. 1999 /M.L. Berbee UBCtra 1437C. Culture conditions: no arthroconidia.
- 10355 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Jan. 1999 /M.L. Berbee UBCtra 1438C. Culture conditions: no arthroconidia.
- 11168 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.15 [=GenBank HQ157879 ITS]. Molecular systematics: as Helotiaceae sp. VII in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11169 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.38 [=GenBank HQ157864 ITS]. Molecular systematics: as Helotiaceae sp. II in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G,

- Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11170 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 18-May-2007 /G. Kernaghan ARSL 180507.12 [=GenBank HQ157919 ITS]. Molecular systematics: as Helotiaceae sp. III in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11171 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.55 [=GenBank HQ157876 ITS]. Molecular systematics: as Helotiaceae sp. V in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11172 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 7-Sep-2007 /G. Kernaghan ARSL 070907.9 [=GenBank HQ157913 ITS]. Molecular systematics: as Helotiaceae sp. VI in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11201 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 23-May-2007 /G. Kernaghan ARSL 230507.35 [=GenBank HQ157833 ITS]. Molecular systematics: Blast match highest ITS similarity to Helotiales and uncultured fungi; as Helotiaceae sp. I in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11202 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 07-May-2007 /G. Kernaghan ARSL 070907.35 [=GenBank HQ157925 ITS]. Molecular systematics: Blast match highest ITS similarity to Helotiales and uncultured fungi; as Helotiaceae sp. IV in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).

***Helvella lacunosa* Afzelius:Fries**

- 6474 forest, *Fagus sylvatica* Belgium V. Demoulin /CBS 404.74. Pigment: brown // mycorrhizae.

Hemlock mycorrhiza* see *Root associated fungus

Hendersonula toruloidea* see *Neoscytalidium dimidiatum

***Hericium coralloides* (Scop.:Fr.) Pers.**

- 1245 K. Nobles N 7 [=DAOM 22606T].
- 6341 on recently cut conifer log Coast Mts. nr Vancouver, B.C. S. Berch Sep 1986 /S. Berch.
- 8030 ex *Fagus sylvatica*, polypore isolate Denmark N. Hallenberg (GB145) /S. Davies FC-372 [=ATCC 52778]. Edible: mushroom.

Hericium erinaceus (Bull.:Fries) Persoon

8029 ex willow oak (*Quercus phellos*) J. San Antonio 248 /S.
Davies FC-373 [=ATCC 56457]. Edible: mushroom // culture
conditions: fruiting bodies produced on pda.

Heterobasidion annosum see ***Spiniger meineckellus******Heterocephalum aurantiacum*** Thaxter

3068 soil Monrovia, Liberia /R.K. Benjamin RSA 4 [=CBS 288.51
=IMI 236331 =NRRL 2238].
3095 soil Zaire J. Meyer (34118) 1956 /IMI 62339.

Heteroconium chaetospora see ***Cladophialophora chaetospora******Heteroconium sp.***

7317 isolated two times from skin of Hawaiian female, 60 yr, who
returns frequently to Hawaii; histopathology positive for
muriform cells Allen Park, Michigan VA Medical Center
/M.G. Rinaldi V-92-86. Pigment: brown // cycloheximide:
sensitive (growth strongly inhibited) // benomyl: sensitive (NG
2 ppm).

Hirschioporus laricinus see ***Trichaptum laricinum******Hirsutella rhossiliensis*** Minter & Brady

5977 *Cricnemella xenoplax* (Nematoda) Erie Co., PA, USA B.
Jaffee (Hr-31) 25 Oct 1983 /R. Humber ARSEF 2006.

Hirsutella strigosa Petch

5978 *Nilaparvata lugens* (Dephacidae) ex greenhouse culture IRRI,
Los Banos, Philippines M. Rombach (071185-2) 7 Nov 1985
/R. Humber ARSEF 2044.

Hispidoconidioma alpina Tsuneda & Davey

11010 (*T. Hispidoconidioma alpina*) ex black colony formed on twig
of larch (*Larix lyallii*) Larch Valley, Banff National Park, Alta.
A. Tsuneda. 5- Aug-2008 /A. Tsuneda L2-2 [=GenBank
FJ997285 ITS =GenBank FJ997286 LSU]. Plant pathogen:
associated with declining and dead larch trees // biodiversity:
endoconidial black meristematic fungi (BMF) on larch
(Tsuneda A; Davey ML; Tsuneda I; Currah RS, Botany
88:471-487, 2010).

Histoplasma capsulatum see ***Ajellomyces capsulatus******Histoplasma capsulatum var. duboisii*** (Vanbreus.) Ciferri

(syn. *Histoplasma duboisii*; morph *Ajellomyces capsulatus*)
4369 CDC B-0936b.

Histoplasma capsulatum var. farciminosum (Rivolta)

Weeks, Padhye & Ajello (syn. *Histoplasma farciminosum*)
2869 M. Berliner G144.

Histoplasma duboisii see ***Histoplasma capsulatum var. duboisii******Histoplasma farciminosum*** see ***Histoplasma capsulatum var. farciminosum******Hohenbuehelia*** see ***Nematoctonus concurrens******Hohenbuehelia petalodes*** (Bull.:Fr.) Schulz. (morph

Nematoctonus geogenius)

5317 contaminant ex basidiocarp *Cortinarius sp.* Edson Forest, Alta.
24 Aug 1985 / [=GenBank AF139960]. Nematode-trapping:
rings & adhesive knobs // molecular systematics:

Hohenbuehelia and *Pleurotaceae* (Thorn et al. *Mycologia*
92:241-252, 2000; Koziak ATE, Cheng KC, Thorn RG, Can J
Bot 85:762-773, 2007).

Holubovaniella elegans Castaneda Ruiz

5412 fallen leaf of *Andira inermis* Pinar del Rio, Cuba R.F.
Castaneda 6 Jan 1986 /G.R. Arnold INIFAT C86/37 [=CBS
404.86 =MW i 1344].

Holubovaniella gracilis Castaneda Ruiz

5411 fallen leaf of *Matayba oppositifolia* Pinar del Rio, Cuba R.F.
Castaneda 6 Jan 1986 /G.R. Arnold INIFAT C86/11-2 [=CBS
369.86].

Hormoconis resiniae see ***Amorphotheca resiniae******Hormodendrum negronii*** see ***Exophiala lecanii-corni******Hormographiella candelabrata*** Gene & Guarro

7697 (*T. Hormographiella candelabrata*) ex goat dung Andraitx,
Majorca, Spain J. Gene 10 Aug 1989 /J. Guarro FMR 3782
[=IMI 349602]. Benomyl: sensitive @ 10ppm, resistant @ 2
ppm // cycloheximide: sensitive.

Hormographis ramirezii Guarro, Punsola & von Arx

5668 (*T. Hormographis ramirezii*) forest soil Alp, Cerdanya,
Catalonia, Spain Apr 1982 /J. Guarro FMR 186 [=ATCC
60798].

Hormonema dematioides Lagerberg & Melin (morph

Sydowia polyspora)

4244 ex blackened rust gall of *Endocronartium harknessii* Smokey
Lake, Alta. A. Tsuneda Sep 1979 /A. Tsuneda Smokey Lake
III. Biocontrol: appears to penetrate sorus and inactivate spores
in gall, causes black color of gall.
4250 ex rust gall of *Endocronartium harknessii* Devonian Bot.
Garden, Alta. A. Tsuneda 25 Sep 1979 /A. Tsuneda.
4298 canker gall on *Cronartium coleosporioides* ex *Pinus contorta*
Sask. crossing, Banff, Alta. L. Sigler May 1980 /A. Tsuneda
CFB 20955.
4662 resin of *Pinus banksiana* Devonian Bot. Garden, Alta. L. Sigler
Oct 1982 /L. Sigler.
4725 ex *Endocronartium harknessii* gall Edith Cavell, Jasper E. Allen
Nov 1982 /E. Allen.
4877 wood ex *Pinus contorta* Crownsnest forest, Blairmore, Alta. L.
Sigler (BSF 24) Oct 1982 /P. Muruyama.
4879 wood ex *Pinus contorta* Crownsnest forest, Blairmore, Alta. L.
Sigler (BSF 27) Oct 1983 /P. Muruyama.
7214 bone biopsy, right tibia Edmonton, Alta. 21 May 1992 /R.
Rennie MY 2298.
11213 ex black subiculum on bark of white spruce (*Picea glauca*)
Larch Valley, Banff National Park, Alta. A. Tsuneda
5-Aug-2008 /A. Tsuneda S1-1. Pigment: dark brown.
11214 ex black subiculum on bark of white spruce (*Picea glauca*)
Larch Valley, Banff National Park, Alta. A. Tsuneda
24-Jun-2009 /A. Tsuneda S1-2. Pigment: dark brown.

Hormonema dematioides see ***Sydowia polyspora******Hormonema schizolunatum*** W.J. Middelhoven & de Hoog

8969 (*T. Hormonema schizolunatum*) leaf of Canarian sage (*Salvia*
canariensis v. *candidissima*) Gran Canaria, Barranco de
Arguineguin, Spain W.J. Middelhoven /CBS 707.95.

Hormonema sp.

598 throat swab Edmonton, Alta. J.W. Carmichael Jan 1958 /J.W.
Carmichael.
1014 skin rodent survey J.W. Carmichael 1960 /J.W. Carmichael.
4068 ex spruce lumber soaked in copper containing preservative L.

- Sigler /A. Jobson. Biodeteriogen/biodegradation: growth on lumber treated with preservative.
- 4263 ex *Pseudotsuga taxifolia* A. Tsuneda /A. Tsuneda C-352. Pigment: pink on PDA; green on OAT.
- 4628 twig with cup fungi State College, Pennsylvania L. Sigler Sep 1982 /L. Sigler.
- 4668 decaying branch Devonian Bot. Garden, Alta. J.W. Carmichael Oct 1982 /J.W. Carmichael.
- 5874 contaminant ex UAMH 5751 UAMH A. Flis 23 Jul 1987 /A. Flis.
- 7462 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (CF-90-1c-4b) 28 Sep 1990 /L. Hutchison NOF 1535. Pigment: black.
- 10765 on steel siding of a beer aging warehouse La Crosse, Wisconsin J. (C) Scott 24-Jul-2005 /J. Scott 2488441 [=Wisconsin 1-b]. Biodiversity: characterization of warehouse staining fungi in spirits industry (Scott JA, Untereiner WA, Ewaze JO, Wong B, Doyle D, Mycologia 99:592-601, 2007) // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species as *Aureobasidium pullulans* (A. Cywinska) // molecular systematics: Blast match 93% ITS similarity to *Hormonema prunorum* and other Dothidiomycetes (fide UAMH 2012).
- Hormonema sp. I***
- 8814 wood plastic extruded board L. Sigler (3B yellow) Feb 1997 /J. Muller.
- 8827 wood plastic extruded board L. Sigler (3F) Feb 1997 /J. Muller.
- 8828 wood plastic extruded board L. Sigler (3G) Feb 1997 /J. Muller.
- 8829 wood plastic extruded board L. Sigler (3C) Feb 1997 /J. Muller.
- Hortaea werneckii* Nishimura & Miyaji (syn.**
Phaeoannellomyces werneckii, *Exophiala werneckii*)
- 2894 D. Borelli FMC 206 [=NCMH 691 =CDC B1672].
- 3683 *Tinea nigra* Borelli /CDC B-3618 [=Duke 3340 =NCMH 690].
- 3688 *Tinea nigra* Borelli /CDC B-0617 [=Duke 3339 =NCMH 612].
- 3689 *Tinea nigra* (isolate A) Ceylon /CDC [=Duke 2441].
- 3696 *Tinea nigra* New Orleans Friedman (C-150) /CDC [=Duke 3357 =?NCMH 695].
- 3701 *Tinea nigra* Borelli /CDC B-0619 [=Duke 3341 =NCMH 661].
- 3962 (*T. Rhinocladiaella werneckii*) man, *Tinea nigra* palmaris Lisbon, Portugal M. Figueiredo (13938) & G.A. de Vries /M. McGinnis NCMH 75 [=CBS 107.67 =ATCC 36317 =CDC B1432]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: RFLP of mitochondrial DNA (Uijthof et al., Mycoses 37:307-312, 1994).
- 3963 (*T. Pullularia fermentans* var. *castellani*) man A. Castellani /M. McGinnis NCMH 78 [=CBS 126.35 =IMI 62459]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: RFLP of mitochondrial DNA (Uijthof et al., Mycoses 37:307-312, 1994).
- 4978 salted fish *Osteoglossum bicirrhosum* Brazil /W.Y. Mok Gr. IIC-g [=CBS 117.90]. Halophilic: salt tolerant (Mok et al., J. Fd. Technol. 16:505-512, 1981) // molecular systematics: RFLP of mitochondrial DNA (Uijthof et al., Mycoses 37:307-312, 1994).
- 4979 salted fish *Osteoglossum bicirrhosum* Brazil /W.Y. Mok Gr. IC-h. Halophilic: salt tolerant (Mok et al., J. Fd. Technol. 16:505-512, 1981).
- 4981 dermal area human scalp Brazil /W.Y. Mok T39C/9-5.
- 4984 interdigital area human hand Brazil /W.Y. Mok T32M/8-5.
- 4985 kidney ex toad *Bufo granulatus* Brazil /W.Y. Mok An07-R1 [=CBS 115.90]. Molecular systematics: RFLP of mitochondrial DNA (Uijthof et al., Mycoses 37:307-312, 1994).
- 4986 liver ex toad *Bufo marinus* Brazil /W.Y. Mok An s/n-F.
- 5389 eye infection in fish (black sea bream; *Cantharus cantharus*) in aquarium *Cantharus cantharus*, eye infection, black sea bream in aquarium /ATCC 52681 [=CBS 116.90]. Human/animal pathogen: fish pathogen (Todaro, F. et al., Mycopathologia 81:95-97, 1983) // molecular systematics: RFLP of mitochondrial DNA (Uijthof et al., Mycoses 37:307-312, 1994).
- Humicola an. Arthrocristula hyphenata* see *Arthrocristula hyphenata***
- Humicola an. Chaetomium homopilatum* see *Chaetomium homopilatum***
- Humicola dimorphospora* see *Sporothrix inflata***
- Humicola fusco-atra* Traaen**
- 812 IMUR 452-IBB:194.
- 1102 soil Imperial Co., Calif. /G.F. Orr UCLAB-136.
- 1103 soil Riverside Co., Calif. /G.F. Orr UCLAB-137.
- 1104 soil Kern Co., Calif. /G.F. Orr UCLAB-138.
- 1347 air Texas 1954 /DAOM 45345.
- 4792 ex coyote dung Lost River Canyon, S. Alta. L. Sigler Jul 1983 /L. Sigler.
- 9925 hand, male Texas 2000 /Texas Dept. of Health BY 3671. Benomy! sensitive.
- 10064 wound, male 9 yr Fort Worth, TX Jul 2001 /Texas Dept. of Health BY 1952.
- Humicola grisea* Traaen**
- 971 soil ex grassy field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
- 1009 soil ex ploughed field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
- 2808 soil ex flower bed Edmonton, Alta. D. Remington Jul 1967 /D. Remington.
- 3242 mouse dung ex cupboard in cabin San Bernardino Mts., Calif. J.W. Carmichael 18 Mar 1969 /J.W. Carmichael.
- 10044 cysts on lower left leg post liver transplant, male 54 yr Vancouver, British Columbia June 2001 /R. Rennie MY 4116. Mesophilic: NG @ 37C, good growth @ 30C.
- Humicola lanuginosa* see *Thermomyces lanuginosus***
- Humicola nigrescens* Omvik**
- 3078 (*T. Humicola nigrescens*) potato field soil Norway A. Omvik 1951 /IMI 45938 [=CBS 208.55 =GenBank AB625579 LSU =ATCC 22714 =GenBank AB625592 ITS].
- Humicola sp.***
- 3235 soil ex turkey corrals Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael. Mesophilic: NG @ 37C.
- 5639 dung Alberta /; . Mesophilic: NG @ 37C, good growth @ 25C & 18C.
- 11595 swab ex skin of living bat Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 33 C.3 skin ox [=Untereiner WUC S33]. Biodiversity: mycobiota of bat caves.
- Humicolopsis cephalosporioides* Cabral & Marchand**
- 5077 (*T. Humicolopsis cephalosporioides*) soil under *Nothofagus antactica* Argentina J.E. Wright /CBS 645.76 [=IMI 180354].
- Hyalodendron fusiforme* see *Retroconis fusiformis***
- Hyalodendron lignicola* see *Trichosporon lignicola***

***Hyalodendron* sp.**

- 2532 hair and skin scrapings ex feline face Edmonton, Alta. J.W. Carmichael 5 Jul 1965 /J.W. Carmichael.
6303 roots of dead *Picea sitchensis* seedlings Terrace, B.C. 5 Oct 1988 /A. Funk DAVFP 23808.

Hyalorhinocladiella an. *Cephaloascus albidus* see
Cephaloascus albidus

Hyalorhinocladiella an. *Ceratocystiopsis minima* see
Ceratocystiopsis minima

Hyalorhinocladiella an. *Ceratocystis autographa* see
Ceratocystis autographa

Hyalorhinocladiella an. *Ceratocystis tubicollis* see
Ceratocystis tubicollis

Hyalorhinocladiella an. *Ophiostoma bicolor* see
Ophiostoma bicolor

Hyalorhinocladiella an. *Ophiostoma minus* see
Ophiostoma minus

Hyalorhinocladiella an. *Ophiostoma pseudominus* see
Ophiostoma pseudominus

Hyalorhinocladiella minuta-bicolor see ***Ceratocystiopsis minuta-bicolor***

***Hyalorhinocladiella* sp. 1**

- 10639 ex *Ips perturbatus* (northern spruce engraver) Whitehorse, Yukon S. Alamouti /C. Breuil 2YT4P-H1 [=GenBank DQ268590 SSU =GenBank DQ268622 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
10640 gallery of *Ips perturbatus* (northern spruce engraver) Cracker Creek, Yukon S. Alamouti /C. Breuil 3YT5P-H1 [=GenBank DQ268591 SSU =GenBank DQ268623 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).

***Hyalorhinocladiella* sp. 2**

- 10641 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 3PG10P-H2 [=GenBank DQ268592 SSU =GenBank DQ268624 B-tubulin =GenBank DQ268593 SSU]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
10642 ex *Ips perturbatus* (northern spruce engraver) Whitehorse, Yukon S. Alamouti /C. Breuil 2YT4P-H2 [=DQ268593 ITS =GenBank DQ268625 beta tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).

Hyaloscypha see ***Haplographium* sp.**

Hyaloscypha zalewskii see ***Clathrosphaerina zalewskii***

***Hyaloscyphaceae* sp.**

- 11165 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.62 [=GenBank HQ157907 ITS]. Molecular systematics: as *Hyaloscyphaceae* sp. III in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
11166 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 23-May-2007 /G. Kernaghan ARSL 230507.52 [=GenBank HQ157858 ITS]. Molecular systematics: as *Hyaloscyphaceae* sp. I in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
11167 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 18-Sep-2007 /G. Kernaghan ARSL 180907.20 [=GenBank HQ157957 ITS]. Pigment: orange-brown // culture conditions: produces solitary indehiscent conidia // molecular systematics: as *Hyaloscyphaceae* sp. IV in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
11200 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 17-May-2007 /G. Kernaghan ARSL 170507.13 [=GenBank HQ157908 ITS]. Molecular systematics: Blast match highest ITS similarity to uncultured Helotiales & root fungi; as *Hyaloscyphaceae* sp. II in Kernaghan & Patriquin 2011 (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
11281 ex *Calluna vulgaris* hair roots Aylesbeare Common, Exeter, Devon, U.K. (C) G.A. Grelet J.M. Sharples Jan-1998 /G. Grelet AC1 [=IMI 392566 =GenBank FM180479 ITS]. Mycorrhizae: ericoid mycorrhiza (Grelet GA; Mehargi AA, Duff EI, Anderson IC, Alexander IJ, New Phytologist 181: 708-718, 2009).
11282 ex *Calluna vulgaris* hair roots Aylesbeare Common, Exeter, Devon, U.K. (C) G.A. Grelet J.M. Sharples Jan-1998 /G. Grelet AC2 [=GenBank FM180476 ITS =IMI 392567]. Mycorrhizae: ITS 100% identical with UAMH 11283 (fide Grelet et al 2009); ericoid mycorrhiza (Grelet GA; Mehargi AA, Duff EI, Anderson IC, Alexander IJ, New Phytologist 181: 708-718, 2009) // pigment: orange-brown.
11283 ex *Calluna vulgaris* hair roots Aylesbeare Common, Exeter, Devon, U.K. (C) G.A. Grelet J.M. Sharples Jan-1998 /G. Grelet AC21 [=GenBank FM180477 ITS =IMI 392568]. Pigment: orange-brown // mycorrhizae: ITS 100% identical with UAMH 11282 (fide Grelet et al 2009); ericoid mycorrhizal fungi (Grelet GA; Mehargi AA, Duff EI, Anderson IC, Alexander IJ, New Phytologist 181: 708-718, 2009).
11284 ex *Calluna vulgaris* hair roots Aylesbeare Common, Exeter, Devon, U.K. (C) G.A. Grelet J.M. Sharples Jan-1998 /G. Grelet AC14 [=GenBank FM180478 ITS =IMI 392569]. Mycorrhizae: ericoid mycorrhiza (Grelet GA; Mehargi AA, Duff EI, Anderson IC, Alexander IJ, New Phytologist 181: 708-718, 2009).
11285 ex *Calluna vulgaris* hair roots Aylesbeare Common, Exeter, Devon, U.K. (C) G.A. Grelet J.M. Sharples Jan-1998 /G. Grelet AC5 [=IMI 392570 =GenBank FM180480 ITS].

Mycorrhizae: ericoid mycorrhiza (Grelet GA; Mehargi AA, Duff EI, Anderson IC, Alexander IJ, New Phytologist 181: 708-718, 2009).

Hydnangium carneum Wallr.

6196 in plantation *Eucalyptus globulus* Oregon (C) R. Molina 1978 /L. Hutchison 19. Culture conditions: no clamps.

Hydnum imbricatum see ***Sarcodon imbricatus***

***Hydnum* sp.**

9440 R.M. Danielson RMD 3220.

Hydropisphaera peziza (Tode: Fr.) Dumortier (syn. *Nectria peziza*; morph *Acremonium an. Hydropisphaera peziza*)

772 soil under chicken house Alberta J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.

1821 wood ex fallen tree Edmonton, Alta. J.W. Carmichael 11 Oct 1963 /J.W. Carmichael. Cellulolytic.

7227 ex roots of epiphytic orchid *Pleurothallis pantasmi* La Selva, Heredia Prov., Costa Rica K. Richardson 12 Oct 1991 /R.S. Currah K364f. Mycorrhizae: root endophyte epiphytic orchid *Pleurothallis pantasmi*.

Hygrophopsis aurantiaca (Wulf.:Fr.) R. Maire

6274 gregarious in Dicranum & Pleurozium under *Pinus banksiana* York regional forest, Porritt tract nr Ballantrae, York Co., Ont. L. Hutchison 15 Oct 1987 /L. Hutchison LH-50-87 [=TRTC LH-50-87]. Culture conditions: sclerotia (Hutchison, Trans. Mycol. Soc. Japan 32:235-245, 1991) // pigment: yellow.

6364 gregarious in conifer needle litter, plantation *Pinus banksiana* & *Picea glauca* Palgrave, Adjala Twp, Ont. L. Hutchison 8 Oct 1988 /L. Hutchison LH-47-88 [=TRTC LH-47-88]. Pigment: yellow // culture conditions: sclerotia (Hutchison, Trans. Mycol. Soc. Japan 32:235-245, 1991).

Hygrophorus calophyllus Karst.

6266 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 22 Aug 1988 /C) S.P. Abbott. Mycorrhizae // pigment: brown.

Hygrophorus eburneus (Bull.:Fr.) Fr.

6072 gregarious in mixed woods *Quercus rubra*, *Populus tremuloides*, *Tsuga canadensis* York County For., nr Aurora, Ont. (C) L. Hutchison 4 Oct 1987 /L. Hutchison LH-33-87 [=TRTC LH-33-87]. Mycorrhizae.

Hygrophorus russula (Fr.) Quel.

6071 sandy soil below *Picea glauca* & *Populus tremuloides* Algonquin Park, Canisbay Twp., Nipissing District, Ont. (C) G. Thorn 4 Oct 1987 /L. Hutchison RGT871004/04 [=TRTC RGT871004/04]. Mycorrhizae.

Hymenopsis typhae (Fuckel) Sacc.

10290 from floating mats of *Typha latifolia* in a beaver pond eastern border of Elk Island National Park, Alta. A. Smreciu (RAM-6-AS3) Nov 1999 /R.S. Currah RAM-6-AS3. Culture conditions: gelatinolytic, cellulolytic, lignolytic, utilizes starch and tannic acid // biodeteriogen/biodegradation: decomposition of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).

Hymenoscyphus ericae see ***Rhizoscyphus ericae***

Hymenoscyphus monotropae see ***Rhizoscyphus monotropae***

Hyphoderma setigerum (Fries) Donk (syn. *Peniophora setigera*, *Peniophora aspera*)

8186 *Populus balsamifera* v. *trichocarpa* British Columbia Jul 1949 /S. Davies FC-140 [=NOF 153]. Biodeteriogen/biodegradation: white rot.

Hyphodiscus hymeniphilus see ***Catenulifera rhodogena***

Hypholoma capnoides (Fr.:Fr.) Kummer

5885 *Pinus contorta* forest Rocky Clearwater Forest, Alta. (C) S.P. Abbott 20 Aug 1987 /C) S.P. Abbott.

Hypholoma fasciculare (Huds.) Fr.

3772 ex wood *Fagus sylvatica* H. Wollenweber /CBS 141.24.

Hyphopichia burtonii (Boidin, Pignal, Lehoudey, Vey & Abadie) Arx & Van der Walt (syn. *Pichia burtonii*)

1945 gizzard of chicken /H. Wallace 63-118.

2511 swab, perforated otitis media, male 10 mo Edmonton, Alta. J.W. Carmichael 29 Jun 1965 /J.W. Carmichael. Molecular systematics: >99% ITS similarity with *Pichia burtonii* AB158652 (IFO10837) // culture conditions: colony moist, white powdery (fide UAMH).

2713 sputum J.W. Carmichael 3 Mar 1967 /J.W. Carmichael.

6104 J. Harris BY8-595.

6483 (*T. Pichia burtonii*) pollen /CBS 2352 [=ATCC 13169 =NRRL Y-1933] heterothallic.

6781 creosote-treated southern pine pole Chester, NJ C.J.K. Wang /C.J.K. Wang P-844 [=ATCC 66689]. Benomyl: sensitive.

7138 sputum ex male 31 yr San Antonio, Texas Oct 1991 /M. Kemna M105-92. Cycloheximide: sensitive // thermotolerant: grows @ 37C.

7596 bronchial wash, female Massachusetts Lahey Clinic Medical Center /M.G. Rinaldi UTHSC 94-57.

9009 repeatedly isolated from peritoneal dialysis fluid New Zealand D. Parr /D. Parr MD 7244.

10117 cuticle, coffee berry borer (*Hypothenemus hampei*) Rosario Izapa, Chiapas, Mexico J. Perez 27 Apr 2001 /F. Vega RI-CU R24-22.

10118 feces, coffee berry borer (*Hypothenemus hampei*) Rosario Izapa, Chiapas, Mexico J. Perez 4 May 2001 /F. Vega RI-HE R1-1.

10526 abscess of veiled lizard from local pet store; histopathology hyphal elements not noted Charlottetown, PEI L. Lund 12-12-04 /R. Rennie MY 7971. Thermotolerant: grows @ 35 C // cycloheximide: sensitive (MYC).

Hyphospora agavaciensis A.W. Ramaley (morph *Comminutispora agavaciensis*)

10395 (*T. Hyphospora agavaciensis*) dead leaves of *Dasyliroia leiophyllum* Big Band National Park, Brewster Co., TX A.W. Ramaley (9445) 25-10-94 /A. Tsuneda CBS 619.95 [=CBS 619.95 =ATCC 96605 =UC 1475184 =BPI 802959 (isotype)]. Systematics/taxonomy: description (Ramaley, Mycologia 88: 132-136, 1996) // pigment: yellow on OAT // biodiversity: endoconidial black meristematic fungus (BMF).

Hyphozyma lignicola Hutchison, Sigler & Hiratsuka

7002 (*T. Hyphozyma lignicola*) ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (CF-90-1c-20) 28 Sep 1990 /L. Hutchison NOF 1570 [=CBS 325.93 =DAOM 194284 =ATCC 96294 =GenBank AJ496239 SSU =GenBank AF353595 LSU]. Trehalose esters (Ayer & Miao, J. Nat. Prod. 56:2046-2052, 1993). Pigment: brown // odor: yeasty // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993) // molecular systematics: phylogeny of *Hyphozyma* species and other ascomycetes (Lopandic K, Molnar O, Suzuki M, Pinsker W, Prillinger H, Mycological Progress 4:205-214, 2005); groups with *Hyphozyma sanguinea*

- and apart from *Hyphozyma variabilis* (Lopandic K, Molnar O, Suzuki M, Pinsker W, Prillinger H, Mycological Progress 4:205-214, 2005).
- 7119 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-2-1b) 28 Sep 1990 /L. Hutchison NOF 1572. Pigment: brown // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993).
- 7120 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-3-1i) 28 Sep 1990 /L. Hutchison NOF 1574. Pigment: brown // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993).
- 7121 ex *Populus tremuloides* (aspen poplar) Blue Ridge, Alta. P. Crane (BG-89-2-25a) Jul 1989 /L. Hutchison NOF 1831. Pigment: brown // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993).
- 7228 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (CF-90-K-20b) 28 Sep 1990 /L. Hutchison NOF 1571. Pigment: brown // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993).
- 7229 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-2-1c) 28 Sep 1990 /L. Hutchison NOF 1573. Pigment: brown // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993).
- 7230 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-3-1ii) 28 Sep 1990 /L. Hutchison NOF 1575. Pigment: brown // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993).
- 7231 ex *Populus tremuloides* (aspen poplar) Fort Nelson, B.C. P. Crane 22 Jul 1992 /L. Hutchison NOF 2015. Pigment: brown // culture conditions: physiological reactions (Hutchison et al, Mycol. Res. 97:1409-1415, 1993).
- Hyphozyma roseonigra*** De Hoog & Th. Smith
7240 (T *Hyphozyma roseonigra*) ex soil (This strain has been cited in a US or other patent & should not be used to infringe patent claims) central New Jersey M. Farbood /CBS 514.83. Mesophilic: NG @ 30C // molecular systematics: groups with members of the Helotiales; BLAST match 98% SSU similarity with AY544706 *Neofabraea malicorticis* (fide UAMH).
- Hyphozyma sanguinea*** (Ramirez ex Ramirez) de Hoog & Th. Smith (syn. *Sporothrix sanguinea*)
6100 (T *Sporotrichum sanguineum*) tannin of *Quercus* & *Castanea* Lyon, France C. Ramirez May 1947 /CBS 406.52 [=GenBank AJ496238]. Molecular systematics: phylogeny of *Hyphozyma* species and other ascomycetes (Lopandic K, Molnar O, Suzuki M, Pinsker W, Prillinger H, Mycological Progress 4:205-214, 2005); groups with *Hyphozyma lignicola* and apart from *Hyphozyma variabilis* (Lopandic K, Molnar O, Suzuki M, Pinsker W, Prillinger H, Mycological Progress 4:205-214, 2005).
- Hyphozyma variabilis* var. *odora*** de Hoog & Th. Smith
707 stool ex baby Edmonton, Alta. J.W. Carmichael 1960 /J.W. Carmichael. Odor: like roses.
6099 (T *Hyphozyma variabilis* v. *odora*) margarine Unilever Research Vlaarding, Netherlands S. de Hoog 1980 /CBS 328.80 [=GenBank AJ496240]. Molecular systematics: phylogeny of *Hyphozyma* species and other ascomycetes (Lopandic K, Molnar O, Suzuki M, Pinsker W, Prillinger H, Mycological Progress 4:205-214, 2005).
- Hyphozyma variabilis* var. *variabilis*** de Hoog & Th. Smith
369 water D Provincial Laboratory, Edmonton, Alta. J.W. Carmichael 1955. Culture conditions: colonies pink, yeast-like // mesophilic: NG @ 35C.
370 water C Provincial Laboratory, Edmonton, Alta. J.W. Carmichael 1955. Culture conditions: colonies pink, yeast-like // mesophilic: NG @ 35C // molecular systematics: 100% ITS similarity with sequence from UAMH 6101 (ex-type); BLAST match 100% SSU similarity with AJ496241 (ex-type CBS 523.79) *Hyphozyma variabilis* v. *variabilis*.
- 6049 water St. Lawrence River Kingston, Ont. K. Millar 11 Feb 1988 /K. Millar 852.
6050 water St. Lawrence River Quebec City K. Millar Jul 1987 /K. Millar 8744.
6101 (T *Hyphozyma variabilis* v. *variabilis*) minced meat in fridge Rheni Trajecti, Neth. D. Mossel 1979 /CBS 523.79 [=GenBank AJ496241 =GenBank AF353596]. Molecular systematics: phylogeny of *Hyphozyma* species and other ascomycetes (Lopandic K, Molnar O, Suzuki M, Pinsker W, Prillinger H, Mycological Progress 4:205-214, 2005).
- Hypochnicium vellereum*** (Ellis & Cragin) Parmasto (syn. *Corticium vellereum*)
1246 M.K. Nobles /K. Nobles N 11 [=DAOM 31242].
8143 *Populus balsamifera* Alberta M.K. Nobles Jul 1958 /S. Davies FC-092 [=NOF 486]. Biodeteriogen/biodegradation: brown rot.
- Hypocrea jecorina*** Berk. & Broome (morph *Trichoderma reesei*)
10673 sponge *Terpios zeteki* (yellow-brown-black specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 8C. Molecular systematics: BLAST match 99% ITS similarity with *Hypocrea jecorina* and *Trichoderma reesei*.
- Hypocrea jecorina* see *Trichoderma reesei*
- Hypocrea koningii* see *Trichoderma koningii*
- Hypocrea lutea* see *Gliocladium viride*
- Hypocrea schweinitzii* see *Trichoderma citrinoviride*
- Hypomyces albidus* see *Cladobotryum sphaerocephalum*
- Hypomyces aurantius*** (Pers.) Tulasne (morph *Cladobotryum varium*)
1444 moss Monk's Wood, Hunts., U.K. E. Milne S. Redhead 1960 /DAOM 88679 [=IMI 83240].
3834 leaves & twigs ex rotting log Bell's Corner, Ont. J.W. Carmichael 10 May 1975 /J.W. Carmichael.
6405 ex mushroom basidiocarp Peel Co., Ont. (C) J. Kerr & B. Friel Oct 1988 /L. Hutchison. Hyperparasite.
7403 ex parasitized fruiting body of *Pleurotus ostreatus* on *Populus* sp. Poplar Creek Natural Area near Breton, Alta. S.P. Abbott (SA 819) 11 Jul 1993 /S.P. Abbott (SA 819). Pigment: brown // hyperparasite.
- Hypomyces boletiphagus*** Rogerson & Samuels (morph *Sepedonium* an. *Hypomyces boletiphagus*)
6602 (T *Hypomyces boletiphagus*) ex Boletaceae Henderson Co. S of Tuxedo, Green Cove, NC C. Rogerson 20-Sep-1980 /C. Rogerson CTR 80-103m [=NY CTR 80-103]. Pigment: violet // hyperparasite // culture conditions: ascospores produced.
6603 (T *Hypomyces boletiphagus*) ex Boletaceae Henderson Co. S of Tuxedo, Green Cove, NC C. Rogerson 20 Sep 1980 /C. Rogerson CTR 80-103ss4 [=NY CTR 80-103]. Pigment: yellow // hyperparasite // culture conditions: ascospores not produced.
6604 ex Boletaceae nr Canaan Valley State Park, Tucker Co., W VA M. Bates 3 Aug 1985 /C. Rogerson CTR 85-55ss1 [=NY CTR 85-55]. Pigment: violet // hyperparasite // culture conditions: ascospores produced.
6612 on *Strobilomyces floccopus* Pisgah Natl. Forest, N of Brevard, Transylvania Co., NC R. Petersen 29 Sep 1988 /C. Rogerson

- CTR 88-54m [=NY CTR 88-54]. Pigment: violet // hyperparasite // culture conditions: ascospores not produced.
 6618 on Strobilomyces floccopus Pisgah Natl. Forest, N of Brevard, Transylvania Co., NC R. Peterson 29 Sep 1988 /C. Rogerson CTR 88-54ss1 [=NY CTR 88-54]. Pigment: violet // hyperparasite // culture conditions: ascospores not produced.

Hypomyces broomeanus Tulasne

- 1412 ex Fomes annosus Oundale, Vale of Pickering, Yorks., U.K. W.G. Bramley 1957 /DAOM 88681 [=IMI 71367]. Hyperparasite.

Hypomyces chlorinigenus Rogerson & Samuels (morph *Sepedonium chlorinum*)

- 6605 on Boletaceae U. Georgia Botanical Garden, Clarke Co., Georgia C. Rogerson 25 Aug 1978 /C. Rogerson CTR 78-68ss1 [=NY CTR 78-68]. Pigment: yellow // hyperparasite.
 6606 on Boletaceae U. Georgia Botanical Garden, Clarke Co., Georgia C. Rogerson 25 Aug 1978 /C. Rogerson CTR 78-68m [=NY CTR 78-68]. Pigment: yellow // hyperparasite.
 6613 (T *Hypomyces chlorinigenus*) on Boletaceae Honey Island Swamp, St. Tammany Parish, Louisiana C. Rogerson 6 Jun 1976 /C. Rogerson CTR 76-26m [=UAMH 6619 =NY CTR 76-26]. Pigment: yellow // hyperparasite.
 6614 on *Boletus aestivalis* U. de Liege au Sart-Tilman campus, Prov. Liege, Belgium V. (266) Demoulin 5 Aug 1976 /C. Rogerson CTR 76-80ss1 [=NY CTR 76-80]. Pigment: yellow // hyperparasite.
 6615 on Boletaceae Alachua Co., Florida C. Rogerson 27 Aug 1978 /C. Rogerson CTR 77-116ss1 [=NY CTR 77-116]. Pigment: yellow // hyperparasite.
 6619 (T *Hypomyces chlorinigenus*) on Boletaceae Honey Island Swamp, St. Tammany Parish, Louisiana C. Rogerson 6 Jun 1976 /C. Rogerson CTR 76-26ss3 [=NY CTR 76-26 =UAMH 6613]. Hyperparasite.

Hypomyces chrysospermus Tulasne (morph *Sepedonium mycophilum*)

- 847 fleshy fungi Atlanta, GA J.W. Carmichael Sep 1960 /J.W. Carmichael. Hyperparasite.
 3084 *Boletus* sp. Guelph, Ont. G.L. Barron 1964 /IMI 109891. Cellulolytic // hyperparasite.
 4803 ex *Leccinum aurantiacum* Devonian Bot. Garden, Alta. L. Sigler Jul 1983 /L. Sigler. Pigment: orange // hyperparasite.
 5419 ex litter Rocky-Clearwater Forest, Alta. UAMH Sep 1986 /UAMH.
 6607 on Boletaceae Mt. Fuji, Japan G. Samuels 5 Sep 1983 /C. Rogerson GJS 83-285ss1 [=NY GJS 83-285 =PDD 44207]. Hyperparasite.
 6616 on Boletaceae Brown's Tract, nr Raquette Lake, NY S. Stein 7 Sep 1986 /C. Rogerson GJS 86-536ss5 [=NY GJS 86-536]. Hyperparasite.
 7422 ex parasitized *Leccinum insigne* under *Populus tremuloides* Spruce Grove, Alta. S.P. Abbott (SA 888) 19 Aug 1993 /S.P. Abbott (SA 888). Pigment: brown // hyperparasite.

Hypomyces microspermus Rogerson & Samuels (morph *Sepedonium mycophilum pro parte*)

- 6608 (T) on Boletaceae Berkshire Co., Massachusetts T. Baroni 16 Aug 1986 /C. Rogerson GJS 86-518ss1 [=NY GJS 86-518]. Hyperparasite.

Hypomyces mycophilus Rogerson & Samuels (morph *Cladobotryum polypori*)

- 3371 (T *Dactylaria mycophila*) ex *Hirneola polytricha* Nagaoa, Japan K. Tubaki 1955 /J. Sumner [=ATCC 16163 =IFO 6785 =IMI 158792 =MUCL 9429 =CBS 175.56].

Hypomyces rosellus (Alb. & Schw. per Fr.) Tulasne (morph *Cladobotryum dendroides*)

- 1411 ex *Stereum* sp. U.K. 1941 /DAOM 88680 [=IMI 89284 =LSHB BB.178]. Hyperparasite.
 4329 commercial mushrooms Sherwood Park, Alta. V. Mann Sep 1980 /V. Mann. Cellulolytic: slightly cellulolytic // hyperparasite.

***Hypomyces* sp.**

- 7405 ex parasitized fruiting body of *Leccinum* under *Populus* sp. Poplar Creek Natural Area near Breton, Alta. S.P. Abbott (SA 820) 11 Jul 1993 /S.P. Abbott (SA 820). Hyperparasite: on *Leccinum*.

Hypomyces tremellicola (Ellis & Everhart) Rogerson (morph *Verticillium an. Hypomyces tremellicola*)

- 7404 ex parasitized fruiting body of *Crepidotus mollis* on *Populus* log Elk Island National Park, Alta. S.P. Abbott (SA 818) 24 Jul 1993 /S.P. Abbott (SA 818). Pigment: grey // hyperparasite: on *Crepidotus*.

Hypomyces tulasneanus Plowright

- 534 pasture soil Edmonton, Alta. J.W. Carmichael Jul 1956 /J.W. Carmichael.
 538 soil sheep corral Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 777 garden soil Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael.
 4252 hyperparasite ex culture *Trichophyton ajelloi* J.W. Carmichael 1979 /J.W. Carmichael. Hyperparasite.

Hypoxylon croceum J.H. Miller

- 2134 Lake Ozark, Missouri P. Martin Sep 1962 /P. Martin 1178.
 6301 blood Austin, TX J. Harris /J. Harris BY9-199. Pigment: brown.
 6302 bronchial washings Austin, TX J. Harris /J. Harris BY8-1871. Pigment: brown.

Hypoxylon dieckmannii Theiss.

- 5520 maxillary sinus (repeatedly), female 17 yrs Philadelphia /CDC 86-032555.

Hypoxylon fuscum (Persoon ex Fries) Fries

- 1648 stromata on wood Nature's Cape, W. Cape, S. Africa P. Martin 1962 /P. Martin 1002. Cellulolytic.
 6741 endophyte ex surface-disinfested cranberry leaves (*Vaccinium macrocarpon* cultivar Searless) Wood Co., WI S. Jeffers 1988 /S. Jeffers L-79. Pigment: brown.

Hypoxylon haematostroma Mont.

- 1680 San Blas, Mexico /P. Martin 1503. Cellulolytic.
 6740 endophyte ex surface-disinfested cranberry leaves (*Vaccinium macrocarpon* cultivar Searless) Wood Co., WI S. Jeffers 1987 /S. Jeffers L-X-7. Pigment: brown.

Hypoxylon investiens (Schwein.) M.A. Curtis

- 2121 Columbia, Missouri P. Martin Aug 1962 /P. Martin 1100. Cellulolytic.

Hypoxylon lenormandii Berk. & M.A. Curtis

- 2122 Columbia, Missouri P. Martin Aug 1962 /P. Martin 1107. Cellulolytic.

Hypoxylon limoniisporum see ***Rosellinia limoniispora******Hypoxylon rubiginosum*** (Pers. :Fr.) Fr.

- 1647 stromata on wood Mazatlan, Mexico P. Martin 1962 /P. Martin 913. Cellulolytic.

- 2135 Lake Ozark, Missouri P. Martin Sep 1962 /P. Martin 1177. Cellulolytic.
 2136 Lake Ozark, Missouri P. Martin Sep 1962 /P. Martin 1169.1. Cellulolytic.

Hypoxylon serpens see *Nemania serpens**Hypoxylon* sp.

- 9676 nail, male 40 yr Alberta 29 Aug 1999 /R. Rennie MY 6445. Cycloheximide: sensitive // pigment: reddish-brown // mesophilic: NG @ 37C.
 9677 blood, male Texas S. Lock 1999 /Texas Dept. of Health BY 2857. Thermotolerant: grows @ 37C // pigment: dark brown.

Hypsizygous marmoreus (Pk.) Bigelow

- 7362 ex fruiting body at base of Populus Devon, Alta. S.P. Abbott (SA 703) 16 Jul 1993 /S.P. Abbott (SA 703).

Hysterangium separabile Zeller

- 6298 Picea engelmannii & Populus deltoides woods Crow-Bow Forest, Alta. S.P. Abbott 16 Aug 1988 /S.P. Abbott. Mycorrhizae.

Inifatiella nectandrae Castaneda Ruiz

- 5410 fallen leaf of Nectandra coriacea Camaguey, Cuba R.F. Castaneda 6 Mar 1985 /G.R. Arnold INIFAT C85/24 [=CBS 402.86].

Inonotus obliquus (Pers. ex Fr.) Pilat

- 7504 ex tissue explant from fruiting body / gall on Betula papyrifera North Saskatchewan River Valley near Genesee, Alta S.P. Abbott (SA 936) 4 Nov 1993.

Inonotus sp.

- 11233 ex fluid from left thigh mass, human Memorial Sloan-Kettering Cancer Center, Manhattan, NY 2009 /D.A. Sutton UTHSC 09-2966 [=UTHSC R-4465]. Molecular systematics: member of the Phellinus tropicalis-Phellinus undulatus-Inonotus marginatus clade (fide K. Nakasone, Cener for Center for Forest Mycology Research, Forest Products Lab., USDA) // culture conditions: no clamps // thermotolerant: grows better @ 30C than @ 25C and 35C.
 11403 ex cornea; histopathology + for hyphae /D.A. Sutton UTHSC 10-2207. Human/animal pathogen: mycotic keratitis // molecular systematics: Close to Inonotus andersonii by sequencing but distinct (fide K. Nakasone, Cener for Center for Forest Mycology Research, Forest Products Lab., USDA) // thermotolerant: grows well at 35C but slower at 40C (2+ growth) (fide D.A. Sutton).

Inonotus tomentosus (Fries) Teng (syn. *Onnia tomentosa*, *Polyporus tomentosus*, *Coltricia tomentosa*)

- 5564 mixed Picea glauca, P. mariana woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /.
 5582 mixed Picea mariana, P. glauca, Populus & Pinus contorta woods Rocky-Clearwater Forest, Alta. 20 Aug 1986. Mycorrhizae.
 8189 Picea glauca (white spruce) Alberta D.E. Etheridge 1952 /S. Davies FC-139 [=NOF 312]. Biodeteriogen/biodegradation: brown rot.
 8963 sporocarp solitary under spruce Bragg Creek, Alta. R.M. Danielson 13 Sep 1981 /R.M. Danielson RMD 3132. Pigment: brown.

Inonotus tropicalis (M. Larsen & Lombard) T. Wagner & M. Fischer (syn. *Phellinus tropicalis*)

- 10376 back wound ex patient with chronic granulomatous disease Dallas, TX /M.G. Rinaldi UTHSC 03-2972 [=UAMH 10436 =UAMH 10437 =GenBank AY599487 (ITS)]. Culture

conditions: produces setae // thermotolerant: grows better @ 35C than @ 30C // human/animal pathogen: disseminated infection in a patient with chronic granulomatous disease (Sutton DA, Thompson EH, Rinaldi MG, Iwen PC, Nakasone KK et al. J. Clin. Microbiol. 43:982-987, 2005; Davis CM, Noroski LM, Dishop MK, Sutton DA, Braverman RM, Paul ME, Rosenblatt HM, Pediatr Infect Dis J 26:655-656, 2007).

- 10436 ex back abscess, repeat isolation from patient with chronic granulomatous disease; same patient as UAMH 10376, 10437 Dallas, TX 2-Jul-01 /M.G. Rinaldi UTHSC 01-1419 [=GenBank AY598828 =GenBank AY598826 =UAMH 10376 =UAMH 10437]. Thermotolerant: grows better @ 35C than @ 30C // human/animal pathogen: disseminated infection in a patient with chronic granulomatous disease (Sutton DA, Thompson EH, Rinaldi MG, Iwen PC, Nakasone KK et al. J. Clin. Microbiol. 43:982-987, 2005).
 10437 back lesion ex patient with chronic granulomatous disease; same patient as UAMH 10376, 10436 Dallas, TX 31-7-01 /M.G. Rinaldi UTHSC 01-0652 [=GenBank AY598829 =GenBank AY598832 =UAMH 10376 =UAMH 10436]. Thermotolerant: grows better @ 35C than @ 30C // human/animal pathogen: disseminated infection in a patient with chronic granulomatous disease (Sutton DA, Thompson EH, Rinaldi MG, Iwen PC, Nakasone KK et al. J. Clin. Microbiol. 43:982-987, 2005).

Iodophanus testaceus see *Oedocephalum glomerulosum**Isaria felina* see *Beauveria felina**Isthmologispora ampulliformis* (Tubaki) de Hoog & Hennebert (syn. *Dactylaria ampulliformis*)

- 3372 ex Cocos nucifera J. Hattori Botanical Lab. /J. Sumner [=ATCC 16166 =CBS 223.59].

Itersoniella perplexans Derx

- 1457 parsnip New Brunswick K.N. Graham 1959 /DAOM 64278.

Jahnoporus hirtus (Quel.) Nuss

- 5941 on dead root of living Picea sp. shore of Scots Bay, Kings Co., N.S. G. Thorn 6 Sep 1986 /L. Hutchison RGT 860906/08 [=TRTC RGT 860906/086].

Junghuhnia collabens (Fries) Ryvarden (syn. *Poria rixosa*)

- 8264 Jack pine (Pinus banksiana) Ontario 21 Jul 1947 /S. Davies FC-154 [=NOF 176]. Biodeteriogen/biodegradation: white rot.

Kathistes analemoides Malloch & Blackwell

- 6555 (T Kathistes analemoides) fresh moose dung in moist chamber Eos Lake, Nipissing Distr., Algonquin Prov. Pk., Ont. (C) D. Malloch & M. Blackwell 24 Jun 1988 /R.C. Summerbell BB 757 [=TRTC 51147 (holotype) =GenBank AF313767 (SSU)]. Culture conditions: urease +.

Kathistes calyculata Malloch & Blackwell

- 6114 moose dung in hardwood forest Eos Lake, Nipissing Distr., Algonquin Prov. Pk., Ont. (C) D. Malloch & M. Blackwell 24 Jun 1988 /D. Malloch [=TRTC 51146 =GenBank AF313768 (SSU)]. Culture conditions: urease +.

Keratinomyces ceretanicus Punsola & Guarro

- 5384 (T Keratinomyces ceretanicus) forest soil Cerdanya, Catalunya, Spain J. Guarro Sep 1985 /J. Guarro FFBA 328 [=ATCC 58594 =ATCC 66969]. Psychrophilic: opt. 18C (Cano & Sigler, J. Med. Vet. Mycol. 30:327-331, 1992) // chemotaxonomy: cell wall compounds (Guarro et al., Mycopathologia 122:69-77, 1993).
 6412 soil Valdivia, Chile J. Cano Nov 1988 /J. Guarro FMR 3063. Psychrophilic: opt. 18C (Cano & Sigler, J. Med. Vet. Mycol.

- 30:327-331, 1992) // molecular systematics: mtDNA restriction profiles separate *K. ceretanicus* from other dermatophytes (Guillamon et al., *Ant. v. Leeuw.* 69:223-227, 1996).
- 6414 soil Valdivia, Chile J. Cano Nov 1988 /J. Guarro [=ATCC 66968]. Psychrophilic: opt. 18C (Cano & Sigler, *J. Med. Vet. Mycol.* 30:327-331, 1992).
- Keratinophyton durum* see *Aphanoascus durum*
- Keratinophyton terreum* see *Aphanoascus terreus*
- Kernia bartlettii* see *Lophotrichus bartlettii*
- Kernia bifurcotricha* see *Lophotrichus bartlettii*
- Kernia brachytricha* see *Kernia nitida*
- Kernia hippocrepida*** Malloch & Cain
- 6796 house plant soil /R.C. Summerbell W 1916.
- 9254 (T *Kernia hippocrepida*) dung of porcupine (*Erythron dorsatum*) east of Brockville, Leeds Co., Ontario J. Krug 5 Sep 1965 /CBS 774.70 [=IMI 151078 =ATCC 22154 =TRTC 43764].
- 9255 maize-field soil Ontario G.C. Bhatt /CBS 389.69. Benomyl: resistant (2 ppm).
- Kernia hyalina*** Malloch & Cain
- 8393 horse dung Aurora, Ontario J. Scott (JS237) 10-Feb-1994 /D. Malloch.
- 9129 (T *Kernia hyalina*) dung of cow Potter, Cheyenne Co., Nebraska R. Cain 16 Aug 1964 /CBS 766.70 [=TRTC 45422 =ATCC 22155 =IMI 151079 =CBS 766.70 =TRTC 45422 (holotype)]. Benomyl: resistant (2 ppm).
- Kernia macrospora* see *Lophotrichus macrosporus*
- Kernia nitida*** (Sacc.) Nieuwland (syn. *Kernia brachytricha*)
- 3060 (T *Kernia brachytricha*) /R.K. Benjamin RSA 207 [=ATCC 11223 =CBS 281.52].
- 8396 bird/mouse dung mix Mount Pleasant, Brant Co., Ontario J. Scott (JS 105) 13-Feb-1991 /D. Malloch.
- 8397 sheep dung near Pink Lake State Park, Victoria, Australia J. Scott (JS 276) 9-Feb-1995 /D. Malloch.
- 9044 camel dung on sandy soil under shrubs (*Rhamnus sintenisii*) Aktau, Mangyschlag Peninsula, Kazakhstan M. Schnittler (6922b) 30 Apr 1995 /J.C. Krug TRTC 52071. Benomyl: resistant (2 ppm) // cycloheximide: sensitive (MYC).
- 9119 NRRL 1298. Benomyl: resistant (2 ppm).
- 9120 cow dung Little Lake, California G.F. Orr /NRRL A-7642. Benomyl: resistant (2 ppm).
- 9121 (T *Kernia geniculotricha*) rabbit dung /NRRL A-24186 [=IMI 133118 =ATCC 18529 =CBS 599.68]. Benomyl: resistant (2 ppm).
- Kernia ovata*** (Booth) Malloch and Cain
- 8859 (T *Thielavia ovata*) calyx of teak (*Tectona grandis*) seed Jamaica J.A.N. Burra July 1962 /T. Ito IFO 8792 [=IMI 95673]. Cycloheximide: sensitive (no growth MYC).
- Kernia pachypleura*** Malloch and Cain (morph *Scopulariopsis an. Kernia pachypleura*)
- 88 sputum from case of presumptive pulmonary infection Arizona /O.A. Plunkett [=Bobrov 3]. Mesophilic: NG @ 35C // culture conditions: not osmophilic; colony dry, adherent; degenerate, few conidia but no ascospores produced.
- 3597 from Russia as *C. immitis* /CDC 40-73-48556. Culture conditions: grows better @ 25C than at 30C (fide UAMH 2010); degenerate, few conidia and ascospores but no ascospores produced // molecular systematics: Blast match 100% ITS similarity to *Kernia pachypleura* DQ318208 (UM 235 = UAMH 9790) (fide UAMH 2011).
- 8857 wood panel Japan K. Tubaki (Kita 2A-1-3) 1973 /T. Ito IFO 9864. Cycloheximide: sensitive (no growth MYC).
- 8858 soil of paddy field Japan T. Yokoyama (WIII-4-5-25) 1977 /T. Ito IFO 30413. Cycloheximide: sensitive.
- 9256 dung of goat Venezuela J. Krug /CBS 410.78. Benomyl: resistant (2 ppm).
- 9282 (T *Kernia pachypleura*) dung of elephant Uganda D. Malloch /CBS 776.70 [=ATCC 22142 =IMI 151091 =TRTC 662166g]. Benomyl: resistant (2 ppm).
- 9790 beach-ridge soil University of Manitoba Field Station, Delta Marsh, MB J.W. Pearn (R3-I42-11) /J. Reid UM 253 [=GenBank AF13966 =GenBank AF13967 =WIN(M) 253 =GenBank DQ318208 ITS]. Biodiversity: beach ridge and marsh soil in Manitoba (Pearn JW, MSc thesis, U of Manitoba, 1981) // molecular systematics: outgroup for *Ceratocystis norvegica* phylogeny (Reid J, Iranpour M, Rudski SM, Loewen PC, Hausner G, *Botany Botany* 88:971-983, 2010); relationships between the genera *Ceratocystis* & *Ophiostoma* (Hausner, Reid & Klassen, *Mycol. Res.* 97:625-633, 1993); relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, *Can. J. Bot.* 78:903-916, 2000).
- 9791 beach-ridge soil University of Manitoba Field Station, Delta Marsh, MB J.W. Pearn (R1-IS1-9) /J. Reid UM 252. Biodiversity: beach ridge and marsh soil in Manitoba (Pearn JW, MSc thesis, U of Manitoba, 1981).
- Kernia peruviana*** Udagawa & Furuya (morph *Scopulariopsis an. Kernia peruviana*)
- 6494 (T) urea-treated soil Tamshiyacu, Iquitos, Peru (C) T. Akiyama 9 Jul 1987 /S.-I. Udagawa NIH 2985. Culture conditions: oatmeal agar amended with urea (Udagawa & Furuya, *Mycotaxon* 33:291-301, 1989).
- Kernia retardata*** Udagawa & Muroi (morph *Scopulariopsis an. Kernia retardata*)
- 1327 soil ex donkey paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael. Cellulolytic.
- 1385 soil ex Cougar pen Alberta Game Farm, Edmonton J.W. Carmichael 18 Jul 1962 /J.W. Carmichael. Cellulolytic.
- 9026 leaves of aspen (*Populus tremuloides*) on lawn with snow mold Devonian Botanic Garden near Devon, Alta S.P. Abbott (SA-M182) 21-Apr-1997 /S.P. Abbott (SA-M182) [=IMI 377815 =IFO 33037].
- 9027 dung of skunk (*Mephitis mephitis*) on ground in farm yard 10 km south of Leduc, Alta S.P. Abbott (SA-M184) 10 Jun 1997 /S.P. Abbott (SA-M184).
- 9134 (T *Kernia retardata*) rice (*Oryza sativa*) field soil Nishinasuno-machi, Nasu-gun, Tochigi, Japan T. Muroi 28 May 1978 /CBS 707.82 [=NHL 2879]. Benomyl: resistant (2 ppm).
- 9420 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-02-S5A) 28 Sep 1998 /R.S. Currah EI-02-S5A. Biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9454 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-01-S6H) 9 Feb 1999 /R.S. Currah EI-01-S6H. Biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9455 leaf litter under hazelnut (*Corylus cornuta*) and aspen (*Populus tremuloides*) Elk Island National Park, Alta S.P. Abbott (SA-M281) 7 Jan 1999 /S.P. Abbott (SA-M281).
- 9500 decayed wood (stage 3 decay), white spruce log (*Picea glauca*), 30 year post-fire site Slave Lake, Alta T. Lumley

(F681-01-S3E) 19 Feb 1999 /R.S. Currah F681-01-S3E.
Biodiversity: rotting wood (Lumley et al., Mycotaxon
74:395-414, 2000).

- 9613 living moss (*Sphagnum fuscum*) in bog dominated by black spruce (*Picea mariana*), moss (*Sphagnum fuscum*) & heather (*Ericaceae*) nr Perryvale, AB (54D28'N, 113D16'W) M.N. Thormann (MNT 64) 01 Sep 1997 /R.S. Currah MNT 64. Biodeteriogen/biodegradation: enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001).

Kernia spirotricha see *Emilmuelleria spirotricha*

Khuskia oryzae see *Nigrospora oryzae*

Kluyveromyces marxianus (Hansen) van der Walt (morph *Candida kefyi*)

- 5519 clinical isolate /H. Congly 1532M [=ATCC 46764]. Assay of ketoconazole (Antimicrob. Agents Chemo. 20:59-62, 1981).

Kluyveromyces marxianus see *Candida kefyi*

Kluyveromyces wickerhamii (Phaff, M.W. Mill. & Shifrine) Van der Walt

- 1739 (T *Kluyveromyces wickerhamii*) intestinal tract of fruit fly, *Drosophila montana* Sierra Nevada, USA /R.J. Bandoni B12 [=IFO 1675 =CBS 2745 =DBVPG 6077 =ATCC 24178 =NCYC 908 =NRRL Y-8286 =MUCL 31248 =Phaff strain F-394A =VKM Y-1297 =NBRC 1675]. Systematics/taxonomy: strain received as IFO 1675 under the name *Taphrina cerasi* // application: produces pectin-releasing enzyme PPase-W (fide ATCC).

Knufia endospora Tsuneda & Currah

- 10396 (T *Knufia endospora*) twig of trembling aspen (*Populus tremuloides*) Landsdowne Park, Edmonton, Alta. A. Tsuneda 13-11-02 /A. Tsuneda. Systematics/taxonomy: meristematic fungi (Tsuneda A, Currah RS, Rep. Tottori Mycol. Inst. 42:1-9, 2004).

Kraurogymnocarpa trochleospora (Kuehn & G.F. Orr)

Udagawa & Uchiy. (syn. *Arachniotus trochleosporus*, *Pseudoarachniotus trochleosporus*)

- 3476 orange mutant ex UAMH 3416 UAMH 1972 / .
10101 (T *Pseudoarachniotus trochleosporus*) sandy clay Dugway, Tooele Co., Utah G.F. Orr 1964 /S.W. Peterson NRRL 3715 [=O-3148 =ATCC 18900 =DPG-71 =CBS 591.71 =NRRL A-16936 =UAMH 3416 =GenBank KF477238 ITS =GenBank AY177295 SSU =GenBank NR_111882.1 =GenBank AB075344 D1D2 =GenBank AB075344 LSU]. Pigment: yellow // molecular systematics: SSU rDNA sequence comparison with *Arachniotus ruber* (Sigler L, Hambleton S, Pare JA, Stud. Mycol. 47:123-129, 2002); phylogeny of *Nannizziopsis* and related onygenalean fungi (Sigler L, Hambleton S, Pare JA, J Clin Microbiol Aug 7 (Epub ahead of print), 2013).

Kretzschmaria sp.

- 10913 ex gametophytes of the moss *Polytrichum alpinum* on exposed soil in the understory of mixed *Betula*, *Acer* & *Fagus* forest Lac Beauport, Que. M. Davey 2008 /R.S. Currah Psp1-O. Biodiversity: from boreal bryophyte species (Davey ML, Diversity, systematics and ecology of bryophilous fungi, University of Alberta Ph.D. thesis, 2009) // culture conditions: non sporulating.

Kuehneromyces mutabilis (Schff.:Fr.) Sing. & Smith (syn. *Pholiota mutabilis*)

- 8006 spruce Germany H. Butin (P399) ex Foge /S. Davies FC-308

[=ATCC 34481]. Edible: mushroom // biodeteriogen/biodegradation: white rot // culture conditions: clamp connections.

Kuehniella racovitzae (Lagarde) Orr (syn. *Apinisia racovitzae*; morph *Chrysosporium an. Kuehniella racovitzae*)

- 3640 soil Wendover, Utah /G.F. Orr O-0182 [=UAMH 3665 =Orr O-1183 =CBS 363.74 =ATCC 26999].
3665 soil Wendover, Utah /G.F. Orr O-1183 [=CBS 373.74 =ATCC 26999 =UAMH 3640 =Orr O-0182].
3767 (T neotype *Kuehniella racovitzae*) lesion ex dog Kansas /G.F. Orr O-3436 [=ATCC 28557 =NRRL 6154 =GenBank AB040696 =NRRL A-11822 =CBS 156.77]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
3768 mouse dung Fruita Colorado /G.F. Orr O-3636 [=ATCC 32468 =CBS 158.77].
3832 sputum Kansas City /G.F. Orr O-3212 [=ATCC 32467 =CBS 157.77].
3838 soil Dugway, Utah /G.F. Orr O-1294 [=ATCC 32466].
6170 garden soil Benicarlo, Castellon, Spain J. Guarro Aug 1985 /J. Guarro FMR 2026 [=ATCC 64722 =CBS 482.88].
9273 left ear swab, female 36 yr, DE+ Ontario 23-Mar-1996 /R.C. Summerbell FR 1010. Odor: pungent.

Kuraishia capsulata (Wickerham) Y. Yamada, K. Maeda & Mikata (syn. *Hansenula capsulata*, *Pichia capsulata*; morph *Candida*)

- 5319 (T *Hansenula capsulata*) ex frass conifer tree shore of Wabatongushi Lake, nr Franz, Ont. L.J. Wickerham /CBS 1993 [=NRRL Y-1842 =GenBank EF568066 ITS =GenBank EF599433 RPB1 =GenBank EU018489 SSU =GenBank EU011585 26S =GenBank EF550408 18S].

Kurtzmanomyces nectairei (Rodrigues de Miranda) Y. Yamada, M. Itoh, Kawasaki, Banno & Nakase

- 6534 rhizosphere soil *Picea mariana* Burt Lake, nr Kirkland Lake, Timiskaming District, Ont. R.C. Summerbell 6 Jun 1982 /R.C. Summerbell RCS-Y727. Culture conditions: nitrate+; no fermentation; NG vitamin free medium (fide R.C. Summerbell).

Laccaria bicolor (R. Maire) Orton

- 5268 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 / . Mycorrhizae: simple sequence repeat (SSR) markers for environmental monitoring of *Laccaria bicolor* (Jany J-L, Bousquet J, Gagne A, Khalsa DP, Mycol Res 110:51-59, 2006).
5269 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 9 Apr 1985 / . Mycorrhizae: simple sequence repeat (SSR) markers for environmental monitoring of *Laccaria bicolor* (Jany J-L, Bousquet J, Gagne A, Khalsa DP, Mycol Res 110:51-59, 2006).
5313 pure culture mycelial inoculum of Larch container seedling FSL Greenhouse, Corvallis Ore. R. Molina 17 Sep 1976 /R. Molina S-238 [=Herb. Trappe 4685]. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002).
5476 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 / . Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002); simple sequence repeat (SSR) markers for environmental monitoring of *Laccaria bicolor* (Jany J-L, Bousquet J, Gagne A, Khalsa DP, Mycol Res 110:51-59, 2006) // benomyl: tolerant @ 2 ppm.
5488 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 / . Mycorrhizae.
6061 bare ground under *Picea glauca* Burt Lake Burt Twp.,

- Timiskaming Dist., Ont. R. Summerbell 3 Jun 1982 /L. Hutchison DM32 [=TRTC 49430]. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002) // application: nitrogen metabolism (Ahmad, Carleton, Malloch & Hellebust, New Phytol. 116:431-441, 1990).
- 6150 gregarious in rotting logs & humus below *Betula*, *Picea*, *Abies balsamea* & *Prunus* sp. Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie 25 Aug 1979 /L. Hutchison DM26 [=TRTC Lahaie 79171E]. Mycorrhizae.
- 6151 on moss covered rotten log with *Picea mariana*, *Abies balsamea*, *Populus tremuloides*, *Betula papyrifera* east of Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie 7 Aug 1979 /L. Hutchison DM28 [=TRTC Lahaie 79081B]. Mycorrhizae.
- 6152 under *Alnus rugosa* & *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) J. Fortin (211) Aug 1981 /L. Hutchison DM31 [=TRTC DM31]. Mycorrhizae: simple sequence repeat (SSR) markers for environmental monitoring of *Laccaria bicolor* (Jany J-L, Bousquet J, Gagne A, Khalsa DP, Mycol Res 110:51-59, 2006).
- 6153 debris & humus from clearcut, former *Pinus banksiana*-*Picea mariana* stand Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie 25 Aug 1979 /L. Hutchison DM77 [=TRTC Lahaie 79152A]. Mycorrhizae.
- 6299 ?monokaryon, *Picea engelmannii* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Sep 1988 // (C) S.P. Abbott. Mycorrhizae // culture conditions: monokaryon?, no clamps or pigment.
- 8231 fruiting body associated with *Alnus rugosa* & *Abies balsamea* Burt Lake, Ontario 1981 /P.D. Khalsa 0101. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002).
- 8232 *Pinus banksiana* roots Burt Lake, Ontario 1992 /P.D. Khalsa CRBF 92.9. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002; Bois G, Bigras FJ, Bertrand A, Piche Y, Fung MY, Khalsa DP, Tree Physiology 26:1185-1196, 2006; candidate for inoculation of tree seedlings in salt-affected soil; Bois G, Bertrand A, Piche Y, Fung M, Khalsa DP, Mycorrhiza 16:99-109, 2006); simple sequence repeat (SSR) markers for environmental monitoring of *Laccaria bicolor* (Jany J-L, Bousquet J, Gagne A, Khalsa DP, Mycol Res 110:51-59, 2006); most persistent inoculant strain in outplanted seedlings (Gagne et al 2006); persistence of introduced ectomycorrhizal fungi in outplanted seedlings (Gagne A, Jany J-L, Bousquet J, Khalsa PD, Can J For Res 36:1684-1694, 2006); responses of ectomycorrhizal *Ulmus americana* seedlings to salinity and soil compaction (Calvo Polanco M, Zwiazek JJ, Voicu MC, Plant Soil 308:189-200, 2008; Calvo Polanco M, Jones MD, Zwiazek JJ, Acta Physiol Plant 31:515-522, 2009); responses of ectomycorrhizal *Populus tremuloides* and *Betula papyrifera* seedlings to salinity (Yi H, Calvo Polanco M, MacKinnon MD, Zwiazek JJ, Environmental and Experimental Botany 62:357-363, 2008); role of ectomycorrhizal fungi in mineral weathering (Adeleke RA, Cloete TE, Bertrand A, Khalsa DP, Mycorrhiza Epub Feb 2012) // culture conditions: clamps.
- 8233 fruiting body in berry plantation Abitibi, Que. 1991 /P.D. Khalsa CRBF 91.3. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002).
- 9438 ex tissue of sporocarp found near logging road in coastal forest of Douglas-fir (*Pseudotsuga menziesii*) & Western Hemlock (*Tsuga heterophylla*) Madley Lake near Whistler, B.C. G. Kernaghan 10 Oct 1998 /G. Kernaghan 98101009LB-T-B. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002); simple sequence repeat (SSR) markers for environmental monitoring of *Laccaria bicolor* (Jany J-L, Bousquet J, Gagne A, Khalsa DP, Mycol Res 110:51-59, 2006) // pigment: no purple pigment (fide UAMH 2012).
- Laccaria laccata*** (Scopoli ex Fr.) Berk. & Br.
6063 Japan (C) T. Yokoyama (4810-10-4) 1973 /L. Hutchison DM238 [=IFO 9792 =NBRC 9792]. Mycorrhizae.
10033 sporocarp, gregarious in road by lake (not developing beneath soil), with *Atreus* sp. Richardson's Fire Tower, Ft. McMurray, AB R.M. Danielson 25 Sep 1976 /R.M. Danielson RMD 2456. Application: assessment of fungal hydrophobicity properties (Chau HW, Si BC, Goh YK, Vujanovic V, Mycological Research 113:1046-1052, 2009).
- Laccaria ochropurpurea*** (Berk.) Peck
5814 gregarious under *Quercus macrocarpa* & *Q. rubra* Cooksville Brickworks, Peel Co., Ont. (C) D. Malloch /L. Hutchison DM 438 [=TRTC DM 438]. Mycorrhizae.
- Laccaria proxima*** (Boud.) Pat.
6062 Japan (C) T. Yokoyama (5109-28-8) 1977 /L. Hutchison DM227 [=IFO 30353 =NBRC 30353 =NBRC H-11742 (herbarium)]. Mycorrhizae: salt tolerant (Kernaghan, Hambling, Fung & Khalsa, Restoration Ecology 10:43-51, 2002).
10031 sporocarp in bearberry in cleared area with pine seedlings Mildred Lake, Alta. R.M. Danielson 21 Sep 1977 /R.M. Danielson RMD 2661. Mycorrhizae.
- Laccaria* sp.**
8323 explant from sporocarp in *Pinus strobus* (eastern white pine) seedbed in tree nursery Ontario Ministry of Natural Resources Nursery, St. Williams, Ont. M. Kronick -Ursic (MK 1-94) Sep 1994 /R.L. Peterson MK 1-94. Pigment: white to purplish // mycorrhizae: ectomycorrhizal in field & in pot culture.
- Lachnellula fuscousanguinea*** (Rehm) Dennis
5034 *Pinus contorta* Alberta D.E. Wells May 1954 /L. Browne [=NFRC C693].
- Lactarius affinis*** Peck
5919 solitary under *Picea glauca* nr Wren Lake, St. Patrick Township, Charlotte Co., N.B. L. Hutchison 23 Aug 1985 /L. Hutchison LH-48-85 [=TRTC LH-48-85]. Mycorrhizae.
6078 Burt Lake Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie Aug 1980 /L. Hutchison DM157 [=TRTC DM157]. Mycorrhizae.
8948 sporocarp near jackpine, alder, aspen & saskatoon Mildred Lake, Alta. R.M. Danielson (RMD 2872) 19 Sep 1978 /R.M. Danielson RMD 2872 [=DAOM 176666 =CCFC 3708]. Mycorrhizae.
9179 sporocarp in lodgepole pine Forestry Trunk Road, Alta. /R.M. Danielson RMD 2801. Mycorrhizae.
- Lactarius chelidonium*** Peck
6197 under *Pinus banksiana* Fort McMurray, Alta. (C) R. Danielson 1976 /L. Hutchison J239. Mycorrhizae // culture conditions: no clamps (fide UAMH 2011).
- Lactarius deliciosus*** (L. ex Fr.) S.F. Gray
5449 *Pinus contorta* & *Picea mariana* bog Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Mycorrhizae.
5450 *Picea mariana* & *P. glauca* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: [=CECT 20180]. Mycorrhizae.
5546 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986 /: [=CECT 20181]. Mycorrhizae.
5547 mixed *Picea glauca*, *P. mariana*, *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986 /: [=CECT 20161]. Mycorrhizae.
5548 mixed *Picea mariana*, *P. glauca*, *Populus* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986 /: [=CECT

- 20162]. Mycorrhizae.
- 5839 ex litter under *Picea glauca* & *Betula* sp. Burt Lake Burt Twp., Timiskaming Dist., Ont. L. Hutchison 26 Aug 1986 /L. Hutchison LH-74-86 [=TRTC LH-74-86]. Mycorrhizae.
- 6079 solitary in moss carpet under dwarf *Picea glauca* on mountain ledge Irony Mtn., nr Schefferville, Labrador, Nfld. (C) D. Malloch 28 Aug 1984 /L. Hutchison DM431 [=TRTC DM431]. Mycorrhizae.
- 6258 *Picea engelmannii* & *Eleagnus commutata* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott [=CECT 20182]. Mycorrhizae.
- 6259 *Pinus contorta*, *Picea engelmannii*, *Populus tremuloides* & *Salix* sp. woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Mycorrhizae.
- Lactarius indigo*** (Schwein.) Fr.
5933 gregarious to scattered in *Pinus resinosa* plantation Dufferin County Forest, Dufferin Co., Ont. (C) R. Summerbell 15 Sep 1985 /L. Hutchison LH-149-85 [=TRTC LH-149-85]. Odor: fruity // mycorrhizae.
- Lactarius resimus*** Fr.
9057 sporocarp solitary in young pine stand Forestry Trunk Road, Alta. R.M. Danielson (RMD 2794) 26 Aug 1978 /R.M. Danielson RMD 2794 [=DAOM 176646 =CCFC 3687 =CCFC 3688]. Mycorrhizae.
- Lactarius rufus*** (Scop.) Fr.
5797 gregarious below *Larix laricina* York Regional Forest nr Ballantrae, York Co., Ont. L.J. Hutchison 12 Sep 1986 /L. Hutchison LH-93-86 [=TRTC LH-93-86]. Mycorrhizae.
5836 in needle litter below *Pinus banksiana* Burt Lake Burt Twp., Timiskaming Dist., Ont. L. Hutchison 20 Aug 1986 /L. Hutchison LH-36-86 [=TRTC LH-36-86]. Mycorrhizae.
5928 gregarious under *Pinus strobus* nr Turkey Point Provincial Park, Norfolk Co., Ont. L. Hutchison 6 Oct 1984 /L. Hutchison LH-125-84 [=TRTC LH-125-84]. Mycorrhizae.
5930 gregarious in Sphagnum under *Larix laricina* & *Picea mariana* Lawrence Station, Charlotte Co. N.B. L. Hutchison 4 Sep 1985 /L. Hutchison LH-131-85 [=TRTC LH-131-85]. Mycorrhizae.
6074 in Pleurozium carpet nr *Picea mariana* Burt Lake Burt Twp., Timiskaming Dist., Ont. (C) Summerbell 9 Sep 1987 /L. Hutchison DM418 [=TRTC DM418]. Mycorrhizae.
6242 *Pinus contorta*, *Picea engelmannii* & *Salix* sp. woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Mycorrhizae.
- Lactarius subpurpureus*** Peck
5926 under *Tsuga canadensis*, *Pinus strobus* & *Acer* spp. North York, York Co., Ont. L. Hutchison 23 Sep 1984 /L. Hutchison LH-116-84 [=TRTC LH-116-84]. Mycorrhizae.
- Lactarius theiogalus*** (Fr.) Fr.
5920 gregarious on rotted wood under *Abies balsamea* & *Alnus rugosa* nr Wren Lake, St. Patrick Township, Charlotte Co., N.B. L. Hutchison 23 Aug 1985 /L. Hutchison LH-50-85 [=TRTC LH-50-85]. Mycorrhizae.
- Lactarius thynos*** Smith
5840 steep slope under *Thuja occidentalis* (Eastern cedar) St. Andrews, Charlotte Co., N.B. L. Hutchison 30 Aug 1986 /L. Hutchison LH-78-86 [=TRTC LH-78-86]. Mycorrhizae // edible // culture conditions.
- Lactarius torminosus*** (Schff. ex Fr.) S.F. Gray
5815 growing below *Abies balsamea*, *Picea glauca*, *Salix*, *Alnus* & *Betula* sp. Burt Lake Burt Twp., Timiskaming Dist., Ont. L.J. Hutchison 25 Aug 1986 /L. Hutchison LH-67-86 [=TRTC LH-67-86]. Mycorrhizae.
- 6077 scattered in duff below *Betula papyrifera*, *Alnus rugosa*, *Abies balsamea*, *Acer spicatum* Burt Lake Burt Twp., Timiskaming Dist., Ont. (C) D. Malloch 3 Sep 1987 /L. Hutchison DM53 [=TRTC DM53]. Mycorrhizae.
- Lactarius uvidus*** Fr.
9056 sporocarp gregarious along roadside with spruce, aspen and grasses Brown Lowery Park, Alta. R.M. Danielson (RMD 2735) /R.M. Danielson RMD 2735 [=DAOM 176650 =CCFC 3696 =CCFC 3797]. Mycorrhizae.
- Lactarius villosus*** Clements
8950 solitary sporocarp in cutline with bearberry and aspen Mildred Lake, Alta. R.M. Danielson (RMD 2878) 20 Sep 1978 /R.M. Danielson RMD 2878 [=DAOM 176652 =CCFC 3698 =CCFC 3699]. Mycorrhizae.
- Lactarius vinaceorufescens*** A.H. Smith
5835 in needle litter below *Pinus banksiana* & *Alnus* sp. Burt Lake Burt Twp., Timiskaming Dist., Ont. L. Hutchison 19 Aug 1986 /L. Hutchison LH-27-86 [=TRTC LH-27-86]. Mycorrhizae.
6075 scattered in soil below *Pinus banksiana*, *Betula papyrifera*, *Acer spicatum* Burt Lake Burt Twp., Timiskaming Dist., Ont. (C) D. Malloch 1 Sep 1980 /L. Hutchison DM51 [=TRTC DM51]. Mycorrhizae.
6154 scattered in moss in mature *Pinus banksiana* stand Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) E. Schwartzel 25 Aug 1983 /L. Hutchison DM339 [=TRTC DM339]. Mycorrhizae.
- Lampteromyces japonicus*** (Kawamura) Singer (syn. *Pleurotus japonicus*)
8182 Weijer /S. Davies FC-025. Pigment: brown.
- Lasiobolium orbiculoides*** Malloch & Benny
7584 ex soil from date palm plantation Basrah, Iraq Jul 1983 /S.-I. Udagawa NHL 2921.
- Lasiodiplodia theobromae*** (Patouillard) Griffon & Maublanc (syn. *Botryodiplodia theobromae*; morph *Botryosphaeria rhodina*)
3250 coconut Edmonton, Alta. K. Wilson Jun 1969 /K. Wilson.
3584 moldy coconut Edmonton, Alta. J.W. Carmichael Dec 1972 /J.W. Carmichael.
4395 eye infection? Medellin, Columbia A. Restrepo /M.A. Gordon.
6554 R.C. Summerbell FR 551.
7559 eye (vitreous OS) Bascom Palmer Eye Institute /M.G. Rinaldi UTHSC 93-2266. Pigment: black.
7560 eye (K cornea) Bascom Palmer Eye Institute /M.G. Rinaldi UTHSC 93-2267. Pigment: black.
8236 2 inch deep soil Puerto La Cruz, Venezuela M. Tucic 30-Mar-1985 /J.C. Krug TRTC 51532.
9906 right foot, male 44 yr Corpus Christi, TX Jul 2000 /Texas Dept. of Health BY 2074. Thermophilic: good growth @ 37C // cycloheximide: sensitive // benomyl: resistant.
10137 onychomycosis ex toenail following trauma, female, DE positive for light colored, thick septate hyphae; isolated in repeat specimen with + microscopy Chicago, Illinois 2001 /P. Kammeyer W 5356. Culture conditions: good sporulation on OAT cello in window.
10378 toenail ex female 48 yr, DE + Burnaby, B.C. 10-03 /R. Rennie MY 6235 [=BC CDC A3MR465]. Cycloheximide: sensitive // culture conditions: sporulated initially, but pycnidia lost on subculture.
- Lasiosphaeria hirsuta*** (Fr.) Ces. & de Not. (morph *Phialophora lasiosphaeriae*)
5877 soil Serengeti, Kenya J. Krug 1987 /J.C. Krug. Culture conditions: does not survive lyophilization.
7239 ex wood of *Populus* sp. Palgrave swamp, Peel County, Ont. W.

Untereiner 20 Jun 1992 /W. Untereiner 101. Culture conditions: does not survive lyophilization.

***Lasmeniella* sp.**

- 8123 ex roots of epiphytic orchid *Gongora unicolor* (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 10 Apr 1991 /R.S. Currah K28a. Mycorrhizae: root endophyte epiphytic orchid *Gongora unicolor*.
8124 ex roots of tropical epiphytic Orchidaceae La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 10 Apr 1991 /R.S. Currah K19a. Mycorrhizae: root endophyte epiphytic orchid.

***Laurilia sulcata* (Burt) Pouzar (syn. *Stereum sulcatum*)**

- 8154 *Picea glauca* British Columbia 13 Oct 1948 /S. Davies FC-164 [=NOF 63]. Biodeteriogen/biodegradation: white rot.

***Lecanicillium lecanii* (Zimmermann) Zare & W. Gams (syn.**

- Verticillium lecanii*; morph *Torrubiella confragosa*)
356 Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
505 sputum Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael. Molecular systematics: BLAST match 100% ITS similarity with *Torrubiella confragosa* (*Lecanicillium lecanii*) (fide UAMH).
595 contaminant in stock cult. Edmonton, Alta. J.W. Carmichael Jan 1958 /J.W. Carmichael [=GenBank AF108492 =GenBank AF110530]. Molecular systematics: phylogeny of insect pathogenic *Verticillium* species (Bidochka, MJ et al., *Microbiology* 145:955-963, 1999).
706 skin Edmonton, Alta. J.W. Carmichael 1960 /J.W. Carmichael. Molecular systematics: BLAST match 100% ITS similarity with *Torrubiella confragosa* (*Lecanicillium lecanii*) (fide UAMH).
869 sandy bank near rodent burrows Edmonton, Alta. Nov 1960 /;. 2019 soil Belgium /E. Varsavsky Bel-31.
2020 soil Belgium /E. Varsavsky Bel-10.
2054 East Cape, S. Africa P. Martin Jan 1958 /P. Martin 139.
2063 *Leucadendron adscendens* Nature's Valley, W. Cape, S. Africa P. Martin 1 Apr 1959 /P. Martin 519.
2107 tropical forest San Blas, Mexico P. Martin Dec 1961 /P. Martin 992.
2221 soil, pasture New Zealand /M.J. Marples 2b.
4842 H.D. Burges 19-79. Biocontrol.
7184 ex dead rove beetles in well water sample Saskatchewan H. Congly 1992 /H. Congly 1503M-92 [=GenBank AF110529 =GenBank AF108491]. Molecular systematics: phylogeny of insect pathogenic *Verticillium* species (Bidochka, MJ et al., *Microbiology* 145:955-963, 1999).

***Lecanicillium psalliotae* (Treschew) Zare & W. Gams (syn.**

- Verticillium psalliotae*)
699 commercial mushrooms in damp chamber Edmonton, Alta. J.W. Carmichael Feb 1960 /J.W. Carmichael.
700 commercial mushrooms in damp chamber Edmonton, Alta. J.W. Carmichael Feb 1960 /J.W. Carmichael. Molecular systematics: BLAST match 100% ITS similarity with *Lecanicillium psalliotae* (fide UAMH).
1058 rabbit dung Kern County Orr /G.F. Orr 0-2050.
1458 soil under sparrow tree Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
1692 Douglas fir timber Fort Langley, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael. Mesophilic: NG @ 35C.
1881 soil Dugway, Utah Orr 1963 /G.F. Orr 11FC 2. Molecular systematics: BLAST match 100% ITS similarity with *Lecanicillium psalliotae* (fide UAMH).
3225 feathers ex dead bird Claremont, Calif. Edmonton, Alta. J.W. Carmichael 4 Feb 1969 /J.W. Carmichael.
4168 soil hair bait W. Australia R. McAleer 1978 /R. McAleer Tamb 0.

***Lecanicillium* sp.**

- 1136 garden Edmonton, Alta. J.W. Carmichael 13 Sep 1961 /J.W. Carmichael. Molecular systematics: BLAST match 99% ITS similarity with *Lecanicillium* sp. (fide UAMH).

Leccinum arenicola

- 5927 singly or in small groups amongst *Hudsonia* sp. in sandy soil Kingston, Kings Co., N.S. L. Hutchison 2 Sep 1985 /L. Hutchison LH-124-85 [=TRTC LH-124-85]. Pigment: yellow // mycorrhizae.

***Leccinum aurantiacum* (Bull. ex St. Am.) S.F. Gray**

- 5838 singly under *Pinus banksiana* 15 yr plantation Burt Lake Burt Twp., Timiskaming Dist., Ont. L. Hutchison 23 Aug 1986 /L. Hutchison LH-53-86 [=TRTC LH-53-86 =UAMH 5921]. Mycorrhizae.
5921 singly under *Pinus banksiana*, 15 yr old plantation Burt Lake, Burt Twp., Timiskaming Dist., Ont. L. Hutchison 23 Aug 1986 /L. Hutchison LH-53-86 [=TRTC LH-53-86 =UAMH 5838]. Mycorrhizae.

Lecythophora* an. *Coniochaeta malacotricha* see *Coniochaeta malacotricha

***Lecythophora canina* D.A. Sutton, Gene & Cano**

- 11702 (*T Lecythophora canina*) ex mass on distal right tibia, female German shepherd dog, 3 yr old, with disseminated infection; histopathology + for hyphae and terminal budding Veterinary Teaching Hospital, Blacksburg, VA 2011 /D.A. Sutton UTHSC 11-2460 [=UTHSC R-4810 =UAMH 11633 (different fungus from same dog) =GenBank JX481775 ITS =GenBank NR_120211 ITS =CBS 133243 =CBS H-21048 =FMR 12295 =GenBank JX481775 ACT =GenBank HE974356 TUB =GenBank JX481774 D1D2]. Human/animal pathogen: antifungal therapy itraconazole followed by itraconazole + terbinafine (Troy GC et al 2013); disseminated infection in a canine associated with two fungi (Troy GC, Panciera DL, Pickett JP, Sutton DA, Gene J, et al, *Med Mycol* 51:455-460, 2013) // systematics/taxonomy: description of *Lecythophora canina* (Troy GC, Panciera DL, Pickett JP, Sutton DA, Gene J, et al, *Med Mycol* 51:455-460, 2013).

***Lecythophora hoffmannii* (van Beyma) Gams & McGinnis (syn. *Phialophora hoffmannii*)**

- 1204 soft rot of cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael. Pigment: orange.
1371 pulp sample paper mill C.J. Wang (377) /DAOM 70687 [=IMI 96743].
2200 soil (8) San Jacinto Calif. P. Martin 1962 /P. Martin 1338.
4383 (*T Phialophora aurantiaca*) waste water van Beyma /CDC B-2829a [=CBS 140.41 =GenBank AF353600 LSU]. Molecular systematics: Blast match 99% ITS similarity with AY945807 *Lecythophora hoffmannii* type CBS 245.38 (DUMC 153.04) (fide UAMH).
5033 *Alnus* sp. hyperparasite ex *H. fuscum* Alberta A. Tsuneda 30 May 1966 /L. Browne [=NFR C710]. Pigment: yellow/red // hyperparasite.
5956 serially washed mycorrhiza of *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) R. Summerbell & L. Ippolito Aug 1981 /R.C. Summerbell Y701. Pigment: red.
6767 CCA-treated Douglas Fir pole Binghamton, NY /C.J.K. Wang ED-80 [=ATCC 66711].
6779 ex wood panels from CHMC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls. Pigment: orange.
6780 ex wood panels from CHMC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls. Pigment: brown.
7001 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-2-1 ii) 28 Sep 1990 /L. Hutchison NOF 1604. *Lecythophora*, a chaetiacandin sulfate (Ayer, W.A. &

- N. Kawahara, Tetrahedron Letters 36:7953-7956, 1995);
 lecythoside & lycotrophorin (Ayer et al., Rev. Latinoamer.
 Quim. 24:183-190, 1996). Biocontrol: fungus & culture
 filtrates inhibitory to blue stain fungus *Ophiostoma*
crassivaginatatum (UAMH 7004) (Chakravarty & Hiratsuka, J.
 Plant Diseases & Protection 101:74-79, 1994) // pigment:
 orange.
- 7106 ex shower tile grout Edmonton, Alta. L. Abbott 27 Jan 1992
 /L. Abbott.
- 9863 puncture wound on hand, cellulitis, male 39 yr Ottawa, ON
 2000 /R. Rennie My 4574. Pigment: rose-brown.

Lecytophora lignicola Nannf. apud Melin & Nannf. (syn.
Phialophora lignicola)

- 1238 soft rot cedar cooling tower Toronto J.W. Carmichael 1962
 /J.W. Carmichael.
- 1407 *Taxodium distichum* Rodney Ont. Jan 1960 /DAOM 75850
 [=IMI 96746].
- 5134 (*Phialophora lignicola*) E. Melin /CBS 267.33. Molecular
 systematics: ITS sequence for *Phialophora lignicola* ex-type
 culture (UAMH authentication project).
- 5194 liver & spleen mice inoculated i/p with sample from cat's nail
 tree Uruguay /I. Conti 4118B [=Conti 4118E].
- 6046 water from humidifier tank in home furnace Edmonton, Alta.
 A. Flis 16 Feb 1988 /A. Flis.
- 6363 soil Toronto, Ont. (C) D. Shah Oct 1988 /L. Hutchison.
 Pigment: green.
- 8223 sputum, immunocompromised female 27 yr, with Crohn's
 disease, DE- Edmonton, Alta. C. Sand 13 Jul 1995 /R. Rennie
 MY 2360.
- 8224 bronchial wash fluid, male 63 yr, DE- Edmonton, Alta. C.
 Sand 27 Jul 1995 /R. Rennie MY 2548.
- 9302 subcutaneous cystic lesion, immunocompromised male, 70 yr,
 DE+ fungal elements Albany, New York May 1996 /V.
 Chaturvedi M325-96. Human/animal pathogen: subcutaneous
 infection due to *Tilletiopsis minor* (Ramani, Kahn &
 Chaturvedi, J Clin Microbiol 35:2992-2995, 1997).

Lecytophora mutabilis (van Beyma) W. Gams & McGinnis
 (syn. *Phialophora mutabilis*)

- 2986 C.J.K. Wang 29 [=DAOM 70666].
- 2990 C.J.K. Wang 527.
- 5062 keratitis Texas /B.H. Cooper BUMC 34387. Pigment:
 yellow/green.
- 5078 (*T. Margarinyces mutabilis*) ex river water F.H. van Beyma
 /CBS 157.44. Molecular systematics: ITS sequence for
Margarinyces mutabilis ex-type culture (UAMH
 authentication project).
- 5083 CBS 977.72A.
- 5948 soil *Ficus benjamina* in hospital Toronto, Ont. R.C.
 Summerbell 15 Sep 1986 /R.C. Summerbell W 1846. Pigment:
 green.
- 6048 endophyte ex roots fairy slipper orchid *Calypso bulbosa*
 Nichol Springs, Cypress Hills Alta. S. Hambleton (199Aa) 7
 May 1987 /S. Hambleton (199Aa). Mycorrhizae: endophyte
 orchid *Calypso bulbosa*.
- 6771 CCA-treated Douglas Fir pole Hamburg, NY C.J.K. Wang
 /C.J.K. Wang ED-10 [=ATCC 66717]. Pigment: green.
- 6772 CCA-treated Douglas Fir pole (Vapam fumigated) Candor,
 NY /C.J.K. Wang ED-137 [=ATCC 66718]. Pigment: green.
- 6773 CCA treated Douglas Fir pole Ithaca, NY /C.J.K. Wang
 ED-177 [=ATCC 66719]. Pigment: green.
- 6783 C.J.K. Wang ED-190.
- 7416 indoor air ex RCS strip Red Deer, Alta. S.P. Abbott
 (RD-4-2H) 14 Jul 1993 /D. Bourque 4. Pigment: grey.
- 7619 ex corneal tissue, male 34 yr B.C. BC Prov. Lab 6 May 1994
 /R. Rennie MY 2466.
- 7952 indoor air ex RCS strip, from *Apis mellifera* (honeybee)
 overwintering facility Brooks, Alta. S.P. Abbott (OHS 114) 12

- Dec 1993 /S.P. Abbott (OHS 114).
- 9113 nail clippings, female 78 yr, DE small number yeast cells
 resembling *Malassezia* sp. Australia A. Woodgyer 1997 /A.
 Woodgyer 9711792. Pigment: brown.
- 9186 mycosis in zebra fish raised for mutagenesis studies &
 following building renovation College of Veterinary Medicine,
 NC State Univ., Raleigh, NC M. Dykstra (MIT) Jan 1998
 /M.J. Dykstra MIT. Pigment: yellow // human/animal
 pathogen: associated with high mortality in large-scale
 zebrafish colony (Dykstra et al., Comparative Medicine
 52:361-368, 2001).
- 10525 lymph node, R neck, female 79 yr Mount Sinai Hospital,
 Toronto, Ont. 22-11-04 /R. Rennie MY 7480 [=OMH FR
 1239]. Mesophilic: growth strongly inhibited @ 35 C.
- 10554 prosthetic valve endocarditis, male 58yr with COPD and
 congestive heart failure, following aortic valve replacement
 Tufts-New England Medical Center, Boston, MA 2005 /M.G.
 Rinaldi UTHSC 05-970 [=GenBank EF517490 (D1/D2)].
 Molecular systematics: BLAST match 100% with
Lecytophora mutabilis using D1/D2 region (fide D. Sutton) //
 human/animal pathogen: prosthetic valve endocarditis (Drees
 M, Wickes B, Gupta M, Hadley S, Med Mycol 45:463-467,
 2007).
- 10581 ex toenail, male 61 yr; KOH filaments observed B.C.
 25-May-2005 /R. Rennie MY 3530 [=BC CDC A5MR124].
 Thermotolerant: grows @ 35 C (fide submitting laboratory).
- 11173 ex *Cenococcum geophilum mycorrhizae* of paper birch (*Betula*
papyrifera) Mt. MacKenzie, Cape Breton Highlands National
 Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan
 6-Sep-2007 /G. Kernaghan ARSL 060907.9 [=GenBank
 HQ157861 ITS]. Mycorrhizae: boreal root endophyte ex
Cenococcum geophilum root tip (Kernaghan G, Patriquin G,
 Microb Ecol online 8-Apr-2011).

***Lecytophora* sp.**

- 858 contaminated plates Edmonton, Alta. 28 Nov 1960 /; .
 Thermotolerant: grows @ 35 C // molecular systematics:
 BLAST match 99% SSU similarity with *Lecytophora* species
 (fide UAMH).
- 2110 soil XVI San Blas, Mexico P. Martin Dec 1962 /P. Martin
 1394.
- 2146 soil VI Hearst Castle, California P. Martin Sep 1962 /P. Martin
 1295.
- 4501 clinical isolate /D. Howard R407.
- 5632 contaminant ex culture FMR 861 Spain 26 Jan 1987 /J.
 Guarro.
- 6136 black stained vinyl pool liner Edmonton, Alta. A. Flis (3) Jun
 1988 /W. Campbell. Biodeteriogen/biodegradation.
- 7168 indoor air of office ex RCS strip Fort McMurray, Alta. S.P.
 Abbott (SA-M241) 23 Apr 1992 /S.P. Abbott (SA-M241).
- 7213 ex arm, male 72 yr Alberta Provincial Laboratory for Southern
 Alberta 1992 /R. Rennie MY 1596. Mesophilic: NG @ 37C.
- 10331 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R.
 Allen Jan. 1999 /M.L. Berbee UBCtra 1453C [=GenBank
 AY219880]. Molecular systematics: DNA and culture-based
 detection of ericoid mycorrhizal fungi (Allen TR, Millar T,
 Berch SM, Berbee ML, New Phytologist 160:255-272, 2003).
- 10516 biopsy nose, ex male 60 yr; DE calcofluor - ENT Clinic, St.
 Paul's Hospital, Vancouver, B.C. 10-04 /R. Rennie MY 7007.
 Thermotolerant: grows @ 42 C (fide submitting laboratory);
 grows better @ 35C than @ 30C // culture conditions: casein
 hydrolysis positive; tyrosine hydrolysis positive (fide
 submitting laboratory) // molecular systematics: BLAST match
 98% SSU similarity with *Lecytophora* species (fide UAMH).
- 10600 corneal swab from a horse; DE - Victoria, Australia
 23-Sep-2005 /A. Woodgyer 2005-14185. Benomyl: resistant //
 molecular systematics: Blast match closest isolates include
Lecytophora and *Coniochaeta* (fide UAMH 2008); Blast
 match 99% ITS similarity with NR_102011 *Coniochaeta*
 (*Lecytophora*) *canina* T (fide UAMH 2014) // thermotolerant:

- grows better @ 35C than @ 30C (fide UAMH).
- 10612 lung tissue ex male 62 yr with brain tumor and seizures; histopathology negative for fungal filaments Vancouver General Hospital, Vancouver, B.C. /R. Rennie MY 8905 [=BC CDC A5MR431]. Molecular systematics: Pairwise comparison 4 bp differences with 10613; Morphologically similar to *Lecytophora* but no good sequence match (fide UAMH 2008) // thermotolerant: grows @ 35 C (fide UAH).
- 10613 uterine fluid ex mare /A. Woodgyer 2005-16692. Molecular systematics: Pairwise comparison 4 bp differences with 10612; Morphologically similar to *Lecytophora* but no good sequence match (fide UAMH 2008) // thermotolerant: grows @ 35 C (fide UAMH).
- 11229 ex *Bryum pallescens* Saskatchewan Glacier, Banff National Park, Alta. M. Day (2BpT) Aug-2006 /R.S. Currah 2BpT. Culture conditions: colonization of bryophyte tissue (*Hyaloconium spendens*) in vitro (Day MJ, Currah RS, Botany 89:349-359, 2011).

Leiothecium ellipsoideum Samson & Mouchacca

- 5618 soil Rojals, Catalonia, Spain J. Guarro 20 Jun 1986 /J. Guarro FMR 994.
- 6955 soil in Pusztá Hortobágyi, Hungary J. Krug 21 Aug 1990 /R. Khan TRTC 51328.

Lentinula edodes (Berk.) Pegler (syn. *Lentinus edodes*)

- 7994 commercial spawn R. Kurtzman (Le-1) ex Mori Co. (W-4) /S. Davies FC-302 [=ATCC 38221]. Edible: mushroom // biodeteriogen/biodegradation: white rot.
- 7995 artificial log R. Kurtzman (Le-2) ex H. Mee /S. Davies FC-303 [=ATCC 38222]. Edible: mushroom // culture conditions: clamps // biodeteriogen/biodegradation: white rot.
- 7996 commercial spawn from Taiwan S. Jong (465) /S. Davies FC-374 [=ATCC 48971]. Edible: mushroom // culture conditions: fruits at 10-24C; clamps // biodeteriogen/biodegradation: white rot.
- 7997 cultivated edible mushroom Edmonton, Alta. from Jason Lu /S. Davies FC-379. Edible: mushroom // culture conditions: clamps; fruiting bodies produced on pda // biodeteriogen/biodegradation: white rot.
- 7998 cultivated edible mushroom Calgary, Alta. from S. Nagy /S. Davies FC-380. Edible: mushroom // biodeteriogen/biodegradation: white rot // culture conditions: clamps.

Lentinus edodes see ***Lentinula edodes***

Lentinus sajor-caju (Fries) Fries (syn. *Pleurotus sajor-caju*; morph *Antromyopsis sajor-caju*)

- 8002 cultivated edible mushroom from Weijer (#30) India /S. Davies FC-307. Edible: mushroom // culture conditions: clamps.
- 8003 cultivated edible mushroom from Mountain Mushrooms Airdrie, Alta. /S. Davies FC-376. Edible: mushroom // culture conditions: clamps.
- 8004 cultivated edible mushroom from Burles Spawn Lab Medicine Hat /S. Davies FC-383. Edible: mushroom // culture conditions: clamps.

Lenzites betulina (Fr.) Fr.

- 7468 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. P. Crane (6-49-B62-2a) Jul 1989 /L. Hutchison NOF 1815. Pigment: amber.
- 8265 Breton, Alta L.L. Kennedy (B-75) /S. Davies FC-034. Biodeteriogen/biodegradation: white rot.
- 8266 Alberta L.L. Kennedy (KW-99) /S. Davies FC-316. Biodeteriogen/biodegradation: white rot.

Lenzites sepiaria see ***Gloeophyllum sepiarium***

***Lenzites* sp.**

- 8993 sporocarp on lodge pole pine slash Hinton, Alta. R.M. Danielson (RMD 3065) 11 Jun 1981 /R.M. Danielson RMD 3065. Pigment: brown.

***Leohumicola* sp.** Hambleton & Seifert

- 10384 *Tsuga heterophylla* N. Vancouver Is., BC P. Kroeger /M.L. Berbee pkc07 [=GenBank AY394901]. Pigment: yellow/green; pink on PDA // molecular systematics: heat-resistant fungi with pigmented aleurioconidia (Hambleton S, Nickerson NL, Seifert KA, Stud Mycol 53:129-152, 2005).

Lepidosphaeria nicotiae Parguey-Leduc

- 9416 soil Basrah, Iraq 12 Nov 1996 /J. Guarro FMR 6559.

Lepista irina (Fries) Bigelow (syn. *Clitocybe irina*)

- 8298 basidiospore germination ex fruiting body on ground in mixed woods Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 1040) 31-Aug-1994 /S.P. Abbott (SA 1040).

Lepista nuda (Bull. : Fries) Cooke (syn. *Clitocybe nuda*)

- 7363 ex fruiting body solitary on ground under *Betula papyrifera*, *Pinus banksiana* & *Picea glauca* Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 700) 6 Aug 1992 /S.P. Abbott (SA 700).

Leptodontidium beauverioides de Hoog

- 4605 mixed with UAMH 4617, ex bark, bark beetle gallery in alpine-fir Hinton, Alta. L. Linarez Jul 1982 /Y. Hiratsuka [=CBS 438.83]. Hyperparasite: grew together with *Melanospora* UAMH 4617 in culture.

Leptodontidium boreale de Hoog

- 7679 (*T. Leptodontidium boreale*) pine pole in ground contact Sweden Th. Nilsson /CBS 682.76.

Leptodontidium elatius* var. *elatius (Mangenot) de Hoog

- 6762 creosote-treated southern pine pole Chester, NJ /C.J.K. Wang P-247 [=ATCC 66694]. Biodeteriogen/biodegradation: soft rot (Wang & Zabel, Fungi from utility poles, 1990).
- 9247 roots of white spruce (*Picea glauca*) seedling on nurse log Elk Island National Park, Alta. 1-29B) T. Lumley (EIS-13-3 29 Jan 1997 /R.S. Currah TCL 057.
- 11052 (*T. Isotype Rhinocladiella elatior*) decaying wood of *Betula* France F. Mangenot 1952 /CBS 329.53 [=CBS H-7283 =CBS H-7284 =MUCL 1136 =MUCL 15747 =ATCC 18656 =IMI 134455 =GenBank AY129285 ITS =GenBank AY129280 partial 18S].
- 11446 swab ex fur of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 19 C.3 . Biodiversity: mycobiota of bat caves // molecular systematics: Blast match ITS 96% similarity with *Leptodontidium elatius* var. *elatius* AY129285 CBS 329.53 T (fide UAMH 2011).

Leptodontidium obscurum de Hoog

- 7680 (T) soil under *Pinus abies* Sweden B. Soderstrom /CBS 240.74. Cycloheximide: resistant // benomyl: sensitive.

Leptodontidium orchidicola Sigler & Currah

- 5420 ex long-bracted green orchid *Coeloglossum viride* Devonian Bot. Garden, Alta. R. Currah (16a4) 10 Jun 1985 /R. Currah (16a4) [=ATCC 64849 =IMI 318093]. Mycorrhizae: septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992); root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995); endophyte orchid *Coeloglossum viride* // culture conditions: phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995).

- 5421 ex orchid *Corallorhiza maculata* Castle River., Alta. R. Currah (50b) 20 Jun 1985. Mycorrhizae: endophyte orchid *Corallorhiza maculata*.
- 5422 (T *Leptodontidium orchidicola*) ex northern green orchid *Platanthera hyperborea* Devonian Bot. Garden, Alta. R. Currah (58a) 25 Jun 1985 [=ATCC 64850 =DAOM 197967 =IMI 318087]. Mycorrhizae: root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995); resynthesis experiments (Fernando & Currah, Can. J. Bot. 7:1071-1078, 1996); endophyte orchid *Platanthera hyperborea* // culture conditions: phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995); colonization of bryophyte tissue (*Hyaloconium splendens*) in vitro (Day MJ, Currah RS, Botany 89:349-359, 2011) // cellulolytic: some degradation of cellophane membrane (fide Fernando & Currah, 1996) // molecular systematics: phialide arrangement in helotialean genera *Cadophora* and *Phialocephala* (Day M, Hall JC, Currah RS, Mycologia 104:371-381, 2012).
- 5423 ex orchid *Corallorhiza maculata* Castle River, Alta. R. Currah (43cb) 20 Jun 1985. Mycorrhizae: endophyte orchid *Corallorhiza maculata*.
- 5440 endophyte of white bog orchid *Platanthera dilatata* Castle River, Alta. R. Currah (RC56a4) 20 Jun 1985 /R. Currah (RC56a4). Mycorrhizae: endophyte orchid *Platanthera dilatata*.
- 5441 ex fairy slipper orchid *Calypso bulbosa* Jerry Creek, Alta. R. Currah (8b) 6 Apr 1986 /R. Currah (8b). Mycorrhizae: endophyte orchid *Calypso bulbosa*.
- 5627 endophyte of orchid *Piperia unalascensis* Castle River, Alta. R. Currah (RC 37a) 19 Jun 1985. Mycorrhizae: endophyte of orchid *Piperia unalascensis*.
- 5628 endophyte of white bog orchid *Platanthera dilatata* Castle River, Alta. R. Currah (RC 55a) 20 Jun 1985 /R.S. Currah RC 55a [=GenBank AF214578]. Molecular systematics: UAMH 5628 excluded from other *P. fortinii* isolates (Harney et al., Mycol. Res. 101:1397-1404, 1997); RFLP & ITS sequence comparison of *Phialocephala fortinii* & *L. orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000); molecular characterization reidentified as *L. orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000) // mycorrhizae: endophyte orchid *Platanthera dilatata*.
- 5629 endophyte of *Orchis rotundifolia* Wagner Bog, Alta. R. Currah (RC 77c) 10 Jul 1985 /R. Currah (RC 77c). Mycorrhizae: endophyte of *Orchis rotundifolia*.
- 6085 endophyte ex roots *Corallorhiza trifida* Sundre, Alta. S. Hambleton (RC 203a) 25 May 1987 /S. Hambleton (RC 203a). Mycorrhizae: endophyte orchid *Corallorhiza trifida*.
- 6086 endophyte ex roots *Listeria borealis* Mitsue Lake, Alta. S. Hambleton (RC 240a) 24 Jun 1987 /S. Hambleton (RC 240a). Mycorrhizae: endophyte orchid *Listeria borealis*.
- 6087 endophyte ex roots round-leaved orchid *Platanthera orbiculata* Devonian Bot. Garden, Alta.) S. Hambleton (RC 264a 22 Jun 1987 /) S. Hambleton (RC 264a. Mycorrhizae: symbiont? endophyte orchid *Platanthera orbiculata* (Currah et al., Can. J. Bot. 68:1171-1181, 1990).
- 8149 root of *Carex* sp. Cardinal River Divide, Alta. A.A. Fernando Oct 1993 /R.S. Currah F-CxN1A. Mycorrhizae: endophyte, root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995); resynthesis experiments (Fernando & Currah, Can. J. Bot. 7:1071-1078, 1996) // culture conditions: phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995) // cellulolytic: some degradation of cellophane membrane (fide Fernando & Currah, 1996).
- 8150 root of Northern slender ladies tresses orchid *Spiranthes lacera* Whiteshell Prov. Forest, Man. C. Zelmer Aug 1991 /R.S. Currah Z63.NR.2a. Mycorrhizae: resynthesis experiments (Fernando & Currah, Can. J. Bot. 7:1071-1078, 1996); endophyte orchid *Spiranthes lacera*, root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995) // culture conditions: phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995).
- 8151 root of *Artemisia norvegica* Cardinal River Divide, Alta. A.A. Fernando Oct 1993 /R.S. Currah F-AaN1A [=GenBank AF056374]. Mycorrhizae: endophyte, root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995); resynthesis experiments (Fernando & Currah, Can. J. Bot. 7:1071-1078, 1996); comparison with sterile isolates (Jumponnen & Trappe, New Phytol. 140:295-310, 1998) // culture conditions: phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995) // cellulolytic: some degradation of cellophane membrane (fide Fernando & Currah, 1996).
- 8152 root of *Pedicularis bracteosa* Cardinal River Divide, Alta. A.A. Fernando Oct 1993 /R.S. Currah F-PsN4A [=GenBank AF214576 =GenBank DQ521603 SSU]. Mycorrhizae: endophyte, root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995) // culture conditions: phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995) // cellulolytic: some degradation of cellophane membrane (fide Fernando & Currah, 1996) // molecular systematics: RFLP & ITS sequence comparison of *Phialocephala fortinii* & *L. orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000).
- 9524 sterilized roots of *Betula platyphylla* var. *japonica* in deciduous, broadleaf forest zone at 1300 m. Mt. Norikura, Japan Y. Hashimoto (A-2) /R.S. Currah H-39 [=GenBank AF214577]. Molecular systematics: RFLP & ITS sequence comparison of *Phialocephala fortinii* & *L. orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000).
- 10277 non sporulating strain ex root of *Salix* sp. in boreal forest Fort McMurray, Alberta (approx. 10 km up Tower Road) M. Piercey (FM1RBc) July 2000 /R.S. Currah FM1 [=GenBank AY237627]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, Mycol. Res. 108:955-964, 2004).
- 10995 ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Lily lake natural area, Alta. W. Wang /R.S. Currah LDL-55-163e [=GenBank FJ665277].
- 10996 ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Lamont natural area, Alta. W. Wang /R.S. Currah MDL-11-32a [=GenBank FJ665275].
- 10997 ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Lily lake natural area, Alta. W. Wang /R.S. Currah LWL-47-140c [=GenBank FJ665276].
- Leptodontidium quercuum*** Tsuneda, Maekawa & Currah
8341 (T *Leptodontidium quercuum*) oak wood (*Quercus acutissima*) used for cultivation of shiitake (*Lentinula edodes*) Kikuchi City, Kumamoto Pref., Japan /R.S. Currah TMI 32391. Hyperparasite: antagonistic to *Lentinula edodes* (shiitake) in *Quercus* logs (Tsuneda et al., Can. J. Bot. 75:1649-1655, 1997).
- 8342 oak wood (*Quercus acutissima*) used for cultivation of shiitake (*Lentinula edodes*) Morotsuke-son, Miyazaki Pref., Japan /R.S. Currah TMI 32420. Hyperparasite: antagonistic to *Lentinula edodes* (shiitake) in *Quercus* logs (Tsuneda et al., Can. J. Bot. 75:1649-1655, 1997).
- Leptographium abietinum*** (Peck) M.J. Wingf. (syn. *Verticicladiella abietina*, *Leptographium engelmannii*)
4296 stained *Picea glauca* (black stained root) nr Slave Lake, Alta. 5-15-79 /A. Tsuneda C-713 [=UAMH 5028].
- 4800 cadaver *Dendroctonus rufipennis* in Englemann spruce Dry Creek, Revelstoke, B.C. L. Sigler Jul 1983 /H.S. Whitney.
- 5028 stained spruce Slave Lake, Alta. /W.A. Ayer [=UAMH 4296 =NFRC C-713]. Pigment: black.
- 6348 *Picea engelmannii* Victoria, BC (C) A. Molnar (ACM 52.8b) Mar 1953 /DAOM 37980 [=ATCC 62324 =UM 1196].

- Culture conditions: sporulates on oatmeal salts agar.
- 10643 gallery of *Ips perturbatus* (northern spruce engraver) Cracker Creek, Yukon S. Alamouti /C. Breuil 3YT5P-La [=GenBank DQ097853 SSU =GenBank DQ097859 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
- 10644 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 2PG6P-La [=GenBank DQ268595 SSU =GenBank DQ268626 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
- 10645 gallery of *Dryocoetes* sp. Fort St. James, B.C. S. Alamouti /C. Breuil 2FJ3A-La [=GenBank DQ268596 SSU =GenBank DQ268627 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).

Leptographium antibioticum (W.B. Kendr.) M.J. Wingf.
(syn. *Vorticicliadiella antibiotica*)

- 6389 (T *Vorticicliadiella antibiotica*) *Pinus strobus*, coniferous wood Big Rideau Lake, Portland Ont. S. Hughes 30 Sep 1961 /DAOM 84338 [=ATCC 384674 =DAOM 84338 HOLOTYPE]. Biodiversity: considered to be a saprophyte (Jacobs & Wingfield, *Leptographium* Species p 66, 2001).

Leptographium engelmannii see ***Leptographium abietinum***

Leptographium fruticetum S. Massoumi Alamouti, J.-J. Kim & C. Breuil

- 10624 ex gallery of *Ips perturbatus* in *Picea glauca* Whitehorse, Yukon Territory S.M. Alamouti Aug 2003 /C. Breuil 3YT1P-L1 [=DAOM 234390 =GenBank DQ097848 (SSU) =GenBank DQ097855 (B-tubulin)]. Molecular systematics: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007); *Leptographium* species associated with the northern spruce engraver (Alamouti SM, Kim JJ, Breuil C, Mycologia 98:149-160, 2006) // cycloheximide: resistant (fide Alamouti et al.).
- 10625 (T *Leptographium fruticetum*) ex *Ips perturbatus* in *Picea engelmannii* x *glauca* Prince George, B. C. S.M. Alamouti July 2002 /C. Breuil 2PG6P-L1 [=GenBank DQ097847 SSU =GenBank DQ907854 B-tubulin]. Molecular systematics: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007); *Leptographium* species associated with the northern spruce engraver (Alamouti SM, Kim JJ, Breuil C, Mycologia 98:149-160, 2006) // cycloheximide: resistant (fide Alamouti et al.).
- 10626 ex stained logs *Picea engelmannii* x *glauca* Prince George, B. C. A. Uzunovic Sept. 1997 /C. Breuil AU157-253 [=DAOM 234391 (holotype) =GenBank DQ097856 B-tubulin =GenBank DQ097849 SSU]. Molecular systematics: ophiostomatoid fungi associated with spruce-infesting bark beetle in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007); *Leptographium* species associated with the northern spruce engraver (Alamouti SM, Kim JJ, Breuil C, Mycologia 98:149-160, 2006) // cycloheximide: resistant (fide Alamouti et al.).

Leptographium hughesii K. Jacobs, M.J. Wingf. & T.C. Harr.

- 1356 (T *Leptographium hughesii*) *Parashorea plicata* (White serayah) imported on a ship from Borneo (C) J.G. Savory Dec 1957 /DAOM 62102 [=IMI 96754 =CBS 515.63 =DAOM 62102 HOLOTYPE].

Leptographium longiclavatum S. Lee, J.-J. Kim & C. Breuil

- 4876 wood ex *Pinus contorta* Blairmore, Alta. L. Sigler Oct 1983 /L. Sigler. Molecular systematics: identification by padlock probes (Tsui CK, Wang B, Khadempour L, Alamouti SM, Bohlmann J, Murray BW, Hamelin RC, J Microbiol Methods. 83(1):26-33, 2010).
- 10621 ex sapwood of *Pinus contorta* var. *latifolia* infested with *Dendroctonus ponderosae* Princeton, B. C. S. Lee July 2001 /C. Breuil SL-Pw5 [=DAOM 234189 =GenBank AY816682 Actin =GenBank AY816689 ITS & LSU =GenBank AY816696 GPD =GenBank AY288935 B-tubulin]. Molecular systematics: Distinction from *Leptographium* species and *Ophiostoma clavigerum* (Lee S, Kim JJ, Breuil C, Mycol Res 109:1162-1170, 2005) // biodiversity: Associated with mountain pine beetle in lodgepole pine forests.
- 10622 ex *Dendroctonus ponderosae* in *Pinus contorta* var. *latifolia* Williams Lake, B. C. S. Lee /C. Breuil SL-W001 [=DAOM 234191 =GenBank AY816681 Actin =GenBank AY288936 B-tubulin =GenBank AY816695 GPD =GenBank AY816688 ITS & LSU]. Molecular systematics: Distinction from *Leptographium* species and *Ophiostoma clavigerum* (Lee S, Kim JJ, Breuil C, Mycol Res 109:1162-1170, 2005); identification by padlock probes (Tsui CK, Wang B, Khadempour L, Alamouti SM, Bohlmann J, Murray BW, Hamelin RC, J Microbiol Methods. 83(1):26-33, 2010) // biodiversity: Associated with mountain pine beetle in lodgepole pine forests (Lee S, Kim JJ, Breuil C, Mycol Res 109:1162-1170, 2005).
- 10623 (T *Leptographium longiclavatum*) ex sapwood of *Pinus contorta* var. *latifolia* infested with *Dendroctonus ponderosae* Kamloops, B. C. S. Lee Nov 2001 /C. Breuil SL-Kw1436 [=DAOM 234192 (holotype) =GenBank AY816679 Actin =GenBank AY816693 ITS & LSU =GenBank AY288934 B-tubulin =GenBank AY816693 GPD =GenBank JX402954]. Molecular systematics: Distinction from *Leptographium* species and *Ophiostoma clavigerum* (Lee S, Kim JJ, Breuil C, Mycol Res 109:1162-1170, 2005); identification by padlock probes (Tsui CK, Wang B, Khadempour L, Alamouti SM, Bohlmann J, Murray BW, Hamelin RC, J Microbiol Methods. 83(1):26-33, 2010); mating-type loci in *Grossmannia clavigera* and relatives (Tsui CKM, diGuistini S, Wang Y, Feau N, Dhillon B, Bohlmann J, Hamelin RC, G3 (Bethesda) 3:465-480, 2013); Idiormorph MAT1-1 (Tsui et al 2013) // biodiversity: Associated with mountain pine beetle in lodgepole pine forests (Lee S, Kim JJ, Breuil C, Mycol Res 109:1162-1170, 2005).
- 11013 ex flame sterilized wood in gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana* with minimal to moderate bluestain Fairview, Alta. A. Rice 03-May-2007 /A. Rice M001-13-03-02-UL01G01 [=GenBank GU370190 beta tubulin =GenBank GU370233 EF1 alpha =GenBank GU370319 UFM =GenBank GU370147 actin =GenBank GU370276 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype LII (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol

- 62:347-360, 2011).
- 11014 ex adult of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana* Fox Creek, Alta. A. Rice 22-Jan-2008 /A. Rice M002-03-01-17-UC47DA13G63 [=GenBank GU370196 beta tubulin =GenBank GU370239 EF1 alpha =GenBank GU370325 UFM =GenBank GU370153 actin =GenBank GU370282 ITS2]. Molecular systematics: ITS genotype haplotype LI1 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011) // biodiversity: mountain pine beetle genomics project.
- 11015 ex flame-sterilized wood in galleries of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Nakiska, Canmore, Alta. A. Rice 27-Sep-2007 /A. Rice M002-06-02-09-UL02G41 [=GenBank GU370189 beta tubulin =GenBank GU370232 EF1 alpha =GenBank GU370318 UFM =GenBank GU370146 actin =GenBank GU370275 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype LII (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11016 ex flame-sterilized wood in galleries of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Harvie Heights, Canmore, Alta. A. Rice 01-Feb-08 /A. Rice M002-06-05-13-UL01G70 [=GenBank GU370191 beta tubulin =GenBank GU370234 EF1 alpha =GenBank GU370320 UFM =GenBank GU370148 actin =GenBank GU370277 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype LI1 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11017 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Harvie Heights, Canmore, Alta. A. Rice 01-Feb-2008 /A. Rice M002-06-05-14-UL03DL74 [=GenBank GU370193 beta tubulin =GenBank GU370236 EF1 alpha =GenBank GU370322 UFM =GenBank GU370150 actin =GenBank GU370279 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype LI1 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11018 ex flame-sterilized wood in galleries of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; small larvae, minimal bluestain present Valemount, B.C. A. Rice 18-Oct-2007 /A. Rice M002-10-02-09-UL03G43 [=GenBank GU370211 beta tubulin =GenBank GU370254 EF1 alpha =GenBank GU370340 UFM =GenBank GU370168 actin =GenBank GU370297 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype LI1 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11019 ex flame-sterilized wood in galleries of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; moderate bluestain present Muddy/Sheep, Willmore-Kakwa, B.C. A. Rice 27-Mar-2008 /A. Rice M002-02-03-03-UL11G19 [=GenBank GU370213 beta tubulin =GenBank GU370256 EF1 alpha =GenBank GU370342 UFM =GenBank GU370170 actin =GenBank GU370299 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype LI1 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11020 ex flame-sterilized wood in galleries of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; moderate bluestain present Blaeberry, Golden, B.C. A. Rice 24-Oct-2007 /A. Rice M002-11-03-04-UL13G22 [=GenBank GU370214 beta tubulin =GenBank GU370257 EF1 alpha =GenBank GU370343 UFM =GenBank GU370171 actin =GenBank GU370300 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype LI1 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).

Leptographium lundbergii Lagerb. & Melin

- 9584 on plank of Scots pine (*Pinus sylvestris*) Skutskar, Uppland, Sweden A. Kaarik /J. Reid UM 68 [=GenBank EU984274 SSU =GenBank AY544603 LSU =NFRI 60-25 =GenBank AF155697 =GenBank AF155698 =GenBank AF155664 =GenBank AY544585 =GenBank AY816698 (GPD) =GenBank AY263184 (Btubulin) =WIN(M) 68 =GenBank AY935584 ITS =GenBank JX402940]. Molecular systematics: relationships among Ceratocystis & Ophiostoma species based on rDNA ITS (Hausner, Reid & Klassen, *Can. J. Bot.* 78:903-916, 2000); PCR-RFLP marker using beta-tubulin gene (Lee, Kim, Fung & Breuil, *Can. J. Bot.* 81:1104-1112, 2003); mating-type loci in *Grosmanina clavigera* and relatives (Tsui CKM, diGuistini S, Wang Y, Feau N, Dhillon B, Bohlmann J, Hamelin RC, G3 (Bethesda) 3:465-480, 2013); Idiomorph MAT1-2 (Tsui et al 2013).
- 9585 sound-looking wood on stored, debarked Scots pine timber (*Pinus sylvestris*) Nannestad, Abershus, Norway 7 Sep 1957 /J. Reid UM 69 [=NFRI 1502/1 =GenBank AY935583 ITS =WIN(M) 69]. Molecular systematics: relationships among Ceratocystis & Ophiostoma species based on rDNA ITS (Hausner, Reid & Klassen, *Can. J. Bot.* 78:903-916, 2000); LSU rDNA sequence equivalent to GenBank AF155664

(Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000).

Leptographium piriforme Greif, Gibas & Currah

- 10680 (T *Leptographium piriforme*) ex fly captured in a trap baited with coyote dung Elk Island National Park, Alta. M.D. Greif (C-421) 16-Jul-2003 /R.S. Currah C-421 [=GenBank DQ885241 ITS].
- 10681 ex beetle caught in a trap baited with coyote dung Elk Island National Park, Alta. M.D. Greif (C-439) 23-Jul-2003 /R.S. Currah C-439 [=GenBank DQ885242 ITS].
- 10682 ex springtail caught in a trap baited with brown-rotted wood Elk Island National Park, Alta. M.D. Greif (B-182) 28-May-2003 /R.S. Currah B-182 [=GenBank DQ885243 ITS].
- 10683 ex fly caught in a trap baited with coyote dung Elk Island National Park, Alta. M.D. Greif (C-445) 23-Jul-2003 /R.S. Currah C-445.
- 10684 ex caterpillar caught in a trap baited with fibreglass Elk Island National Park, Alta. M.D. Greif (Ct-111) 20-Aug-2003 /R.S. Currah Ct-111.
- 10685 ex ant caught in a trap baited with moose dung Elk Island National Park, Alta. M. D. Greif (M-273) 16-Jul-2003 /R.S. Currah M-273.

Leptographium procerum (W.B. Kendr.) M.J. Wingf. (syn. *Verticicladiella procera*)

- 6346 *Pinus strobus* Sudbury, Ont. (C) S. Linzon (PQ 11) 10 Nov 1952 /DAOM 33940 [=ATCC 38465 =CCFC 008557 =CCFC 008558 =UM 1199 =WIN(M) 1199 =GenBank AY935613 ITS].
- 9688 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Compartment 1091, Kaingaroa State Forest, Taupo, NZ J. & S. Reid (82-2) 6 May 1982 /J. Reid UM 797. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000); LSU rDNA sequence equivalent to GenBank AF155666 (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000).
- 9723 larch (*Larix* sp.), inner bark & outer sapwood showing bark beetle activity Compartment 5, Waiotopu, Kaingaroa State Forest, New Zealand J. & S. Reid (82-5) 8 May 1982 /J. Reid UM 661 [=GenBank AF155666]. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000).
- 9724 Austrian pine (*Pinus nigra*), inner bark & outer sapwood showing bark beetle activity Compartment 1091, Kaingaroa State Forest, Taupo, NZ J. & S. Reid (82-166) 20 Jun 1982 /J. Reid UM 796 [=WIN(M) 796 =GenBank AY275140 mt-ml U11 =GenBank AY935621 ITS]. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000); LSU rDNA sequence equivalent to GenBank AF155666 (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000); analysis for mitochondrial group II intron (Mullineux S, Willows K, Hausner G, J Molecular Evolution 72:433-449,

2011).

- 9770 Scots pine timber wood (*Pinus sylvestris*) Siljan, Telemark 1959 /J. Reid UM 33 [=NFRI 59-84/2 =GenBank AF155695 =GenBank AF155696 =WIN(M) 33 =GenBank AY275141 mt-ml U11 =GenBank AY935618 ITS]. Systematics/taxonomy: reidentified (Harrington in Harrington & Cobb, eds., *Leptographium* root diseases on conifers, APS Press, p. 31, 1988) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000); LSU rDNA sequence equivalent to GenBank AF155674 (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000).
- 10237 (T Neotype *Leptographium procerum*) unknown Virginia, USA (C) R. Nevill (VPI-90-3) 1990 /J. Reid UM 1200 [=DAOM 212054].
- 10238 fruiting in *Tomicus piniperda* galleries in trap log of *Pinus sylvestris* Drysdale's Tree Farm, Essa Twp., nr Barrie, Ont. C. Davis 07-01 /J. Reid UM 1210 [=SSM TOM62.30 =WIN(M) 1210 =GenBank AY935616 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada (Hausner G, Iranpour M, Kim JJ, Breuil C et al, Can. J. Bot. 83:1222-1237, 2005).
- 10300 fruiting in *Tomicus* nuptual gallery in trap log of *Pinus sylvestris* Drysdale's Tree Farm, Essa Twp., nr Barrie, Ont. C. Davis 1-02 /J. Reid UM 1244 [=TOM 73.12 =WIN(M) 1244 =GenBank AY935615 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada (Hausner G, Iranpour M, Kim JJ, Breuil C et al, Can. J. Bot. 83:1222-1237, 2005).
- 10301 ex *Pinus sylvestris* abandoned Christmas tree plantation, Mulmar Twp., nr Terra Nova, Ont. C. Davis 7-02 /J. Reid UM 1245 [=TOM 74.14].
- 10302 live beetles (*Tomicus piniperda*) crushed in water & plated Drysdale's Tree Farm, Essa Twp., nr Barrie, Ont. C. Davis 4-02 /J. Reid UM 1250 [=TOM 76.8 =WIN(M) 1250 =GenBank AY935614 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada (Hausner G, Iranpour M, Kim JJ, Breuil C et al, Can. J. Bot. 83:1222-1237, 2005).
- 10303 live beetle (*Tomicus piniperda*) crushed in water & plated Drysdale's Tree Farm, Essa Twp., nr Barrie, Ont. C. Davis 4-02 /J. Reid UM 1253 [=TOM 76.32]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada.
- 10304 live beetle (*Tomicus piniperda*) crushed in water & plated Drysdale's Tree Farm, Essa Twp., nr Barrie, Ont. C. Davis 4-02 /J. Reid UM 1254 [=TOM 76.36 =WIN(M) 1254 =GenBank AY935617 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada (Hausner G, Iranpour M, Kim JJ, Breuil C et al, Can. J. Bot. 83:1222-1237, 2005).
- 10305 live beetle (*Tomicus piniperda*) crushed in water & plated Lake Conestago, SE side, Conestago Conservation Auth., nr Listowel, Ont. C. Davis 4-02 /J. Reid UM 1263 [=TOM 78.8]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada.
- 10306 live beetle (*Tomicus piniperda*) crushed in water & plated Lake Conestago, SE side Conestago Conservation Auth., nr Listowel, Ont. C. Davis 4-02 /J. Reid UM 1264 [=TOM 78.13 =GenBank EU879143 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada // molecular systematics: phylogeny of *Grosmannia* and *Leptographium* (Mullineux & Hausner, Fungal Gen Biol 46:855-867, 2009).
- 10307 ex *Pinus* sp. Compartment 7, Kaingaroa Stae Forest, Taupo, NZ J. & B. Reid (88-490A) 28-2-88 /J. Reid UM 1375 [=WIN(M) 1375 =GenBank AY935620 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada (Hausner G, Iranpour M, Kim JJ, Breuil C et al, Can.

J. Bot. 83:1222–1237, 2005).

Leptographium sp.

- 4195 barley in field near Stonyplain, Alta. S. Davies 1978 /S. Davies A36-F.
 7087 ex wood, mixed hardwood forest Maine /B. Katz 8.
 9802 beetle larvae from aspen (*Populus tremuloides*) Fort Nelson, BC L. Hutchison /J. Reid UM 984 [=WIN(M)984 =GenBank HQ595734 SSU intron =GenBank EU879122 ITS]. Molecular systematics: phylogeny of *Grosmannia* and *Leptographium* (Mullineux & Hausner, Fungal Gen Biol 46:855–867, 2009); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitza KM, et al, Fungal Biology 116:98–111, 2012).

Leptographium sp. 2

- 10646 ex *Ips perturbatus* (northern spruce engraver) Whitehorse, Yukon S. Alamouti /C. Breuil 2YT2P-L2 [=GenBank DQ268598 SSU =GenBank DQ268628 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19–34, 2007) // culture conditions: no conidia observed (fide UAMH 2015).
 10647 gallery of *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 3PG6P-L2 [=GenBank DQ268599 SSU =GenBank DQ268629 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19–34, 2007).

Leptographium sp. 3

- 10648 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 3PG9P-L3 [=GenBank DQ268600 SSU =GenBank DQ268630 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19–34, 2007).
 10649 ex *Polygraphus rufipennis* (four-eyed spruce beetle) Fort St. James, Yukon S. Alamouti /C. Breuil 2FJ3R-L3 [=GenBank DQ268601 SSU =GenBank DQ268631 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19–34, 2007).

Leptographium terebrantis S.J. Barras & T.J. Perry

- 9649 lodgepole pine (*Pinus contorta*) Sooke, Vancouver Island, BC J. & B. Reid (87-4) 17 Sep 1987 /J. Reid UM 663. Molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903–916, 2000); LSU rDNA sequence equivalent to GenBank AF155665 (Hausner, Reid & Klassen, Can. J. Bot. 78:903–916, 2000).
 9690 lodgepole pine (*Pinus contorta*) Sooke, Vancouver Island, BC J. & B. Reid (87-3a) 17 Sep 1987 /J. Reid UM 662 [=WIN(M) 662 =GenBank AY935607 ITS]. Molecular systematics: analysis for mitochondrial group II intron (Mullineux S, Willows K, Hausner G, J Molecular Evolution 72:433–449, 2011); phylogeny of *Grosmannia* and *Leptographium* (Mullineux & Hausner, Fungal Gen Biol 46:855–867, 2009).
 9722 lodgepole pine (*Pinus contorta*) Sooke, Vancouver Island, BC J. & B. Reid (87-5) 17 Aug 1987 /J. Reid UM 468 [=GenBank AY544606 LSU =GenBank EU984275 SSU =GenBank AF155665 =GenBank AF155699 =GenBank AF155700 =GenBank AY544588 =GenBank AY263182 =GenBank AY816701 (GPD) =GenBank AY 263192 (Btubulin)

- =WIN(M) 468 =GenBank AY935605 ITS]. Molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903–916, 2000); PCR-RFLP marker using beta-tubulin gene (Lee, Kim, Fung & Breuil, Can. J. Bot. 81:1104–1112, 2003); analysis for mitochondrial group II intron (Mullineux S, Willows K, Hausner G, J Molecular Evolution 72:433–449, 2011); identification by padlock probes (Tsui CK, Wang B, Khadempour L, Alamouti SM, Bohlmann J, Murray BW, Hamelin RC, J Microbiol Methods. 83(1):26–33, 2010); phylogeny of *Grosmannia* and *Leptographium* (Mullineux & Hausner, Fungal Gen Biol 46:855–867, 2009).
 10157 (*T Leptographium terebrantis*) in pupal chamber of *Dendroctonus terebrans* in *Pinus taeda* (root) Elisabeth, Louisiana, USA S. J. Barros 29 Sep 1966 /J. Reid UM 1183 [=CBS 337.70 =DAOM 128706 =WIN(M) 1183 =GenBank AY275143 mt-rnl U11 =GenBank AY935609 ITS].
 11000 ex wood of *Pinus contorta* with very small larvae (1–2 instar) of mountain pine beetle (*Dendroctonus ponderosae*) Spray Lake, Canmore, Alta. A. Rice 02-Feb-2007 /A. Rice M001-06-01-03-UC48G19 [=GenBank GU370186 beta tubulin =GenBank GU370229 EF1 alpha =GenBank GU370315 UFM =GenBank GU370143 actin =GenBank GU370272 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946–959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347–360, 2011) // cellulolytic.
 11001 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* with little bluestain Coleman Blairmore area, Crowsnest Pass, Alta. A. Rice 28-Feb-2007 /A. Rice M001-07-01-03-UC23DL10 [=GenBank GU370206 beta tubulin =GenBank GU370249 EF1 alpha =GenBank GU370335 UFM =GenBank GU370163 actin =GenBank GU370292 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946–959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347–360, 2011) // cellulolytic.
 11002 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana* Valleyview, Fox Creek, Alta. A. Rice 17-Jan-2008 /A. Rice M002-03-01-12-UC18G23 [=GenBank GU370197 beta tubulin =GenBank GU370240 EF1 alpha =GenBank GU370326 UFM =GenBank GU370154 actin =GenBank GU370283 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype TI2 (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, Mol Ecol Res 10:946–959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347–360, 2011) // cellulolytic.
 11003 ex adult of mountain pine beetle (*Dendroctonus ponderosae*) in gallery in *Pinus contorta* x *banksiana* Valleyview, Fox Creek, Alta. A. Rice 17-Jan-2008 /A. Rice M002-03-01-12-UC67DA09G59 [=GenBank GU370198 beta tubulin =GenBank GU370241 EF1 alpha =GenBank GU370327 UFM =GenBank GU370155 actin =GenBank GU370284 ITS2]. Molecular systematics: ITS genotype haplotype AII (fide A. Roe); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347–360, 2011) // cellulolytic // biodiversity: mountain pine

- beetle genomics project.
- 11004 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana* Fox Creek, Alta. A. Rice 22-Jan-08 /A. Rice M002-03-01-17-UM03DL25 [=GenBank GU370195 beta tubulin =GenBank GU370238 EF1 alpha =GenBank GU370324 UFM =GenBank GU370152 actin =GenBank GU370281 ITS2]. Molecular systematics: ITS genotype haplotype TI2 (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011) // cellulolytic // biodiversity: mountain pine beetle genomics project.
- 11005 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Harvie Heights, Canmore, Alta. A. Rice 31-Jan-2008 /A. Rice M002-06-05-09-UC43DL48 [=GenBank GU370199 beta tubulin =GenBank GU370242 EF1 alpha =GenBank GU370328 UFM =GenBank GU370156 actin =GenBank GU370285 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011) // cellulolytic.
- 11006 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Oldman, Crownsnest, Alta. A. Rice 06-Feb-08 /A. Rice M002-07-02-01-UC08DL08 [=GenBank GU370208 beta tubulin =GenBank GU370251 EF1 alpha =GenBank GU370337 UFM =GenBank GU370165 actin =GenBank GU370294 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011) // cellulolytic.
- 11007 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta*; Dolichopodidae predators present Mount Wardle, Kootenay-Yoho area, Alta. A. Rice 05-Dec-07 /A. Rice M002-16-01-05-UC38DL41 [=GenBank GU370209 beta tubulin =GenBank GU370252 EF1 alpha =GenBank GU370338 UFM =GenBank GU370166 actin =GenBank GU370295 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype AII (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Bromilow SE, Cooke JEK, Sperling FAH, *Mol Ecol Res* 10:946-959, 2010); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011) // cellulolytic.
- Leptographium wageneri* var. *pseudotsugae* Harrington & Cobb**
- 4904 coastal Douglas fir (*Tsuga heterophylla*) Sooke, Vancouver Is., British Columbia D. Morrison, A. Johnson R.S. Hunt 2-Aug-1979 /L. Browne [=GenBank DQ097862 Btub =ATCC 42953 =PFRC 5 =DAVFP 21959]. Pigment: red brown // mesophilic: grows well @ 18C & 22C, does not grow @ 25C.
- 4905 lodgepole pine (*Pinus contorta*) Christina Lake, BC Paulsen /L. Browne [=PFRC 50]. Orcinol, orcinol monomethyl ether, 1,3,6,8-tetrahydroxyanthraquinone, alpha-L-rhamopyranosides (Ayer & al, *Phytochemistry* 22:2267-2271, 1983). Pigment: red brown // mesophilic: grows well @ 18C & 22C, does not grow @ 25C.
- 5029 *Pseudotsuga menziesii* (Douglas-fir) British Columbia Jun 1980 /W.A. Ayer [=ATCC 58162 =NFR C728]. Xanthonones, vertixanthone & hydroxyvertixanthone (Ayer et al, *J. Nat. Products* 52:119-129, 1989); alpha-pyrone, vertipyronol & vertipyronediol (Ayer et al, *J. Nat. Products* 52:119-129, 1989). Pigment: black // mesophilic: better growth @ 18C & 22C than @ 25C.
- Leptographium wingfieldii* M. Morelet**
- 10161 (*T. Leptographium wingfieldii*) ex *Tomicus piniperda* on *Pinus sylvestris* Orleans, France M. Morelet (M 207) Aug 1984 /J. Reid UM 1180 [=CBS 645.89 =GenBank AY935603 ITS]. Molecular systematics: phylogeny of *Grosmania* and *Leptographium* (Mullineux & Hausner, *Fungal Gen Biol* 46:855-867, 2009).
- 10162 wood of *Pinus brutia* Thessaloniki, Greece M. Morelet (M214) 1987 /J. Reid UM 1181 [=CBS 648.89 =WIN(M) 1181 =GenBank AY275142 mt-rnl U11 =GenBank AY935611 ITS]. Molecular systematics: phylogeny of *Grosmania* and *Leptographium* (Mullineux & Hausner, *Fungal Gen Biol* 46:855-867, 2009).
- 10163 *Tomicus piniperda* from *Pinus sylvestris* Thetford, UK J. N. Gibbs 16 Jun 1986 /J. Reid UM 1182 [=CBS 345.90 =WIN(M) 1182 =GenBank AY275142 mt-rnl U11].
- 10164 *Tomicus piniperda* in xylem of *Pinus densiflora* Kukizaki, Ibaraki, Japan H. Masuya (MCC 125) 22 May 1996 /J. Reid UM 1123 [=WIN(M) 1123 =GenBank AY275150 mt-rnl U11 =GenBank AY935608 ITS].
- 10165 *Tomicus piniperda* in xylem of *Pinus densiflora* Ichinoseki, Iwate, Japan H. Masuya (MCC 130) 19 Jun 1996 /J. Reid UM 1124 [=MAFF 410911 =WIN(M) 1124 =GenBank AY275147 mt-rnl U11 =GenBank AY935612 ITS].
- 10166 *Tomicus piniperda* in xylem of *Pinus densiflora* Iwaki, Fukushima, Japan H. Masuya (MCC 132) 18 Jun 1996 /J. Reid UM 1125.
- 10167 breeding adult of *Tomicus piniperda* Morioka, Iwate, Japan H. Masuya (MCC 349) 15 May 2000 /J. Reid UM 1126 [=WIN(M) 1126 =GenBank AY275149 mt-rnl U11 =GenBank AY935610 ITS].
- 10168 ex bark of *Pinus sylvestris* infested with *Tomicus piniperda* Yamabe, Hokkaido, Japan H. Masuya (MCC 362) 11 Jul 1996 /J. Reid UM 1127.
- 10169 *Pinus sylvestris* Norrsundet, Sweden O. Olsen 16 Sep 1988 /J. Reid UM 1130 [=NFR1 88-369/11 =WIN(M) 1130 =GenBank AY275157 mt-rnl U11].
- 10170 ex *Pinus sylvestris* Jdraas, Sweden O. Olsen 15 Jun 1989 /J. Reid UM 1131 [=NFR1 89-1040/1/3].
- 10235 light brown stain associated with *Ips* & *Tomicus* in *Pinus sylvestris* trap log Drysdale's Tree Farm, Essa Twp., nr Barrie, Ont. C. Davis 26-6-00 /J. Reid UM 1103 [=WIN(M) 1103 =GenBank AY275148 mt-rnl U11 =GenBank AY935599 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada (Hausner G, Iranpour M, Kim JJ, Breuil C et al, *Can. J. Bot.* 83:1222-1237, 2005) // molecular systematics: clusters with *Leptographium wingfieldii* in molecular analysis (fide J. Reid).
- 10236 wood with blue-black stains, v-shaped, *Pinus sylvestris* Lake Conestogo, NW side Conestogo Conservation Authority C. Davis 26-6-2000 /J. Reid UM 1121 [=SSM TOM11.5 =WIN(M) 1121 =GenBank AY275152 mt-rnl U11 =GenBank AY935602 ITS]. Biodiversity: associated with introduced bark beetle *Tomicus piniperda* in Canada (Hausner G, Iranpour M, Kim JJ, Breuil C et al, *Can. J. Bot.* 83:1222-1237, 2005).
- Leptomelanconium cinereum* (Dearn.) Morgan-Jones (syn. *Gloeocoryneum cinereum*)**
- 6269 ex *Pinus ponderosa* needles Loon Lake, Cariboo Dist., BC A. Flis Jul 1988 /A. Funk. Pigment: red.

Leptonia sp.

- 8992 sporocarp near slender wheat grass, oil sands and peat R.M. Danielson 28 Jul 1981 /R.M. Danielson RMD 3099. Pigment: brown // mycorrhizae.

Leptosphaeria maculans (Desm.) Ces. & de Not. (morph *Plenodomus lingam*)

- 8227 blackleg disease of canola (*Brassica napus*) U. of A. Research Station, Edmonton, Alta. G. Stringham & V. Bansal 1990 /V.K. Bansal 3356. Plant pathogen: blackleg resistance (*Brassica napus*) (Bansal et al., *Plant Disease* 78:276-281, 1994; Stringam et al., *Can. J. Plant Sci.* 75:437-439, 1995); virulent form, causes blackleg in Canola and other cruciferous crops.
- 9410 virulent strain from black leg of *Brassica* sp. /P.D. Khasa 3329-60. Plant pathogen: blackleg resistance (*Brassica napus*) // application: metabolism of dithiocarbamates by *Leptosphaeria maculans* (Pedras MS, Sarma-Mamillapalle VK, *J Agric Food Chem* 60:7792-7798, 2012); interactions of the cruciferous phytoalexins with *Leptosphaeria maculans* (Pedras MS, Sarma-Mamillapalle VK, *Bioorg Med Chem* 20:3991-3996, 2012); molecular interactions of the phytotoxins destruxin B and sirodesmin PL with crucifers and cereals (Pedras MS, Khallaf I, *Phytochemistry* 77:129-139, 2012).

Leptosphaerulina argentinensis (Spegazzini) Graham & Luttrell

- 1333 soil under evergreen tree Edmonton, Alta. J.W. Carmichael 23 Jul 1962 /J.W. Carmichael. Cellulolytic.

Leptosphaerulina australis McAlp.

- 7202 ex roots of epiphytic orchid *Nidema boothii* La Selva, Heredia Prov., Costa Rica K. Richardson 8 Apr 1991 /R.S. Currah K209b. Mycorrhizae: root endophyte epiphytic orchid *Nidema boothii*.
- 7203 ex roots of epiphytic orchid *Rodriguezia compacta* on log 9-10 cm diam La Selva, Heredia Prov., Costa Rica K. Richardson 8 Apr 1991 /R.S. Currah K212a. Mycorrhizae: root endophyte epiphytic orchid *Rodriguezia compacta*.

Leptosporomyces fuscostratus (Burt.) Hjort. (syn. *Corticium fuscostratum*, *Athelia fuscostratum*, *Confertobasidium olivaceoalbum*)

- 8183 coniferous log Ontario 03 Oct 1950 /S. Davies FC-097 [=NOF 143]. Biodeteriogen/biodegradation: brown rot // pigment: brown.

Leptoxyphium axillatum (Cooke) S. Hughes

- 4499 axil of veins, undersurface *Catalpa* leaves D. Samuelson (C) /M. Pickard [=DAOM 167770]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985).

Leptoxyphium fumago (Woron.) R.C. Srivast. (syn.*Caldariomyces fumago*)

- 4490 E.R. Squibb & Sons SC3815 /M. Pickard [=ATCC 16373]. Chloroperoxidase (Hollenberg & Hager, *Methods Enzymol.* 52:521-529, 1978; Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael & al, *Appl. & Env. Microbiol.* 51:276-280, 1986).
- 4491 Nobel Explosives Co., Ardeer, Scotland 1925 /M. Pickard [=IMI 89362]. Chloroperoxidase (Morris & Hager, *J. Biol. Chem.* 241:1763-1768, 1966; Sae & Cunningham, *Phytochemistry* 18:1785-1787, 1979; Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058, 1984; Carmichael & al, *Biotechnology Lett.* 7:289-294, 1985; Carmichael & al, *Appl. Env. Microbiol.* 51:276-280, 1986; Pickard & Hashimoto, *Can.*

J. Microbiol. 34:998-1002, 1988; Carmichael & Pickard, *Appl. Env. Microbiol.* 55:17-20, 1989; Metodieva et al, *Biochemical & Biophysical Research Communications* 159:1086-1092, 1989); caldariomycin; gluconic acid, glycerol & succinic acid.

Leptoxyphium sp.

- 4493 Citrus leaves Los Banos, Laguna, Phillipines D.B. Reynolds (C) /M. Pickard [=DAOM 119795]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985).
- 4494 leaf & fruit of citrus (orange) Rehovot, Israel Y. (C) Olmert /M. Pickard [=DAOM 137632]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985; Carmichael et al, *Appl. & Env. Microbiol.* 51(2): 276-280, 1986).
- 4495 grass 'Earle Coastal Bermuda' Louisiana 1971 /M. Pickard [=DAOM 138163]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985).
- 4496 fallen fruit *Gustavia superba* Barbour Trail, Barro Colorado Is., Canal Zone, Panama R.D. Goos (444) 1973 /M. Pickard [=DAOM 145537 =ATCC 32110 =UAMH 4500]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985).
- 4497 Hibiscus sp. petioles Lee County, Florida D. Brunk /M. Pickard [=DAOM 165359]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985).
- 4498 leaf *Diospyros melanoxylon* Pantheria Forest, Saugar, India Jan 1973 /M. Pickard [=DAOM 166438]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985).
- 4500 fallen fruit of *Gustavia superba* Barbour Trail, Barro Colorado Is., Canal Zone Panama R.D. Goos (444) 1973 /M. Pickard [=ATCC 32110 =DAOM 145537 =UAMH 4496]. Chloroperoxidase (Hashimoto & Pickard, *J. Gen. Microbiol.* 130:2051-2058; Carmichael et al., *Biotechnology Lett.* 7:289-294, 1985).

Leucocoprinus birnbaumii see **Leucocoprinus luteus****Leucocoprinus luteus** (Sow. : Fr.) Locquin (syn.*Leucocoprinus birnbaumii*)

- 5759 soil under Phoenix dactylifer shopping mall, Edmonton, Alta. A. Flis 17 Mar 1987 /A. Flis. Culture conditions.
- 6640 ex peat after heating, stored in closed pail UAMH A. Flis 9 Jan 1990 /A. Flis. Culture conditions: yellow sclerotia.
- 7124 ex fruiting body on potting soil Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 629) 13 Mar 1992 /S.P. Abbott (SA 629). Pigment: brown // culture conditions: yellow sclerotia.

Leuconeurospora pulcherrima (Winter) Malloch & Cain

- 9397 forest soil Switzerland E. Muller /CBS 343.76 [=GenBank AF096193 LSU =GenBank AF096178 SSU =GenBank KF049206 ITS =GenBank FJ176884 LSU =GenBank FJ238367 RPB2 =GenBank FJ238409 TEF1]. Benomyl: resistant (2 ppm) // psychrophilic: grows best at 9C // culture conditions: degenerate, not sporulating when received; infertile ascospores produced.

Leucopaxillus candidus (Bres.) Singer

- 6276 gregarious-scattered, fairy ring under *Pinus banksiana* Sandilands Prov. Forest, Reynolds Local Govt. Dist., Man. L. Hutchison 9 Sep 1988 /L. Hutchison LH-17-87 [=TRTC LH-17-87].

Leucosphaera arxii Malloch (morph *Acremonium an.*)*Leucosphaera arxii*)

- 6113 (T) horse dung Shackelford Bank, Carteret Co., N. Carolina
(C) D. Malloch (M134g) 22 Dec 1986 /D. Malloch [=CBS
737.84].

Leucosphaera indica von Arx, Mukerji & Singh (morph*Sporothrix an. Leucosphaera indica*)

- 4236 (T *Leucosphaera indica*) dung of nilgai Delhi zoo 28 Apr 1977
/CBS 123.78. Cellulolytic.

Leucosporidium cf. fellii Gimenez-Jurado & van Uden

- 6537 rhizosphere of *Picea glauca* Baie de Doree, nr Kincardine, Ont.
R.C. Summerbell 9 Nov 1981 /R.C. Summerbell RCS-Y691
homothallic. Psychrophilic: obligate psychrophile, NG at room
temp..

Leucosporidium gelidum Fell, Statzell, Hunter & Phaff(morph *Candida gelida*)

- 6535 stream runoff foam Six Mile Lake Prov. Park, Ont. R.C.
Summerbell Apr 1984 /R.C. Summerbell Foam 16
homothallic. Psychrophilic: NG at room temp..

Leucosporidium scottii see *Candida scottii**Leucostoma persoonii* see *Cytospora leucostoma****Leucothecium emdenii*** von Arx & Samson (morph*Arthrographis an. Leucothecium emdenii*)

- 4915 (T *Leucothecium emdenii*) agricultural soil Netherlands J.H.
van Emden /CBS 576.73 [=GenBank AB975343 D1D2
=GenBank FJ358286 LSU =GenBank FJ225791 SSU
=GenBank FJ358351 mtSSU =GenBank FJ358413 RPB1].
7217 human skin lesion Belgium Jun 1990 /J. Guarro FMR 3796
[=RV 68385]. Odor: unpleasant // cycloheximide: resistant //
mesophilic: NG @ 37C.
7218 river bottom deposits Tordera River, Catalonia, Spain 23 Jul
1991 /J. Guarro FMR 4177. Odor: unpleasant //
cycloheximide: resistant // mesophilic: NG @ 37C.
7418 skin between toes, male 40 yr Edmonton, Alta. C. Sand 16 Jun
1993 /R. Rennie MY 2609. Mesophilic: NG @ 37C //
cycloheximide: slightly sensitive.
8390 soil Tenerife, Canary Islands, Spain J. Cano Jul 1992 /J.
Guarro FMR 5049.
9305 unknown site, male 44 yr Quebec 1998 /G. St-Germain MY
51562. Pigment: yellow.

Libertella an. Cryptosphaeria populina (morph*Cryptosphaeria populina, Cytosporina an. Cryptosphaeria
populina*)

- 7469 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. P.
Crane (89-5-2) Jul 1989 /L. Hutchison NOF 1862.

Libertella betulina see *Diatrype stigma**Libertella sp.* see *Eutypella sp.****Libertella sp.*** (morph *Eutypella sp.*)

- 7481 blood, male Cleveland, OH 1993 /M.G. Rinaldi UTHSC
93-2090. Culture conditions: does not survive freeze-drying.
7483 respiratory specimen Cleveland, OH 1993 /M.G. Rinaldi
UTHSC 93-2257.
7601 ex Rt lower lobe bronchial wash Houston, TX Methodist
Hospital 1994 /M.G. Rinaldi UTHSC 94-275.
8274 aspen (*Populus tremuloides*) Alberta M.K. Nobles July 1957
/S. Davies FC-169 [=NOF 375]. Culture conditions: non
sporulating on deposit; no conidia obtained then; sporulated on
cereal agar in window.

- 8652 toenail, male 39 yr., DE+ Wellington, New Zealand 1996 /A.
Woodgyer 9601630. Pigment: brown.
8766 bronchial wash, male 65 yr New Zealand D. Parr 1996 /D. Parr
ME 6233.
9944 bronch wash, male 79 yr Texas 2000 /Texas Dept. of Health
BY 3474. Mesophilic: NG @ 37C, good growth @ 30C.
10241 skin biopsy left calf post liver transplant; fungal hyphae &
plant material in histopathology Auckland Hospital K. Rogers
1-11-02 /K. Rogers TU 2860. Human/animal pathogen:
cutaneous abscess following trauma in liver transplant patient
// cycloheximide: tolerant.
10292 from brown Typha leaves in a small permanent pond Site 1,
Elk Island National Park, Alta. M. Schulz (MS-24) 27-6-01
/R.S. Currah MS-24. Culture conditions: produces abundant
pycnidia on TAK cello // biodeteriogen/biodegradation:
decomposition of Typha latifolia and enzymatic abilities
(Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).

Limacella illinita (Fr.) Murrill

- 5624 ex needle litter under *Pinus strobus* & *Fagus grandifolia*
Dufferin Co. Forest, Ont. L. Hutchison 15 Sep 1985 /L.
Hutchison LH-152-85 [=TRTC LH-152-85].

Linderina macrospora Chang

- 3446 forest soil N. Carolina Chien /C.-Y. Chien 7869 [=NRRL 5244
=IMI 174729 =ATCC 24128].

Lollipopaia minuta Inderbitzin

- 10372 corticated branch Khao Yai National Park, Thailand (C) M.A.
Abdul-Wahab; (I) P. Inderbitzin Jul-98 /M.L. Berbee P26
[=UBC F14044 holotype =GenBank AF301534]. Culture
conditions: produced ascospores on PDA but
non sporulating at deposit (fide Inderbitzin); cold sensitive,
culture died when stored at 4 C (fide depositor) // molecular
systematics: Diaporthales (Inderbitzen & Berbee, Can. J. Bot.
79:1099-1106, 2001) // pigment: pink on CER.

Lomentospora prolificans see *Scedosporium prolificans****Lophotrichus ampullus*** Benjamin

- 1762 dung /C.J. Anastasiou A12 [=RSA 779]. Cellulolytic.
8626 soil under wild almond tree (*Terminalia catappa*) 10 km W of
Bidar, near Khanapure, Forest Conservation Area, Karnataka
State, Bidar Dist., India R.S. Khan 19-Dec-1989 /J.C. Krug
TRTC 51963.
9122 guano and soil from cave Tuscon, Arizona G.F. Orr (O-124) 3
Dec 1958 /NRRL 2741 [=O-124]. Benomyl: resistant.
9123 guano and soil from cave Tuscon, Arizona G.F. Orr (O-128) 3
Dec 1958 /NRRL 2742 [=O-128]. Benomyl: resistant.

Lophotrichus bartlettii (Massee & Salmon) Malloch & Cain(syn. *Kernia bartlettii, Lophotrichus brevisstratus,*
Enterocarpus grenotii, Kernia bifurcotricha)

- 8395 bison (*Bison bison*) dung in moist chamber Metro Zoo,
Toronto, Ont J. Scott (JS 253) 7-Sep-1994 /D. Malloch.
8694 rabbit dung Nashville, York County, Ontario R.F. Cain
/DAOM 146082 [=ATCC 22153 =TRTC 43829 =CBS
775.70]. Cycloheximide: slightly resistant.
9036 dung of skunk (*Mephitis mephitis*) on ground in farm yard 10
km S of Leduc, Alta S.P. Abbott (SA-M186) 10 Jun 1997 /S.P.
Abbott (SA-M186) [=IFO 33038]. Benomyl: resistant (2 ppm)
// cycloheximide: sensitive (MYC).
9124 seed D. Johns (DJ 38) 5 Jan 1984 /NRRL A-27250. Benomyl:
resistant // cycloheximide: sensitive.
9257 (T *Enterocarpus grenotii*) dung of fox (*Vulpes ruppelli*) 180 km
from El Golea central Sahara M. Locquin-Linard /CBS 380.78.
9283 desert soil Egypt J. Mouchacca /CBS 277.75. Benomyl:
resistant (2 ppm).
9287 (T *Kernia bifurcotricha*) dung of kangaroo India K.G. Mukerji

(DU/KS 80) /ATCC 18523 [=IMI 141564]. Benomyl: resistant (2 ppm).

Lophotrichus brevirostratus see *Lophotrichus bartlettii*

Lophotrichus fimeti (Arx, Mukerji & N. Singh) Gilgado,

Guarro, Gené & Cano (syn. *Pseudallescheria fimeti*)

- 4257 (T Petriellidium fimeti) dung of nilgai Dehli Zoo, India K.G. Mukerji /CBS 129.78 [=GenBank AF027672 LSU =GenBank AY879799 ITS]. Cellulolytic // molecular systematics: molecular variability in Pseudallescheria; phylogeny of Scolecospium, Pseudallescheria and Petriella (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); transfer to Lophotrichus (Gilgado, Gene, Cano & Guarro, Int J Syst Evol Microbiol 57:2171-2178, 2007) // culture conditions: ascomata but no conidia produced.

Lophotrichus macrosporus (Faurel & Locquin-Linard) Arx,

Figuera & Guarro (syn. *Kernia macrospora*)

- 8394 sheep dung near Pink Lake State Park, Victoria, Australia J. Scott (JS 273) 15-Oct-1994 /D. Malloch.
9258 (T Kernia macrospora) dung of goat Plateau d'Edehi, Tassili des Ajjer, central Sahara M. Locquin-Linard /CBS 379.78.

Lophotrichus martinii Benjamin

- 3066 R.K. Benjamin RSA 45. Cellulolytic.
8692 (T Lophotrichus martinii) rabbit dung near Talara, Peru G.W. Martin Sept-1945 /DAOM 146075. Cycloheximide: slightly resistant.
8693 rat dung Barton County, Kansas, USA T.E. Brooks 24-May-1950 /DAOM 146083 [=TRTC 45466]. Cycloheximide: slightly resistant.
9125 mouse dung Georgia, USA Jun 1940 /NRRL 1716. Benomyl: resistant (2 ppm).

Lophotrichus plumbescens Morinaga, Minoura & Udagawa

- 8710 (T) soil Bangkok, Thailand T. Morinaga (HUT 4163) 8-Apr-1976 /T. Ito IFO 30864 [=ATCC 38285]. Benomyl: resistant (2 ppm).

Lophotrichus sp.

- 11809 ex cornea in female 50 yr following traumatic injury from a dog paw; histopathology negative for fungal elements Sykesville, MD 21-Apr-2011 /S. Zhang F00213.1 [=GenBank KM580494 ITS =GenBank KM609216 Bt2]. Human/animal pathogen: fungal keratitis caused by a novel Lophotrichus sp. (Eghrari AO, Gibas C, Watkins T, Vahedi S, Lee R, Houle E, et al, J Clin Microbiol 53:3063-3067, 2015).

Lycoperdon marginatum Vitt.

- 9054 R.M. Danielson (RMD 2666) /R.M. Danielson RMD 2666 [=DAOM 176605 =CCFC 3651].

Lyophyllum decastes

- 8034 cultivated edible mushroom from B. Chalmers, Western Biologicals Aldergrove, B.C. /S. Davies FC-400. Edible: mushroom.

Macrodiplodiopsis desmazieresii (Mont.) Petrak

- 4513 varnished rock (no lichen) Phoenix, Ariz. L. Sigler 9 Feb 1982 /J.T. Staley.

Macronodus bifurcatus see *Auxarthron conjugatum*

Macrohomina phaseolina (Tassi) Goid.

- 10549 ex metatarsophalangeal joint, male 31 yr, in renal failure; same patient as UAMH 10614 St. Michael's Hospital, Toronto, ON 14-12-2004 /R. Rennie MY 480 [=OMH FR 1679 =see also

UAMH 10614 =GenBank EF570501 (ITS) =GenBank EF570502 (SSU)]. Cycloheximide: sensitive // culture conditions: sclerotia produced; no conidia observed // molecular systematics: BLAST match 98% identity to Macrohomina phaseolina; 100% ITS similarity in pair-wise comparison with UAMH 10586 (ATCC 62589) // human/animal pathogen: dual infection in renal transplant patient (Tan DHS, Sigler L, Gibas C, Fong IW, Med Mycol 46:285-292, 2008) // thermotolerant: good growth @ 35 C // pigment: dark brown; pink // cellulolytic.

- 10586 charcoal rot ex guayule, Parthenium argentatum Arizona JD Mihail (68) /S. Brezden [=ATCC 62589 =GenBank EF570500 (ITS)]. Pigment: black // thermotolerant: grows @ 35 C // molecular systematics: 100% ITS similarity in pair-wise comparison with UAMH 10549 // culture conditions: produces sclerotia // plant pathogen: charcoal rot of guar (Mihail JD, Alcorn SM, Can. J. Bot. 64: 11-12, 1986).
10953 ex skin biopsy R lower leg, child with acute leukemia who underwent bone marrow transplant; cured on posaconazole Memphis, TN 2008 /D.A. Sutton UTHSC 08-1505 [=UTHSC R-4242]. Human/animal pathogen: cutaneous mycosis in child with acute myeloid leukemia (Srinivasan A, Wickes BL, Romanelli AM, Debelenko L, Rubnitz JE, Sutton DA, Thompson EH, Fothergill AW et al, J Clin Microbiol 47:1969-72, 2009) // molecular systematics: Blast match 100% ITS and D1D2 similarity to Macrohomina phaseolina (fide D.A. Sutton) // culture conditions: produces sclerotia.

Madurella grisea Mackinnon, Ferrada & Montemayor

- 5049 mycetoma foot Belgaum, India B. Hemashettar 4 Mar 1983 /B. Hemashettar M-21-83. Pigment: black on PYE.
7127 foot, same patient as UAMH 7128 Doctor's Hospital, Toronto, Ont. 1991 /R.C. Summerbell BB 1079. Pigment: black.
7128 ankle, same patient as UAMH 7127 Hillside Medical Lab., Toronto, Ont. 1991 /R.C. Summerbell BB 1080. Pigment: black.

Madurella mycetomatis (Laverin) Brumpt.

- 7129 ex mycetoma of foot Sudan C. Emmons (8005) /R.C. Summerbell BB 873 [=ATCC 13140]. Pigment: brown.
7130 black grain mycetoma on foot, male 19 yr India V. Pankajalakshmi (4/M/86) /R.C. Summerbell BB 926 [=ATCC 62383]. Pigment: brown.
7131 foot Toronto, Ont. 1990 /R.C. Summerbell BB 978 [=CBS 102791]. Pigment: brown.
8553 tissue, left foot, male 58 yr Ontario 18 Mar 1994 /R.C. Summerbell SF 2362 [=CBS 102792]. Pigment: brown.
9528 exudate with black granules from foot arch, male 49 yr, had lived in Somalia & Saudi Arabia Vancouver, BC BC Centre for Disease Control (98MF1832) Dec 1998 /R. Rennie MY 670 [=CBS 102793]. Thermotolerant: grows well @ 37 C // pigment: brown.

Madurella sp.

- 7132 R.C. Summerbell OMH 660. Pigment: orange.

Malassezia pachydermatis (Weidman) Dodge

- 9604 blood ex neonate girl on hyperalimentation; also isolated from urine, catheter tips, Rt & Lt arm Victoria, B.C. P. Kibsey /P. Kibsey. Human/animal pathogen: disseminated infection in neonate // culture conditions: no lipid requirements.

Malassezia sp.

- 2001 toe nail, male 10 yr Edmonton, Alta. J.W. Carmichael 1 Apr 1964 /J.W. Carmichael.
2030 groin scraping, male 20 yr Edmonton, Alta. J.W. Carmichael 12 May 1964 /J.W. Carmichael.
2032 elbow skin scrapings, female 29 yr Edmonton, Alta. J.W. Carmichael 15 May 1964 /J.W. Carmichael.

- 2036 canine external ear canal Edmonton, Alta. J.W. Carmichael 11 Jun 1964 /J.W. Carmichael.
- 2040 canine head, skin scrapings Edmonton, Alta. J.W. Carmichael 8 Jun 1964 /J.W. Carmichael.
- 2241 nail scraping Edmonton, Alta. J.W. Carmichael 1 Dec 1964 /J.W. Carmichael.
- 5505 anaerobic & aerobic blood cultures ex cancer patient Edmonton, Alta. 1986 /P. Kibsey BC 6671N. Lipophilic.
- Malbranchea albolutea* see *Auxarthron alboluteum*
- Malbranchea an. Amauroascus burundensis* see *Amauroascus burundensis*
- Malbranchea an. Amauroascus tropicalis* see *Amauroascus tropicalis*
- Malbranchea an. Aphanoascus aciculatus* see *Aphanoascus aciculatus*
- Malbranchea an. Aphanoascus canadensis* see *Aphanoascus canadensis*
- Malbranchea an. Aphanoascus mephitidis* see *Aphanoascus mephitidis*
- Malbranchea an. Aphanoascus multiporus* see *Aphanoascus multiporus*
- Malbranchea an. Auxarthron conjugatum* see *Auxarthron conjugatum*
- Malbranchea an. Auxarthron zuffianum* see *Auxarthron zuffianum*
- Malbranchea an. Byssonygena ceratinophila* see *Byssonygena ceratinophila*
- Malbranchea an. Gymnostellatospora canadensis* see *Gymnostellatospora canadensis*
- Malbranchea an. Myxotrichum carminoparum* see *Myxotrichum carminoparum*
- Malbranchea an. Uncinocarpus reesii* see *Uncinocarpus reesii*
- Malbranchea arcuata* Sigler & Carmichael
- 1861 (T *Malbranchea arcuata*) soil Dugway, Utah /G.F. Orr DPG 105 (O-1094) [=ATCC 34523 =CBS 126.77 =IMI 211194].
- 2519 soil Austin, TX Alexopoulos isolate (50) 1965 /G.F. Orr [=UAMH 3877].
- 3844 pellets of *Merops apiaster* in nest Pesirevo, S.R. Macedonia, Yugoslavia 5 Dec 1968 /Z. Hubelak 232 B.
- 3845 pellets of *Merops apiaster* in nest Pesirevo, S.R. Macedonia, Yugoslavia 5 Dec 1968 /Z. Hubelak 236 A.
- 3847 hair of small rodent Vojnik, S.R. Macedonia, Yugoslavia Hubalek 9 May 1968 /Z. Hubelak JU 1623-2.
- 3877 dog dung Austin, TX Alexopoulos (50) /G.F. Orr O-3263 [=UAMH 2519].
- 3902 hair of *Apodemus* sp. Yugoslavia Hubalek (BH 14) /G.F. Orr O-3411.
- 3910 NRRL 6089.
- 4456 garden soil El Maresme, Catalunya, Spain Nov 1980 /J. Guarro FFBA 230.
- Malbranchea aurantiaca* Sigler & Carmichael
- 1569 soil chicken feeding ground Tonasi Panama G.F. Orr /G.F. Orr O-2505. Culture conditions: atypical isolate differing in colonial features (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).
- 1705 back yard soil Tonasi, Panama G.F. Orr /G.F. Orr O-2535.
- 1707 soil, chicken feeding ground Tonasi, Panama G.F. Orr /G.F. Orr O-2531.
- 1709 soil S. Calif. G.F. Orr 1957 /G.F. Orr O-584. Culture conditions: atypical isolate differing in colonial features (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).
- 1710 pig yard (mud) Tonasi, Panama G.F. Orr /G.F. Orr O-2534.
- 1778 ex UAMH 1712 *Gymnoascoideus petalosporus* UAMH J.W. Carmichael 3 Jul 1963 /G.F. Orr 288c.
- 1853 soil Australia Warcup isolate (A 270-1) /G.F. Orr O-3598. Culture conditions: atypical isolate differing in colonial features (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).
- 2844 soil Belgium DeVroey (RV 20043) 1966 /G.F. Orr O-3178. Culture conditions: atypical isolate differing in colonial features (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).
- 3053 lizard dung (D12846-D) along stone fence nr. Chihuahua, Mexico R.K. Benjamin 3 Jul 1964 /R.K. Benjamin 1468.
- 3483 mouse dung India /G.F. Orr O-3150.
- 3524 rat dung India /G.F. Orr O-3733 [=NRRL A-19283].
- 3599 (T *Malbranchea aurantiaca*) plate contaminant Dugway, Utah /G.F. Orr [=ATCC 34524 =IMI 211195 =NCMH 361 =CBS 127.77 =GenBank AB015786 =GenBank AB040704 =GenBank AB361631 ITS is incorrect]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001); GenBank 361631 supposedly representing IFM 41301=UAMH 3599 is incorrect (fide L. Sigler).
- 3660 soil Ellice Is., nr. Quajelien Atoll, S. Pacific /G.F. Orr O-3035.
- 3704 rat dung India 1973 /G.F. Orr O-1163.
- 3705 contaminant Dugway, Utah 1973 /G.F. Orr O-3214.
- 3818 soil Italy Varsavsky (I-36) /G.F. Orr O-3437.
- 3878 soil Ingomar area, Central California /G.F. Orr O-683 [=NRRL A-10044].
- 3879 hair ex ringworm lesion on horse Riverton, Utah /G.F. Orr O-3710.
- 4048 soil survey for keratinophilic fungi India /S.C. Agrawal I (17) [=IARI (ITCC) 2350 =Saugar J/77/29 =IMI 196833].
- 4049 soil survey for keratinophilic fungi India /S.C. Agrawal II (20) [=IARI (ITCC 2353) =Saugar J/77/30].
- 6669 J. Nicot /J. Mouchacca M4.
- 9923 shed dorsal skin ex desert monitor (*Varanus griseus*), >4 yr Central Florida Zoological Park, Lake Monroe FL UAMH (UW023B-B) 05 Dec 2000. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 11585 soil from construction development area Moorpark, California S.P. Abbott 29-Jan-2010 /S.P. Abbott SA1501.
- Malbranchea chryso스포ιοidea* Sigler & Carmichael
- 1031 soil Arizona? Emmons (E 5002) /G.F. Orr O-1524.
- 1032 (T *Malbranchea chryso스포ιοidea*) soil Arizona? Emmons (5003) /G.F. Orr O-1525 [=ATCC 34525 =CBS 128.77 =IMI 211196 =NCMH 362].
- 1060 coyote dung Kern Co. Topanga Canyon, Calif. Orr /G.F. Orr O-837 [=NRRL A-10663].
- 1241 plate contaminant Edmonton, Alta. J.W. Carmichael 1962 /J.W. Carmichael.
- 2051 Hawaiian Islands /E. Varsavsky KAVAI-18.
- 2288 sandy soil, bean garden Usa, Shokuku, Japan G.F. Orr Oct 1964 /G.F. Orr L 7.
- 2740 soil India /H.C. Gugnani S 536.
- 2786 abscesses in mice inoculated intraperitoneally with soil Bethesda, MD C.W. Emmons (5002) /K.J. Kwong-Chung.
- 2850 wind tunnel contaminant Utah Orr 1967 /G.F. Orr 9BR5.

- 3570 soil S. California /G.F. Orr O-3517.
 3856 spore mass Dugway, Utah /G.F. Orr O-3077.
 3876 soil (9) Oahu, Hawaii Varsavsky /G.F. Orr O-3295.
 4458 hemp dust Lucknow, India /J. Lacey C2546 [=IMI 261206].
 9922 shed dorsal skin ex desert monitor (*Varanus griseus*), >4 yr Central Florida Zoological Park, Lake Monroe FL UAMH (UW023B-A periphery) 05 Dec 2000. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

***Malbranchea cinnamomea* (Lib.) van Oorschot & de Hoog**
 (syn. *Malbranchea sulfurea*, *Malbranchea pulchella* var. *sulfurea*)

- 2481 ensiling alfalfa hay forage 1953 /G. Semeniuk 401. Thermophilic: opt. 45C.
 2485 ensiling alfalfa hay forage 1953 /G. Semeniuk 422. Thermophilic: opt. 45C // cellulolytic.
 2486 ensiling alfalfa hay forage 1953 /G. Semeniuk 459. Thermophilic: opt. 45C.
 3747 beef feedlot manure on manure extract agar @ 55 C Lethbridge, Alta. R.G. Bell Nov 1974 /R.G. Bell 1. Thermophilic: opt. 45C.
 3748 beef feedlot manure on manure extract agar Lethbridge, Alta. R.G. Bell Oct 1974 /R.G. Bell 2. Thermophilic: opt. 45C.
 3761 (T *Malbranchea pulchella* var. *sulfurea*) rotting *Parthenium argentatum* Salinas, Calif. Emerson 1945 /IMI 126327 [=CBS 178.67 =ATCC 16456 =NBRC 8834]. Thermophilic: opt. 45C.
 3788 sediment of Lake Sengari Hyogo Pref., Japan 1974 /K. Tubaki IFO 9855. Thermophilic: opt. 45C.
 3789 deer dung Hiroshima, Japan K. Minoura 1970 /K. Tubaki IFO 9739. Thermophilic: opt. 45C.
 3827 henhouse litter, soil from chicken farm A. Grimbergen /CBS 343.55 [=GenBank JF412018 ITS =MUCL 9500 =GenBank JQ067912 SSU =GenBank JQ067903 LSU =GenBank AB359414 LSU]. Thermophilic: opt. 45C // molecular systematics: phylogeny of thermophilic fungi (Morgenstern I, Powlowski J, Ishmael N, Darmond C et al, Fungal Biology 116:489-502, 2012).
 3857 seed of *Oryza sativa* China G.L. Hennebert 1968 /CBS 115.68. Thermophilic: opt. 45C.
 3858 sent by INRA, Bordeaux /CBS 960.72 [=GenBank JF922020 ITS =GenBank GU733363 SSU]. Thermophilic: opt. 45C.
 7140 ex sputum, male Calgary, Alta. 19 Dec 1991 /P. Kibsey MY 0766. Thermophilic: opt. 45C.

***Malbranchea circinata* Sigler & Carmichael** (morph *Myxotrichum*)

- 1890 (T *Malbranchea circinata*) soil Dugway, Utah /G.F. Orr 12-DS-2 (O-1103) [=ATCC 34526 =CBS 129.77 =IMI 211197 =NCMH 363]. Culture conditions: produces infertile ascomata of *Myxotrichum* type (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).
 3589 soil Terra, Utah /G.F. Orr O-3225. Culture conditions: produces infertile ascomata of *Myxotrichum* type (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).

***Malbranchea dendritica* Sigler & Carmichael**

- 2731 (T *Malbranchea dendritica*) soil Dugway, Utah G.F. Orr Feb 1967 /G.F. Orr DPG-141 [=ATCC 34527 =CBS 131.77 =IMI 211199 =NCMH 367 =GenBank L28069 (chitin synthase) =GenBank L28071 (chitin synthase) =GenBank L28064 =GenBank AY177310 ITS =GenBank AY124496 SSU]. Molecular systematics: phylogeny of *Coccidioides immitis* & *Malbranchea* spp (Pan, Sigler & Cole, Microbiology 140:1481-1494, 1994); comments on GenBank L28064 (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002); SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).

- 3953 soil Dugway, Utah /G.F. Orr O-3230 [=NRRL 5131].
 3956 cave floor Kuala Lumpur, Malaysia Emmons (I-752B) /K.J. Kwong-Chung B3056.
 4107 soil Los Banos, Calif. 1967 /CDC [=Plunkett C-318].

***Malbranchea filamentosa* Sigler & Carmichael** (morph *Auxarthron filamentosum*)

- 7163 ex soil Benatshimpuma, Kasai, Zaire, Africa C. de Vroey Aug 1968 /J. Guarro FMR 3858 [=CBS 198.92 =RV 24803 =GenBank AY124500 (SSU) =GenBank AY177299 (ITS) =GenBank AY176718 =GenBank AY177299 ITS =GenBank AY124500 SSU]. Pigment: brown // thermotolerant: good growth @ 35 C // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002); phylogeny of *Ajellomyces* and *Onygenales* (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002) // systematics/taxonomy: mating studies (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002); did not mate in mating studies and ITS differed at 1 nt from mating strains (fide Sigler et al 2002).
 7165 ex soil Kuriange, Burundi, Africa C. de Vroey Jun 1968 /J. Guarro FMR 3860 [=CBS 200.92 =RV 24810 =GenBank AY177298 =GenBank AY177300 (ITS)]. Pigment: brown // systematics/taxonomy: mating studies (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002); did not mate in mating studies but ITS identical to mating strains (fide Sigler et al 2002) // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler, Hambleton, Flis & Pare, Stud. Mycol. 47:111-122, 2002).
 10557 ex brown dog tick, *Rhipicephalus sanguineus* Butler County, OH J.B. Benoit /J. Yoder #1. Biocontrol: caused mortality when reappplied to ticks // culture conditions: produces setae.

Malbranchea filamentosa* see *Auxarthron filamentosum

Malbranchea flava* see *Oncocladium flavum

***Malbranchea flavoroseus* Sigler & Carmichael** (morph *Mxyotrichum*)

- 1051 (T *Malbranchea flavoroseus*) soil? Riverside Co. Calif. Orr /G.F. Orr O-643 [=ATCC 34529 =CBS 130.77 =IMI 211198 =NCMH 364]. Culture conditions: produces infertile ascomata of *Myxotrichum* type (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).
 1065 lung, Kangaroo rat, Palo Verde, S. California /G.F. Orr. Culture conditions: produces infertile ascomata of *Myxotrichum* type (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).
 3909 NRRL 6088. Culture conditions: produces infertile ascomata of *Myxotrichum* type (Sigler & Carmichael, Mycotaxon 4:462-471, 1976).

***Malbranchea flocciformis* Sigler & Carmichael**

- 675 wooden lemon storage bin California P.R. Harding 1959 /DAOM 64000.
 3273 (T *Malbranchea flocciformis*) briny soil Chateau-Saline, Lorraine, France /J. Nicot [=ATCC 34530 =CBS 133.77 =IMI 211201].
 3785 salty soil France J. Villoutreix /CBS 361.69.
 4990 stored rape seed England /J. Lacey C-2623.

***Malbranchea fulva* Sigler & Carmichael**

- 1050 soil? Riverside Co. Inyokern area, Calif. Orr /G.F. Orr O-759.
 1708 soil nr. Palo Verde, Calif. G.F. Orr 1957 /G.F. Orr O-630.
 2849 wind tunnel contaminant Utah G.F. Orr 1967 /G.F. Orr 4TL3.
 2851 (T *Malbranchea fulva*) local air sample when checking air spora Utah Orr 1967 /G.F. Orr DPG-167 [=ATCC 34531 =CBS 135.77 =IMI 211202 =NRRL 5160 =O-2604 =O-3042].

- 3729 G.F. Orr DPG-45.
3889 mouse dung Fruita, Colorado /G.F. Orr O-1508.
3901 lizard dung Palo Verde area, California /G.F. Orr O-1319.

***Malbranchea graminicola* Sigler & Lacey**

- 4289 (T *Malbranchea graminicola*) hay Silsoe, Bedfordshire, England J. Lacey (C2426) 1978 /IMI 235595 [=GenBank AB361636 =ATCC 48175 =CBS 582.82 =DAOM 184713 =IMI 274927]. Molecular systematics: GenBank AB361636 supposedly representing *M. graminicola* IFM 41303=UAMH 4289 is incorrect (fide L. Sigler).
4292 hay Silsoe, Bedfordshire UK J. Lacey (C2427) 1978 /IMI 235596.
4385 hay Silsoe, Bedfordshire UK 1980 /J. Lacey C2400. Pigment: yellow-brown.
4386 wheat grain Abadan Tappeh, Iran 1978 /J. Lacey C2458.
4387 wheat grain Gharaghol, Iran 1979 /J. Lacey C2461. Pigment: black/gold.
4397 hay Silsoe, U.K. /J. Lacey C2509. Pigment: yellow-brown.
4451 wheat grain stored in underground pit 4-5 mo. (sample W12) Gharaghol, Iran 1976 /J. Lacey C2536 [=IMI 201979]. Pigment: yellow.
6681 ferruginous soil Kharga Oasis, New Valley Region, Western Desert, Egypt 1974 /J. Mouchacca M1. Pigment: brown.

***Malbranchea gypsea* Sigler & Carmichael**

- 1734 cat hair C.W. Emmons /G.F. Orr cat hair PBSF.
1841 bronchoscopy specimens from patients with pulmonary infection not coccidioidomycosis Chicago S. McMillen /G.F. Orr O-3226 [=SFVH 129 =GenBank L28066 (SSU) =GenBank L28073 (chitin synthase)]. Molecular systematics: phylogeny of *Coccidioides immitis* & *Malbranchea* spp (Pan, Sigler & Cole, *Microbiology* 140:1481-1494, 1994); phylogeny of Caliciaceae and prototunicate asci (Wedin & Tibell, *Can. J. Bot.* 75:1236-1242, 1997).
1842 bronchoscopy specimen from patient with pulmonary disease, not *Coccidioidomycosis* Chicago S. McMillen /G.F. Orr O-3283 [=SFVH 130].
1843 sputum ex patient with non-coccidioid respiratory infection Olive View Hospital, Los Angeles S. Froman /G.F. Orr ?O-1088 [=SFVH 149].
1975 (T *Malbranchea gypsea*) soil Bakersfield, Calif. Orr 1964 /G.F. Orr [=IMI 211203 =CBS 134.77 =ATCC 34532 =NCMH 1975].
4708 culture ex patient with colon cancer /J. Kane FR 907-82.
5902 toenail, serial isolate ex same patient as UAMH 5903 & 5904 Hamilton, Ont. Jan 1987 /R.C. Summerbell BB 152 [=UAMH 5903 =UAMH 5904].
5903 toenail, serial isolate ex same patient as UAMH 5902 & 5904 Hamilton, Ont. Dec 1986 /R.C. Summerbell BB 64 [=UAMH 5902 =UAMH 5904].
5904 toenail, serial isolate ex same patient as UAMH 5902 & 5903 Hamilton, Ont. Dec 1986 /R.C. Summerbell F 11082.86 [=UAMH 5902 =UAMH 5903].
6286 bronchial washings Toronto, Ont. 9 Aug 1988 /R.C. Summerbell FR 1868.88.
6287 drywall in house basement following condensation problem Toronto, Ont. R.C. Summerbell Aug 1988 /R.C. Summerbell.
6572 bronchial washing, male Houston, Texas 1989 /M.G. Rinaldi UTHSC 89-447.
6651 ex particles in Royal Egyptian mummy coffin Egypt /J. Mouchacca. Cycloheximide: resistant.
6829 toenail Toronto, Ont. 9 Jun 1990 /R.C. Summerbell FR 1464.
6917 ex dust Italian research base, Antarctic Coast R. Mercantini 1987 /R. Mercantini 14/35/A.
8634 rt foot skin scraping, female 32 yr High River, Alta. Provincial Lab of Southern Alberta 26 Jan 1996 /R. Rennie MY 0901. Cycloheximide: resistant // benomyl: sensitive.
8726 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 8-8B) T. Lumley (EI-09-S3F

08 Aug 1995 /R.S. Currah EI-09-S3F, 8-8B.

- 9012 skin, female 53 yr Quebec G. St-Germain /G. St-Germain LSPQ 452.
9116 toe nail, male 41 yr Alberta Prov. Lab. for Southern Alberta 6 Sep 1997 /R. Rennie MY 4661. Pigment: brown.

***Malbranchea pulchella* Sacc. & Penzig**

- 250 skin from face Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
1560 pulp sample ex headbox of paper towel mill N.Y. State Nov 1959 /C.J.K. Wang [=NCMH 365].
3189 card Gravesend, Kent, UK P. Russell (BS 421) 1954 /IMI 57206.
3783 ex R. Ciferri as strain Ravelloni Nov. 1938 /CBS 204.38.
3794 ex R. Ciferri as *M. kambayaskii*, Nov., 1938 /CBS 203.38.
3907 ex R. Ciferri as *M. bolognesii-chiurcoi* Nov. 1938 /CBS 202.38.
4508 old oak furniture U.K. /IMI 245108.
6666 ex air Lyon, France J. Mouchacca 1974 /J. Mouchacca M6. Pigment: tan.
6682 air Paris 1986 /J. Mouchacca M7.
7274 ex roots of epiphytic orchid *Maxillaria confusa* La Selva, Heredia Prov., Costa Rica K. Richardson 1 Mar 1991 /R.S. Currah K26a. Mycorrhizae: root endophyte epiphytic orchid *Maxillaria confusa*.
9101 slightly decayed wood (stage 1 decay), white spruce (*Picea glauca*) log, suspended above ground, some bark missing, in 29 yr post-fire site Slave Lake, Alta. 3-10C) T. Lumley (F681-02-S2E 10 Mar 1996 /R.S. Currah F681-02-S2E, 3-10C. Mesophilic: NG @ 37C // crystals: few // pigment: gold.

Malbranchea pulchella* var. *sulfurea* see *Malbranchea cinnamomea***Malbranchea sclerotica* see *Onychocola sclerotica******Malbranchea* sp.**

- 3914 soil Dugway, Utah /G.F. Orr O-1316.
3917 J. Ellis NRRL 6091.
4118 soil Argentina A.L. Borghi (1) /CDC 77-104307 (Y-332).
6665 soil sand dune, New Valley Region, Western Desert, Egypt J. Mouchacca 1974 /J. Mouchacca M2. Pigment: tan.
6667 R. Cailleux /J. Mouchacca M3. Pigment: green-brown.
6668 ambergris J. Nicot 1972 /J. Mouchacca M5. Pigment: red/brown // molecular systematics: BLAST match highest similarity (92-94%) with *Myxotrichum* species.
6732 mouse /D. Dixon soil 9-liver 4A. Pigment: brown.
7063 hand, female 24 yr Windsor, Ont. 6 Nov 1989 /R.C. Summerbell FR 2843. Pigment: yellow on CMA.
9102 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 4-15B) T. Lumley (EI-02-S11 15 Apr 1996 /R.S. Currah EI-02-S11, 4-15B. Benomyl: resistant.
9103 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 3-3D) T. Lumley (EI-01-S3D 3 Mar 1996 /R.S. Currah EI-01-S3D, 3-3D. Benomyl: sensitive.
9104 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 2-13A) T. Lumley (EI-13-S5E 13 Feb 1996 /R.S. Currah EI-13-S5E, 2-13A. Benomyl: sensitive // pigment: dark deposits occasionally along hyphae; brown.
9105 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 4-16B) T. Lumley (EI-02-S5G 16 Apr 1996 /R.S. Currah EI-02-S5G, 4-16B. Benomyl: sensitive.
9106 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 8-12C) T. Lumley (EI-13-S4F 12 Aug 1996 /R.S. Currah EI-13-S4F,

- 8-12C.
10036 shed dorsal skin ex Eastern indigo snake (*Drymarchon corais couperi*), female 6yr Buffalo Zoological Gardens, Buffalo, NY UAMH (UW117B-A) 27 Mar 2001 /UAMH (UW117B-A) [=GenBank AY124502 (SSU) =GenBank AY177302 (ITS)]. Cycloheximide: resistant // mesophilic: good growth @ 30C, strongly inhibited @ 35 C // molecular systematics: SSU rDNA & ITS sequence comparison with *Auxarthron* spp. (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002) // systematics/taxonomy: mating studies with *Malbranchea filamentosa* (Sigler L, Hambleton S, Flis A, Pare JA, Stud. Mycol. 47:111-122, 2002) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10249 cutaneous lesion ex hand Netherlands /CBS M236. Cycloheximide: slightly sensitive.
- 10919 ex bronchial washing /CDC 200810570. Molecular systematics: Blast match 91-93% ITS similarity with *Spiromastix* species // cycloheximide: tolerant (fide CDC).
- Malbranchea sulfurea* see *Malbranchea cinnamomea*
- Mallochia echinulata* (Dutta & Gosh) von Arx & Samson (syn. *Pseudoarachniotus echinulatus*, *Amauroascus echinulatus*)
- 3561 (T *Pseudoarachniotus echinulatus*) soil ex paddy field India G. Ghosh (G-10) /CBS 278.64 [=ATCC 15317 =NRRL A-12062].
- 3854 soil Baligadia, India Ghosh (GRG-36) /G.F. Orr O-1165 [=ATCC 24534 =CBS 168.76 =QM 9640].
- 5729 rotting leaves Pakistan /CBS 139.86.
- Mammaria echinobotryoides* Cesati
- 1258 peat soil Bradford Marsh, Ont. G.L. Barron Nov 1960 /DAOM 75368.
- 11606 swab ex skin of living female bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 31 C.2 skin ox [=Untereiner WUC M31]. Biodiversity: mycobiota of bat caves.
- Marasmius oreades* Fr.
- 5503 ex lawn Edmonton, Alta. R. Currah 20 Jul 1986 /R. Currah.
- 5750 basidiocarp ex lawn Brooks, Alta. K. Mallett Jun 1985 /K. Mallett Mo-17. Sesquiterpenoids (Ayer & al, Can. J. Chem. 67:773-778, 1989); norsesquiterpenes, sesquiterpenes (Ayer & Crow, Can. J. Chem. 67:1371-1780, 1989); agrocycin (Ayer & Crow, Can. J. Chem. 67:1371-1380, 1989). Culture conditions: produces arthroconidia.
- 5751 lawn Aylmer, Que. Y. Dalpe /K. Mallett Mo-32 [=DAOM 191129]. Culture conditions: no clamps, colony cottony, strong odor, identity needs confirmation.
- 5752 dikaryon ex cross of single spore isolates (fairy ring 4) lawn, Brooks, Alta. K. Mallett Jun 1986 /K. Mallett Mo-33. Culture conditions: forms arthroconidia.
- 5753 dikaryon ex cross of single spore isolates (fairy ring 20) Brooks, Alta. K. Mallett Jun 1986 /K. Mallett Mo-34.
- 5754 ex basidiocarp on lawn (fairy ring 7) Brooks, Alta. K. Mallett Jun 1986 /K. Mallett Mo-35.
- 5755 dikaryon, ex basidiocarp on lawn (fairy ring 21) Brooks, Alta. K. Mallett Jun 1986 /K. Mallett Mo-36.
- 6180 dikaryon ex basidiocarp on lawn Edmonton, Alta. (C) S. Abbott A. Flis Jul 1988 / (C) S. Abbott A. Flis.
- Mariannaea elegans* (Corda) Samson
- 677 DAOM 63698.
- 2887 soil under Jack Pine, 'A2 horizon' Petawawa, Ont. G.C. Bhatt May 1967 /G.C. Bhatt UW361.
- 2909 soil under cedar Puslinch, Ont. G.C. Bhatt Sep 1966 /G.C. Bhatt UW232.
- 4676 litter, old Pinus Devonian Bot. Garden, Alta. L. Sigler Oct 1982 /L. Sigler.
- 7212 decorticated log Cornell Plantation, Cornell Univ., Ithaca, NY K. Hodge Sep 1991 /K. Hodge KTH 9.
- 7490 mouse dung from sand dune Etang du Ouest Ile du Havre Aubert Magdalen IIs, PQ J. Scott 7 Jan 1991 /D. Malloch JS 141. Cyclic octapeptides, mariannins A-C, with antifungal potential (Gloer, Chpt 16, The Mycota IV, p 261, 1997).
- 9769 marsh soil University of Manitoba Field Station, Delta Marsh, MB J.W. Peart /J. Reid UM 296.
- Massariosphaeria typhicola* (Karsten) Leuchtman
- 10283 base of *Typha latifolia* plant at a small temporary lake Site 3, Elk Island National Park, Alta. M. Schulz (MS-8) 27-09-01 /R.S. Currah MS-8 [=DAOM 231301]. Culture conditions: utilizes starch and tannic acid; produced ascospores on TWA with *Typha* leaf after 8 mo @ 22C // cellulolytic // biodeteriogen/biodegradation: decomposition of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).
- Massariothea shawiae* (Sutton) Sutton
- 8763 soil ex interior building of ruins of Bidar Fort Bidar Dist., Karnataka State, India R.S. Khan 18 Dec 1989 /J.C. Krug TRTC 51338 [=IMI 348607].
- Mauginiella scaettae* Cavara
- 4291 Phoenix dactylifera Iraq K.K. Al-Hassan 1979 /IMI 243503.
- Melanoleuca graminicola* (Vel.) Kuehn & Mre.
- 6300 *Picea engelmannii* & *Pinus contorta* woods Bow-Crow Forest, Alta. S.P. Abbott 23 Sep 1988 /S.P. Abbott. Pigment: brown.
- Melanomma* sp.
- 372 Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Cellulolytic.
- Melanopsamma pomiformis* see *Stachybotrys albipes*
- Melanospora chionea* (Fr.) Corda
- 4617 ex bark with bark beetle gallery in Alpine fir; mixed with UAMH 4605 Hinton, Alta. L. Linarez Aug 1982 /L. Linarez. Culture conditions: Mixed with UAMH 4605 (*Leptodontidium beauverioides*) which is needed for ascospore germination.
- Melanospora fallax* Zukal
- 3052 pack rat dung San Bernardino Co., Calif. R.K. Benjamin 8 Oct 1965 /R.K. Benjamin RSA 1637.
- Melanospora* sp.
- 9615 desert soil sample Sinai, Egypt M. Caldach & A.M. Stchigel 25 Feb 1999 /J. Guarro FMR 6725 [=CBS 102190].
- Melanospora zamiae* Corda
- 7878 ex soil and plant debris Edmonton, Alta. L. Sigler (MMID) 20 Oct 1994 /L. Sigler (MMID).
- Melanotus alpiniae* (Berk.) Pilat
- 7159 ex roots of epiphytic orchid *Octomeria* sp. on fallen branch 5 cm diam La Selva, Heredia Prov., Costa Rica K. Richardson 29 Mar 1991 /R.S. Currah K178b. Mycorrhizae: status undetermined ? saprobe ? (Richardson et al, Lindleyana 8:127-137, 1993); root endophyte epiphytic orchid *Octomeria* sp..
- Meliniomyces bicolor* Hambleton & Sigler
- 10107 (T *Meliniomyces bicolor*) as authentic morphotype *Piceirhiza bicolorata*; ex roots of Southern beech (*Nothofagus procera*) seedling (#39) North Yorkshire, UK A. Taylor 1998 /T.

- Vralstad ARON 2805.S [=GenBank AJ243555 =AT67 =ARON 2805.S =G9 =GenBank AJ430147 =CBS 116122 =UNITE UDB000502]. Mycorrhizae: used to synthesize typical *P. bicolorata* ectomycorrhizae with Norway spruce (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000); mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype; authentic *Piceirhiza bicolorata* symbiont // molecular systematics: Hymenoscyphus ericae aggregate subclade 2, ITS1 genotype G9, morphology group 1 (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, *New Phytol.* 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (Hymenoscyphus ericae) aggregate (Hambleton S, Sigler L, *Stud. Mycol.* 53:1-27, 2005) // culture conditions: colony detaches from cellophane overlaid on PDA; colonies uniformly gray, felty to velvety.
- 10108 as morphotype *Piceirhiza bicolorata*: ex roots of oak (*Quercus robur*) seedling (#40) from dry, boreal oak-pine forest Kragero, Telemark, Norway T. Vralstad 1998 /T. Vralstad ARON 2893.S [=ARON 2893.S =GenBank AJ292203 =G11 =CBS 116123 =UNITE UDB000504]. Molecular systematics: Hymenoscyphus ericae aggregate subclade 2, ITS1 genotype G11, morphology group 1 (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, *New Phytol.* 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (Hymenoscyphus ericae) aggregate (Hambleton S, Sigler L, *Stud. Mycol.* 53:1-27, 2005) // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000); ectomycorrhizal in inoculation trials (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000); ectomycorrhizal with *Betula pubescens*, *Picea abies*, *Pinus sylvestris* but not mycorrhizal with *Vaccinium vitis-idaea* (Vralstad, Schumacher & Taylor, *New Phytol.* 153:143-152, 2002) // pigment: brown on CER // culture conditions: colony detaches from cellophane overlaid on PDA; colonies uniformly gray, felty to velvety.
- 10356 *Tsuga heterophylla* N Vancouver Is., BC P. Kroeger /M.L. Berbee pkc34 [=GenBank AY394885]. Molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (Hymenoscyphus ericae) aggregate (Hambleton S, Sigler L, *Stud. Mycol.* 53:1-27, 2005).
- 11175 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.74 [=GenBank HQ157880 ITS]. Pigment: yellow // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11274 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (B1) Fall-2006 /G. Grelet E = GT01P1 [=GenBank FN179335 ITS =strain E]. Mycorrhizae: *Piceirhiza bicolorata* ectomycorrhizae of pine (Grelet GA, Johnson D, Vralstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010); ericoid mycorrhiza (Grelet GA; Johnson D; Paterson E; Anderson IC, Alexander II, *New Phytologist* 182:359-366, 2009) // molecular systematics: genome sequence (<http://genome.jgi.doe.gov/Melbi2/Melbi2.home.html>).
- 11275 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Hill of Fare planted Scots Pine Forest, Echt, Aberdeenshire, Scotland G.A. Grelet (B2) Fall-2006 /G. Grelet FG54P1c [=GenBank FN678888 ITS]. Mycorrhizae: *Piceirhiza bicolorata* ectomycorrhizae of pine (Grelet GA, Johnson D, Vralstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010); co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vralstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010); ectomycorrhizae.
- Meliniomyces sp.**
- 10112 as morphotype *Piceirhiza bicolorata*; ex roots of birch (*Betula pubescens*) seedling (#32) from 5 yr clear-cut spruce forest Eidsvoll, Akershus, Norway T. Vralstad 1998 /T. Vralstad ARON 2917.S [=GenBank AJ243548 =ARON 2917.S =GenBank AJ292200 =G2 =CBS 116127 =UDB000506]. Molecular systematics: Hymenoscyphus ericae aggregate subclade 4, ITS1 genotype G2, morphology group 3 (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001; Vralstad, Schumacher & Taylor, *New Phytol.* 153:143-152, 2002); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, *New Phytol.* 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (Hymenoscyphus ericae) aggregate (Hambleton S, Sigler L, *Stud. Mycol.* 53:1-27, 2005); G2 isolate // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000); ectomycorrhizal in inoculation trials (Vralstad, Schumacher & Taylor, *New Phytol.* 153:143-152, 2002) // culture conditions: colony detaches from cellophane overlaid on PDA; dark grey & light sectors.
- 11128 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 6-Sep-2007 /G. Kernaghan ARSL 060907.26 [=GenBank HQ157838 ITS]. Molecular systematics: Blast match 98% ITS similarity with *M. vraalstadiae* AJ292200 UAMH 10112 (G2 type) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11257 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 19-May-2007 /G. Kernaghan ARSL 170507.42II. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11258 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 070907.4. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11259 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 060907.1. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11260 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 060907.18II. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11261 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 18-May-2007 /G. Kernaghan ARSL 170507.25I. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11262 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Mt. MacKenzie, Cape Breton Highlands National

- Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 060907.36. Mycorrhizae: boreal root endophyte ex Cenococcum geophilum root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11263 ex Cenococcum geophilum mycorrhizae of paper birch (*Betula papyrifera*) Duparquet Lake (FERLD), Quebec (C) G. Patriquin G. Kernaghan 22-May-2007 /G. Kernaghan ARSL 230507.46. Mycorrhizae: boreal root endophyte ex Cenococcum geophilum root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11264 Isolated from Cenococcum geophilum mycorrhizae of paper birch (*Betula papyrifera*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 060907.27. Mycorrhizae: boreal root endophyte ex Cenococcum geophilum root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11276 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Hill of Fare planted Scots Pine Forest, Echt, Aberdeenshire, Scotland G.A. Grelet Fall-2006 /G. Grelet FG34P1 [=GenBank FN678887 ITS =Grelet VR4]. Mycorrhizae: *Piceirhiza bicolorata* ectomycorrhiza of pine (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, New Phytologist 188:210-222, 2010).
- 11277 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Hill of Fare planted Scots Pine Forest, Echt, Aberdeenshire, Scotland G.A. Grelet Fall-2006 /G. Grelet FG17P2 [=GenBank FN678885 ITS =Grelet VR1]. Mycorrhizae: *Piceirhiza bicolorata* ectomycorrhiza of pine (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, New Phytologist 188:210-222, 2010); ectomycorrhizae.
- 11278 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Hill of Fare planted Scots Pine Forest, Echt, Aberdeenshire, Scotland G.A. Grelet Fall-2006 /G. Grelet FG17P3b [=GenBank FN678886 ITS =Grelet VR2]. Mycorrhizae: ectomycorrhizae; *Piceirhiza bicolorata* ectomycorrhiza of pine (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, New Phytologist 188:210-222, 2010).
- Meliniomyces variabilis*** Hambleton & Sigler (syn. *Variable white taxon, Sterile white I*)
- 5900 *Picea mariana* mycorrhizae Burt Lake, Burt Twp., Timiskaming Dist., Ont. R.C. Summerbell 1982 /R.C. Summerbell RCS W369 [=GenBank AY838783 (ITS)]. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989; Summerbell, Can. J. Bot. 66:553-557, 1988); cultural group (Summerbell & Malloch in Can. Workshop on Mycorrhizae in Forestry, Univ. Laval, Quebec 1988) // molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 5979 serially washed mycorrhiza of *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. R.C. Summerbell 9 Sep 1982 /R.C. Summerbell W 611 [=DMCC 450 =GenBank AY838784 (ITS)]. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 66:553-557, 1988; Summerbell, Can. J. Bot. 67:1085-1095, 1989); cultural group (Summerbell & Malloch in Can. Workshop on Mycorrhizae in Forestry, Univ. Laval, Quebec 1988); synthesis not established with *Picea mariana* (Summerbell, New Phytol. 105:437-448, 1989); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 6826 *Picea sitchensis* (sitka spruce) forest Ireland M. Stuart /R.C. Summerbell BB 996 [=GenBank AY838785 (SSU-ITS)]. Mycorrhizae: cultural group (Summerbell & Malloch in Can. Workshop on Mycorrhizae in Forestry, Univ. Laval, Quebec 1988) // molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 6827 *Picea sitchensis* (sitka spruce) forest Ireland M. Stuart /R.C. Summerbell BB 997 [=GenBank AY838786 (ITS)]. Mycorrhizae: cultural group (Summerbell & Malloch in Can. Workshop on Mycorrhizae in Forestry, Univ. Laval, Quebec 1988) // molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 6828 *Picea sitchensis* (sitka spruce) forest Ireland M. Stuart /R.C. Summerbell BB 998. Mycorrhizae: cultural group (Summerbell & Malloch in Can. Workshop on Mycorrhizae in Forestry, Univ. Laval, Quebec 1988) // molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 8861 (*T Meliniomyces variabilis*) roots *Rhododendron albiflorum* (white-flowered rhododendron) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-70Ac) 29 Aug 1994 /R.S. Currah S-70Ac [=CBS 116124 =GenBank AY762619 (SSU-ITS)]. Mycorrhizae: endophyte (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 8862 roots *Vaccinium membranaceum* (tall bilberry) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-71Aa) 29 Aug 1994 /R.S. Currah S-71Aa [=GenBank AY838787 (ITS)]. Mycorrhizae: endophyte (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 8863 roots *Phyllodoce empetriformis* (red heather) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-77Ac) 29 Aug 1994 /R.S. Currah S-77Ac [=GenBank AY838788 (ITS)]. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // mycorrhizae: endophyte; ericoid endophyte (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); colonized roots of *Rhododendron groenlandicum* and *Picea mariana* in resynthesis experiments (Piercey M, Thormann MN, Currah RS, Mycorrhiza 12:175-180, 2002).
- 8864 roots *Empetrum nigrum* (crowberry) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-86Ae) 31 Aug 1994 /R.S. Currah S-86Ae [=CBS 116125 =GenBank AY838789 (SSU-ITS)]. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // mycorrhizae: ericoid endophyte (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); colonized roots of *Picea mariana* in resynthesis experiments (Piercey M, Thormann MN, Currah RS, Mycorrhiza 12:175-180, 2002); failed to form ericoid infection units in *Rhododendron groenlandicum* in resynthesis experiments (Piercey M, Thormann MN, Currah RS, Mycorrhiza 12:175-180, 2002).
- 10022 roots of *Cypripedium acaule* in pine plantation with white pine, red oak, *Maianthemum canadense*, *Cypripedium acaule* and a few scattered ferns St. Williams, ON C. Zelmer 23 Jun

- 1997 /R.S. Currah Z 236-1c.3dupl [=GenBank AY838790 (ITS)]. Molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 10028 surface sterilized roots of *Cypripedium acaule* found in boundary layer between pine needle duff & grey sandy mineral layer of red pine plantation (*Pinus*) with understory of mainly oak saplings, young white pine & wintergreen (*Chimaphila* sp.) St. Williams, Ont. C. Zelmer 23 Jun 1997 /R.S. Currah Z 238-2b.1 [=GenBank AY838791 (ITS)]. Molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // biodiversity: endophyte of *Cypripedium acaule*; pine ectomycorrhizae seen in same understory layer.
- 10029 surface sterilized roots of *Cypripedium acaule* found in boundary layer between pine needle duff & grey sandy mineral layer of red pine plantation (*Pinus*) with understory of mainly oak saplings, young white pine & wintergreen (*Chimaphila* sp.) St. Williams, Ont. C. Zelmer 3 Oct 1997 /R.S. Currah Z 258#4 [=GenBank AY838792 (SSU) =GenBank AY838793 (ITS)]. Molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 10109 roots of Scots pine (*Pinus sylvestris*) seedling (#27) from edge of a coppermine spoil Follidal, Oppland, Norway T. Vralstad 1998 /T. Vralstad ARON 2879.S [=GenBank AJ243551 =ARON 2879.S =G5 =GenBank AJ292201 =ARON 2878.S]. Systematics/taxonomy: morphology group 2 (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000) // molecular systematics: *Hymenoscyphus ericae* aggregate subclade 3, ITS1 genotype G5, morphology group 2 (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001; Vralstad, Schumacher & Taylor, New Phytol. 153:143-152, 2002); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000); nonmycorrhizal in inoculation trials (Vralstad, Schumacher & Taylor, New Phytol. 153:143-152, 2002).
- 10110 roots of Scots pine (*Pinus sylvestris*) seedling (#26) from dry, boreal oak-pine forest Kragero, Telemark, Norway T. Vralstad 1998 /T. Vralstad ARON 2900.S [=ARON 2900.S =GenBank AJ243549]. Molecular systematics: *Hymenoscyphus ericae* aggregate subclade 3, ITS1 genotype G3, morphology group 2 (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000).
- 10113 roots of poplar (*Populus tremuloides*) seedling (#38) from dry, boreal oak-pine forest Kragero, Telemark, Norway T. Vralstad 1998 /T. Vralstad ARON 2903.S [=ARON 2903.S =GenBank AJ308338]. Molecular systematics: *Hymenoscyphus ericae* aggregate subclade 3, ITS1 genotype G3, morphology group 4 (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001; Vralstad, Schumacher & Taylor, New Phytol. 153:143-152, 2002); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000); nonmycorrhizal in inoculation trials (Vralstad, Schumacher & Taylor, New Phytol. 153:143-152, 2002).
- 10114 roots of oak (*Quercus robur*) seedling (#40) from dry, boreal oak-pine forest Kragero, Telemark, Norway T. Vralstad 1998 /T. Vralstad ARON 2894.S [=GenBank AJ243550 =ARON 2894.S =GenBank AJ308339 =G4]. Molecular systematics: *Hymenoscyphus ericae* aggregate subclade 3, ITS1 genotype G4, morphology group 2 (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001; Vralstad, Schumacher & Taylor, New Phytol. 153:143-152, 2002); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000); nonmycorrhizal in inoculation trials (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000).
- 10115 roots of 2-4 yr old natural, rejuvenated wild spruce (*Picea abies*) seedling (#17) from 5 yr clear-cut spruce forest Eidsvoll, Akershus, Norway T. Vralstad 1997 /T. Vralstad ARON 2919.S [=GenBank AJ243549 =ARON 2919.S =G3 =GenBank AJ430148]. Molecular systematics: *Hymenoscyphus ericae* aggregate subclade 3, ITS1 genotype G3, morphology group 2 (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005) // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000).
- 10380 *Tsuga heterophylla* N. Vancouver Is., BC P. Kroeger /M.L. Berbee pkc09 [=GenBank AY394898]. Molecular systematics: BLASTs with *Hymenoscyphus ericae* complex; phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 10381 *Tsuga heterophylla* N. Vancouver Is., BC P. Kroeger /M.L. Berbee pkc32 [=GenBank AY394886 =GenBank AY394917 ITS]. Molecular systematics: BLASTs with *Hymenoscyphus ericae* complex; phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 10382 *Tsuga heterophylla* N. Vancouver Is., BC P. Kroeger /M.L. Berbee pkc21 [=GenBank AY394902 ITS]. Molecular systematics: BLASTs with *Hymenoscyphus ericae* complex; phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 10420 culture ex root (44) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCTra 323 [=GenBank AF149083]. Mycorrhizae: ambiguous (Berch S, Allen TR, Berbee ML, Plant and Soil 244:55-66, 2002) // molecular systematics: phylogenetic relationships within the *Rhizoscyphus ericae* (*Hymenoscyphus ericae*) aggregate (Hambleton S, Sigler L, Stud. Mycol. 53:1-27, 2005).
- 11129 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 7-Sep-2007 /G. Kernaghan ARSL 070907.15

- [=GenBank HQ157934 ITS]. Molecular systematics: Blast match 99-100% with *Meliniomyces variabilis* // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11265 ex *Vaccinium* hair root adjacent to *Piceirhiza bicolorata* ectomycorrhizal pine root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (Var1) Fall-2006 /G. Grelet F = GT02V1. Mycorrhizae: *Vaccinium* hair root; Strain cited in some papers as F = GT02P1 but should be GT02V1; ericoid mycorrhiza (Grelet GA; Johnson D; Paterson E; Anderson IC, Alexander II, *New Phytologist* 182:359-366, 2009); co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010) // molecular systematics: ITS sequence identical to FN179336 UAMH 11266 but not deposited (Grelet GA; Johnson D; Paterson E; Anderson IC, Alexander II, *New Phytologist* 182:359-366, 2009).
- 11266 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (Var103) Fall-2006 /G. Grelet Hc = GT03P1 [=GenBank FN179336 ITS]. Mycorrhizae: *Piceirhiza bicolorata* ectomycorrhiza of pine; ericoid mycorrhiza (Grelet GA; Johnson D; Paterson E; Anderson IC, Alexander II, *New Phytologist* 182:359-366, 2009); Strain cited in some papers as Hc = GT03V1 but should be GT03P1 (from *Piceirhiza*); co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).
- 11267 ex *Vaccinium* hair root adjacent to *P. bicolorata* ectomycorrhizal pine root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (Var 37/38) Fall-2006 /G. Grelet GG11V3 = GS11V3a [=GenBank FN678869 ITS =Grelet GS11V3a / GG11V3]. Mycorrhizae: ericoid mycorrhiza; co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).
- 11268 ex *Vaccinium* hair root adjacent to *P. bicolorata* ectomycorrhizal pine root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (Var39) Fall-2006 /G. Grelet GG11V4 = GS11V4a [=GenBank FN678870 ITS =Grelet GS11V4a / GG11V4]. Mycorrhizae: co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).
- 11269 ex *Vaccinium* hair root adjacent to *P. bicolorata* ectomycorrhizal pine root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (Var41/42) Fall-2006 /G. Grelet GG11V5 = GS11V5a [=GenBank FN678871 ITS =Grelet GS11V5a / GG11V5]. Mycorrhizae: co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).
- 11270 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (Var89) Fall-2006 /G. Grelet GT3P3 [=GenBank FN678858 ITS]. Mycorrhizae: co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).
- 11271 ex *Vaccinium* hair root adjacent to *P. bicolorata* ectomycorrhizal pine root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet (Var94) Fall-2006 /G. Grelet GT3V3 [=GenBank FN678860 ITS]. Mycorrhizae: co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).
- 11272 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Hill of Fare planted Scots Pine Forest, Echt, Aberdeenshire, Scotland G.A. Grelet (Var2) Fall-2006 /G. Grelet FG15P1 [=GenBank FN678877 ITS]. Mycorrhizae: co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).
- 11273 ex *Vaccinium* hair root adjacent to *P. bicolorata* ectomycorrhizal pine root tip, in soil core 0-12 cm deep Hill of Fare planted Scots Pine Forest, Echt, Aberdeenshire, Scotland G.A. Grelet Fall-2006 /G. Grelet FG15V1 [=GenBank FN678878 ITS =Grelet Var3]. Mycorrhizae: co-colonization of ectomycorrhizal and ericoid roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, *New Phytologist* 188:210-222, 2010).

Meliniomyces vraolstadae Hambleton & Sigler

- 10111 (T *Meliniomyces vraolstadae*) as morphotype *Piceirhiza bicolorata*; ex roots of birch (*Betula pubescens*) seedling (#31) from 5 yr clear-cut spruce forest Eidsvoll, Akershus, Norway T. Vralstad 1998 /T. Vralstad ARON 2916.S [=GenBank AJ243547 =ARON 2916.S =GenBank AJ292199 =G1 =CBS 116126]. Molecular systematics: Hymenoscyphus ericae aggregate subclade 5, ITS1 genotype G1, morphology group 3 (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000; Vralstad, Ph.D. Dissertation, 2001; Vralstad, Schumacher & Taylor, *New Phytol.* 153:143-152, 2002); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, *New Phytol.* 155:131-148, 2002); phylogenetic relationships within the *Rhizoscyphus ericae* (Hymenoscyphus ericae) aggregate (Hambleton S, Sigler L, *Stud. Mycol.* 53:1-27, 2005); G1 isolate // mycorrhizae: mycobiont of *Piceirhiza bicolorata* ectomycorrhizal morphotype (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000); superficial hyphal association with roots of *Betula pubescens* & *Vaccinium vitis-idaea* (Vralstad, Schumacher & Taylor, *New Phytol.* 153:143-152, 2002) // culture conditions: dark grey & light sectors; colony detaches from cellophane overlaid on PDA.
- 11203 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 17-May-2007 /G. Kernaghan ARSL 170507.36. Molecular systematics: 99% ITS similarity with UAMH 11204; Blast match 98% ITS similarity in UAMH database with AJ292199 M. *vraolstadae* (G1 = UAMH 10111) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip.
- 11204 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 07-Sep-2007 /G. Kernaghan ARSL 070907.12 [=GenBank HQ157928 ITS]. Molecular systematics: 99% ITS similarity with UAMH 11204; Blast match 98% ITS similarity in UAMH database with AJ292199 M. *vraolstadae* (G1 = UAMH 10111) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).

Memmoniella echinata see *Stachybotrys echinata*

Meria coniospora Drechsler

4730 G.L. Barron.

Merimbla ingelheimense (van Beyma) Pitt (morph

Talaromyces avellaneus)

2531 skin between toes male Edmonton, Alta. J.W. Carmichael 10

- Aug 1965 /J.W. Carmichael [=FRR 2840].
5013 (T *Penicillium ingelheimense*) air Germany F.H. van Beyma 1942 /J.I. Pitt FRR 2110 [=NRRL 2110 =IMI 234977 =CBS 163.42 =GenBank GU092962 28S =GenBank GU092829 Cal =GenBank GU092756 BetaTub =GenBank D14408 18S].

Merulius tremellosus see *Phlebia tremellosus*

Metarhizium microspora D.W. Li, Cowles & Vossbrinck

- 10901 (T *Metarhizium microspora*) pathogen of elongate hemlock scale, *Fiorinia externa* (Ferris) Homoptera, Diaspididae Coventry, CT (I) De-Wei Li; (C) R.S. Cowles Oct. 2006 /De-Wei Li BPI 878276 holotype [=ARSEF 8676 =BPI 878276 (holotype) =GenBank EU420127 EF1 alpha =GenBank EF543262 ITS =GenBank EU420126 SSU]. Biocontrol: entomopathogen of elongate hemlock scale *Fiorinia externa* (Homoptera: Diaspididae) (Li, D-W, Cowles RS, Vossbrinck CR, *Mycologia* 100: 460-466, 2008).

Metarhizium anisopliae (Metschnikov) Sorokin

- 421 insect larvae West Virginia 1954 /H.L. Barnett 1015 [=GenBank EU307899 ITS =LRC 183]. Application: evaluation of entomopathogenic isolates (Entz SC, Kawchuk LM, Johnson DL, *BioControl* 53:327-339, 2008); diagnostic assay for detection of entomopathogen *Metarhizium anisopliae* var. *acidum* (Entz SC, Johnson DL, Kawchuk LM, *Mycol. Res.* 109:1302-1312, 2005) // molecular systematics: genetic diversity of *Metarhizium anisopliae* var. *anisopliae* in southwestern BC (Inglis GD, Duke GM, Goettel MS, Kabaluk JT, *J Invertebr Pathol* 98:101-113, 2008); BLAST match 100% ITS similarity with *Metarhizium anisopliae* isolates using trimmed sequence EU307899 (fide UAMH 2014).
1674 contaminant ex UAMH 965 Edmonton, Alta. J.W. Carmichael 14 Jun 1963 /J.W. Carmichael.
4450 soil sample, 0-6in depth Bare Creek Reservoir, Alta. R. Currah 20 Jun 1981 /R.S. Currah 81-102-4 [=LRC 186 =GenBank EU307900 ITS]. Application: evaluation of entomopathogenic isolates (Entz SC, Kawchuk LM, Johnson DL, *BioControl* 53:327-339, 2008); diagnostic assay for detection of entomopathogen *Metarhizium anisopliae* var. *acidum* (Entz SC, Johnson DL, Kawchuk LM, *Mycol. Res.* 109:1302-1312, 2005); entomopathogenic fungi as potential biocontrol agents of the honey bee parasitic mite *Varroa destructor* (Hamiduzzaman MM, Sinia A, Guzman-Novoa E, Goodwin PH, *J Invertebr Pathol* 111:237-243, 2012); UAMH 4450 of *M. anisopliae* and UAMH 1069, UAMH 9744 of *B. bassiana* killed more than 50% of the varroa mites (Hamiduzzaman MM et al 2012) // molecular systematics: genetic diversity of *Metarhizium anisopliae* var. *anisopliae* in southwestern BC (Inglis GD, Duke GM, Goettel MS, Kabaluk JT, *J Invertebr Pathol* 98:101-113, 2008); Blast match 99-100% ITS similarity with *Metarhizium anisopliae* isolates using trimmed sequence EU307900 (fide UAMH 2014).
6528 dead dragon fly Fanny Bay, B.C. (C) J.W. Carmichael Oct 1989 /J.W. Carmichael.
9197 from soils using waxworm (*Galleria mellonella*) as bait Guelph, Ont. M. Bidochka /M.J. Bidochka GUA2 2iv. Biocontrol: entomopathogenic fungi as potential biocontrol agents of the honey bee parasitic mite *Varroa destructor* (Hamiduzzaman MM, Sinia A, Guzman-Novoa E, Goodwin PH, *J Invertebr Pathol* 111:237-243, 2012); *Metarhizium anisopliae* UAMH 9197 and 9198 caused more than 90% varroa mite mortality (Hamiduzzaman MM et al 2012).
9198 from soils using waxworm (*Galleria mellonella*) as bait Stratford, Ont. M. Bidochka /M.J. Bidochka STA2 2iii. Biocontrol: entomopathogenic fungi as potential biocontrol agents of the honey bee parasitic mite *Varroa destructor* (Hamiduzzaman MM, Sinia A, Guzman-Novoa E, Goodwin PH, *J Invertebr Pathol* 111:237-243, 2012); *Metarhizium anisopliae* UAMH 9197 and 9198 caused more than 90%

- varroa mite mortality (Hamiduzzaman MM et al 2012).
9223 corneal scrapings, healthy male 18 yr with no history of ocular trauma Bogata, Columbia M.C. de Garcia /M.C. de Garcia. Human/animal pathogen: keratitis in an immunocompetent host (Cepero de Garcia et al., *J. Med. Vet. Mycol.* 35:361-363, 1997); first reported case of visceral isolation in a heart transplant patient, excellent patient response to amphotericin B, no response to intrakonazole (Cepero de Garcia et al., *J. Med. Vet. Mycol.* 35:361-363, 1997).
9869 bronch wash, male 68 yr Timmins, ON 14 Sep 2000 /R. Rennie MY 6388. Mesophilic: NG @ 37C (fide UAH).
9902 bronchial lavage, male 47 yr Alberta 5 Oct 2000 /R. Rennie MY 7433.
9940 shed skin ex shingleback skink (*Tiliqua rugosus*), male 7yr Micke Grove Zoo, Lodi CA UAMH (UW067B-D) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, *J. Herpetol. Med. Surg.* 13:10-15, 2003).
10121 cuticle, coffee berry borer (*Hypothenemus hampei*) on artificial diet El Colegio de la Frontera Sur (ECOSUR), Chiapas, Mexico J. Perez 27 Jun 2001 /F. Vega DI-CU R25-12.
10410 ex biopsy left axillary lymph node, male 55 yr; DE + for hyphae Prince Albert, SK L. Congly 2004 /H. Congly MI 2188-03. Mesophilic: NG @ 35C.
11138 fungal pneumonia in leucistic (albino) American alligator (*Alligator mississippiensis*); histopathology + for hyphae and conidia in palisades + oxalic acid crystals Veterinary Medical Center, College of Veterinary Medicine, University of Florida K. Conley 4-Sep-2009 /K. Conley N09-353 [=Genbank HQ539658 ITS]. Human/animal pathogen: severe pneumonia in Alligator mississippiensis associated with oxalosis (Hall NH, Conley K, Berry C, Farina L, Sigler L, Wellehan JF, Roehrl MHA, Heard D, *J Zoo Wild Med* (in press) 2011) // molecular systematics: Blast match 99% ITS similarity to *Metarhizium anisopliae* (fide UAMH 2010) // culture conditions: produced oxalic acid crystals.

Metarhizium brunneum Petch

- 2801 (T epitype of *Metarhizium brunneum*) wireworm of *Agriotes* sp. (Coleoptera) Forest Grove, OR L.P. Rockwood 29-Jun-1933 /E. Simmons QM 191 [=CBS 316.51 =IMI 014746 =GenBank EU248935 RPB2 =NRRL 1944 =ARSEF 2107 =BPI878293 epitype holotype =LRC 206 =GenBank EU307905 ITS =QM 191 =GenBank KC164574 =GenBank KC164565 =GenBank KC164556 =GenBank KC164547 =GenBank KC164538 =GenBank KC164529 =GenBank KC164520 =GenBank KC178691 ITS =GenBank KC178691 =GenBank EU248826 Btub =MUCL 9645 =GenBank EU248855 TEF =GenBank EU248907 RPB1]. Molecular systematics: genetic diversity of *Metarhizium anisopliae* var. *anisopliae* in southwestern BC (Inglis GD, Duke GM, Goettel MS, Kabaluk JT, *J Invertebr Pathol* 98:101-113, 2008); genome-assisted development of nuclear intergenic sequence markers for entomopathogenic fungi of the *Metarhizium anisopliae* species complex (Kepler RM, Rehner SA, *Mol Ecol Resour* 13:210-217, 2013); phylogeny of the *Metarhizium anisopliae* lineage (Bischoff JF, Rehner SA, Humber RA, *Mycologia* 101:512-530, 2009); epitypification of *Metarhizium brunneum* (Bischoff JF et al 2009) // culture conditions: colonies tan colored.

Metschnikowia pulcherrima see *Candida pulcherrima*

Metschnikowia reukaufii Pitt & Miller (morph *Candida reukaufii*)

- 7079 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 638) Aug 1990 /D. Inglis (MR 638).

Meyerozyma guilliermondii (Wick.) Kurtzman & M. Suzuki

- (morph *Candida guilliermondii*)
388 origin unknown / .
4929 A.S. Sekhon.
9408 bertha army worm Alberta A. Keddie 1998 /B.A. Keddie MACO-01/6-15. Culture conditions: API 20C AUX profile # 6776373 (fide UAMH).
10405 (T *Candida guilliermondii*) ex sputum, patient with bronchomycosis A. Castellani /ATCC 6260 [=ATCC 7350 =CBS 566 =IFO 10279 =JCM 1539 =NRRL Y-324]. Application: Preceptrol culture, quality control strain for API identification.

Microascus albonigrescens (Sopp) Curzi (syn. *Petriella proteophila*; morph *Scopulariopsis proteophila*)

- 3168 sandy soil & dung cattle feeder lot Ontario, California J.W. Carmichael 6 Feb 1969 /J.W. Carmichael. Psychrophilic: opt. 18C // cycloheximide: sensitive (no growth MYC).
4757 carnivore dung Fort McMurray, Alta. R. Currah (81-189) 1983 /R. Currah (81-189). Cellulolytic.
4953 (T *Petriella proteophila*) forest soil treated with urea Mt. Kyojumi, Japan Y. (81-AU-727-HA) Horie 27 Jul 1981 /S.-I. Udagawa NHL 2913. Cellulolytic // systematics/taxonomy: synonymy of *Petriella proteophila* with *Microascus albonigrescens* (Abbott SP, Holomorph studies of the Microascaceae, Ph.D. dissertation, 2000) // biodiversity: urea amended soil.
8487 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 1-18B) T. Lumley (EI-01-S1F 13-Sep-1995 /R.S. Currah EI-01-S1F, 1-18B. Cycloheximide: sensitive // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
8490 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. T. Lumley (EI-01-S5H) 13 Sep 1995 /R.S. Currah EI-01-S5H. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
8753 debris of red squirrel (*Tamiasciurus hudsonicus*) midden under jack pine (*Pinus banksiana*) North Buck Lake, Alta S.P. Abbott (SA-M158) 21-Oct-1996 /S.P. Abbott (SA-M158) [=IMI 377814 =IFO 33039].
8851 Japan K. Tubaki 1968 /T. Ito IFO 8988. Cycloheximide: sensitive (no growth MYC).
9148 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 4-16A) T. Lumley (EI-02-S4B 16 Apr 1996 /R.S. Currah EI-02-S4B, 4-16A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
9322 Massachusetts, USA Harvard University (50) R. Thaxter /NRRL 1571. Benomyl: resistant (2 ppm) // systematics/taxonomy: description (Barron et al., CJB 39: 1609-1631. 1961).
9529 dry, rotted wood (stage 3 decay), aspen log (*Populus tremuloides*) Slave Lake, Alta T. Lumley (F822-03-S1E) 29 Jan 1999 /R.S. Currah F822-03-S1E. Cycloheximide: resistant (MYC) // benomyl: resistant // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Microascus brevicaulis S.P. Abbott (morph *Scopulariopsis brevicaulis*)

- 363 hairs ex neck Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael [=LSHB Sc.114 =IMI 86929] + mates with UAMH 9092. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001); fits species concept of *Scopulariopsis koningii* (fide Abbott et al.).
644 silk worm chrysalis Mount Hawa, Zaire R.L. Steycurt 1952 /IMI 49528 [=ATCC 36840] - mates with UAMH 9090. Biodeteriogen/biodegradation: fungus resistance testing // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).

- 943 Caracas, Venezuela 1955 /NRRL A6185 - mates with UAMH 9090. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
1197 straw ex birdhouse roosts Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael self-fertile. Cycloheximide: resistant (MYC) // benomyl: resistant (2 ppm) // systematics/taxonomy: anamorph-teleomorph connection (Abbott, Sigler & Currah, Mycologia 90:297-302, 1998).
3753 dead housefly larvae Lethbridge, Alta /R.G. Bell self-fertile. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // systematics/taxonomy: anamorph-teleomorph connection (Abbott, Sigler & Currah, Mycologia 90:297-302, 1998).
7770 (T *Microascus brevicaulis*) indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 428) 11 Mar 1994 /S.P. Abbott (OHS 428) [=CBS 127812 =IFO 33040 =IMI 377809 =K(M)54670 Isotype] self-fertile. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // systematics/taxonomy: anamorph-teleomorph connection (Abbott, Sigler & Currah, Mycologia 90:297-302, 1998) // culture conditions: produced ascomata on OAT in 6-25 wk (fide Abbott et al.).
7880 indoor air of basement of home ex RCS strip Calgary, Alta. S.P. Abbott (SA-M26) 10 Jan 1995 /S.P. Abbott (SA-M26) [=CBS 127825] self-fertile. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // systematics/taxonomy: anamorph-teleomorph connection (Abbott, Sigler & Currah, Mycologia 90:297-302, 1998) // culture conditions: produced ascomata on OAT in 6-25 wk.
8497 Meju, Korean fermented soybeans Chuncheon, Korea J.D. Lee (A-1-2) /T. Nakase JCM 2619 + mates with UAMH 9092. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
8627 outside air ex RCS strip Barrhead, Alta S.P. Abbott (SA-M76) 20-Mar-1996 /S.P. Abbott (SA-M76) self-fertile. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // systematics/taxonomy: anamorph-teleomorph connection (Abbott, Sigler & Currah, Mycologia 90:297-302, 1998).
8628 burnt, hard wood of black spruce (*Picea mariana*) 15 km north of Mariana Lake, Alta S.P. Abbott (SA-M137) 16-Aug-1996 /S.P. Abbott (SA-M137) - mates with UAMH 9090. Benomyl: resistant (2 ppm) // cycloheximide: resistant // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
8702 atmosphere, cleared site Innisfail, Queensland, Australia J. Upsher 1985 /L. Montelli AMRL 1675 + mates with UAMH 9092. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
8785 Manchester, UK NCTC/ BCIRA 1930 /IMI 61424 [=LSHB Sc. 5] + mates with UAMH 9092. Cycloheximide: resistant (MYC) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
9040 outside air ex RCS strip Winnipeg, Manitoba S.P. Abbott (SA-M31) 21 Dec 1994 /S.P. Abbott (SA-M31) - mates with UAMH 9090. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001); fits species concept of *Scopulariopsis koningii* (fide Abbott et al.).
9090 single ascospore isolate ex UAMH 8627 Edmonton, Alta. S.P. Abbott (Mb 4) 5 May 1997 /S.P. Abbott (Mb 4) + mating type UAMH 9092 mates with UAMH 9093, 9406 (infertile ascomata with UAMH 9092). Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
9091 single ascospore isolate ex UAMH 8627 Edmonton, Alta. S.P. Abbott (Mb 10) 5 May 1997 /S.P. Abbott (Mb 10) + mates with UAMH 9093, 9406 (infertile ascomata with UAMH 9092). Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
9092 single ascospore isolate ex UAMH 8627 Edmonton, Alta. S.P. Abbott (Mb 3) 5 May 1997 /S.P. Abbott (Mb 3) - mating type UAMH 9090 mates with UAMH 9407 (infertile ascomata with UAMH 9090, 9091). Systematics/taxonomy: mating tests

- (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9093 single ascospore isolate ex UAMH 8627 Edmonton, Alta. S.P. Abbott (Mb 7) 5 May 1997 /S.P. Abbott (Mb 7) - mates with UAMH 9090, 9091, 9407. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9139 pupa of *Pteronius pini* Netherlands J. Rozsypal /CBS 335.35 [=CBS 335.35 =LSHB Sc60 =IMI 086922] - mates with UAMH 9090. Benomyl: resistant (2 ppm) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001); listed as *Scopulariopsis flava* by Morton & Smith (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).
- 9367 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-02-S1D) 28 Sep 1998 /R.S. Currah EI-02-S1D. Benomyl: resistant (2 ppm).
- 9406 single ascospore isolate ex UAMH 8627 UAMH S.P. Abbott (Mb 1) 5 May 1997 /S.P. Abbott (Mb 1) - mates with UAMH 9090, 9091, 9407. Benomyl: resistant (2 ppm) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9407 single ascospore isolate ex UAMH 8627 UAMH S.P. Abbott (Mb 8) 5 May 1997 /S.P. Abbott (Mb 8) +. Benomyl: resistant (2 ppm) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9458 dung of moose (*Alces alces*) in black spruce (*Picea Mariana*) forest 30 km east of Nordegg, Alta S.P. Abbott (SA-M136) 17 Jun 1996 /S.P. Abbott (SA-M136).

Microascus brevicaulis see *Scopulariopsis brevicaulis*

Microascus caviariformis Malloch & Hubart (morph *Scopulariopsis an. Microascus caviariformis*)

- 5592 (T *Microascus caviariformis*) decaying meat in cave of Ramioul Prov. de Liege, Flemalle, Belgium (C) J. Hubart Jun 1985 /J.C. Krug TRTC 50940 [=CBS 536.87]. Psychrophilic: grow at 18C // culture conditions: will not grow above 26-27C; does not grow or fruit on media with glucose > 5g/L; fruits on OAT; fruits on nutrient agar (Difco).
- 6112 meat left in cave 6 mo Grotte de Rosee, Belgium (C) J. Hubart Sep 1987 /D. Malloch. Culture conditions: fruits on nutrient agar (Difco); fruits on OAT.
- 11596 swab ex skin of living male bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 32 C.3 skin ox [=Untereiner WUC M32]. Culture conditions: produced ascomata on nutrient agar at 18C // biodiversity: mycobiota of bat caves.
- 11597 swab ex skin of bat Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 36 C.1 skin ox [=Untereiner WUC M36]. Culture conditions: produced ascomata on nutrient agar at 18C // biodiversity: mycobiota of bat caves.
- 11598 swab ex skin of living male bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 38 C.1 CC1 skin ox [=Untereiner WUC M38]. Biodiversity: mycobiota of bat caves // culture conditions: produced fertile ascomata on nutrient agar at 18C.
- 11599 swab ex skin of living female bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 77 C.1 skin ox [=Untereiner WUC M77]. Biodiversity: mycobiota of bat caves // culture conditions: produced ascomata on nutrient agar at 18C (fide W.A. Untereiner).
- 11600 swab ex fur of living female bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 78 C.5 fur ox [=Untereiner WUC M78]. Biodiversity: mycobiota of bat caves // culture conditions: produced infertile ascomata on nutrient agar at 18C.
- 11618 swab ex skin of living bat Underground Lake Cave, New

Brunswick K.J. Vanderwolf 17-Apr-2009 /K.J. Vanderwolf Bat 8 C.4 skin [=Untereiner WUC M08]. Biodiversity: mycobiota of bat caves // culture conditions: produced infertile ascomata on nutrient agar at 18C.

Microascus cinereus (Emile-Weil & Gaudin) Curzi (morph *Scopulariopsis an. Microascus cinereus*)

- 1581 contaminant Edmonton, Alta. J.W. Carmichael Feb 1963 /J.W. Carmichael. Benomyl: resistant (2 ppm).
- 5315 K. Takatori 1011-2.
- 7455 bronchial wash, male 81 yr Tyler, Texas /J. Harris. Cycloheximide: slightly sensitive.
- 8505 Kampala, Uganda Kibuka-Serunkuma (808) 17-Feb-1971 /NRRL A-18426.
- 8681 toenail (DE+) Edmonton, Alta C. Sand 31-Jul-1996 /R. Rennie MY 3499.
- 8842 paddy field soil Japan T. Yokoyama (YV-3-5-31) 1985 /T. Ito IFO 31841. Cycloheximide: resistant (MYC).
- 8889 soil Norwood Technical College, England, UK J.I. Mendy May 1959 /W. Untereiner MUCL 9048 [=IMI 75542 =LSHB Sc. 35 =CBS 195.61].
- 9094 sputum, F 43 yr Prov. Lab Southern Alberta 12 Aug 1997 /R. Rennie MY 4894.
- 9323 coffee Jamaica D. Johns 11 Apr 1984 /NRRL A-27373. Benomyl: resistant (2 ppm).
- 9324 soil California, USA G. Orr (O-423) 29 Aug 1958 /NRRL A-8020 [=Orr O-423 =CBS 666.71]. Benomyl: resistant (2 ppm) // culture conditions: no ascomata produced.
- 9366 grouse dung in black spruce (*Picea mariana*) forest Maqua Lake near Fort McMurray, Alta S.P. Abbott (SA-M272) 15 Sep 1998 /S.P. Abbott (SA-M272). Cycloheximide: resistant (MYC).
- 9390 (T *Microascus reniformis*) lung of man California, USA G.F. Orr /CBS 664.71. Benomyl: resistant (2 ppm).
- 9391 (T *Microascus griseus*) soil Maharashtra, India M.J. Thirumalachar (HACC 1252) /CBS 365.65 [=ATCC 16204 =IMI 113680]. Benomyl: resistant (2 ppm).
- 9392 (T *Peristomium desmosporum* v. *verticillium*) A. Lechmere /CBS 126.14 [=LSHB Sc. 79 =IMI 86916]. Benomyl: resistant (2 ppm).
- 9486 wood of willow (*Salix discolor*) branches, intermediate stage decay Muskeg Road SW of Boyle, Alta S.P. Abbott (SA-M282) 20 Jan 1999 /S.P. Abbott (SA-M282). Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 9932 shed ventral abdomen skin ex savannah monitor (*Varanus exanthematicus*), male >5yr Kansas State University College of Veterinary Medicine, Manhattan, KS UAMH (UW007B-D) 21 Nov 2000. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10146 bronchial wash, post lung transplant male 62 yr Edmonton, AB 4 Jan 2002 /R. Rennie MY 97A. Thermotolerant: good growth @ 35 C.

Microascus cirrosus Curzi (morph *Scopulariopsis an. Microascus cirrosus*)

- 334 skin from hand Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 963 (=Thom 5207) /NRRL 1689 [=CBS 301.61 =IMI 86914 =LSHB Sc.71 =GenBank M89993 SSU]. Cellulolytic // molecular systematics: phylogeny of pyrenomycete fungi (Berbee & Taylor, Molec. Phyl. Evol. 1:59-71, 1992); phylogeny of Microascaceae (Issakainen et al., J. Med. Vet. Mycol. 35:389-398, 1997).
- 966 soil K. Domsch /CBS 240.58 [=IMI 86913]. Cellulolytic.
- 7322 bronchial washing, female 69 yr Edmonton, Alta. C. Sand 16 Dec 1992 /R. Rennie MY 5861.
- 7456 ex Rt knee lesion, bone marrow transplant patient, male 12 yrs

- + mass in R upper lobe of lung; DE & histopathology + /M.G. Rinaldi UTHSC 92-780. Human/animal pathogen: disseminated infection in a pediatric bone marrow transplant patient (Krisher et al., J. Clin. Microbiol. 33:735-737, 1995).
- 7580 ex bronchial wash, female, 61 yr Edmonton, Alta. Grey Nuns Hospital 17 Dec 1993 /R. Rennie MY 0255.
- 8212 ex bronchoalveolar lavage, female Pennsylvania Presbyterian University Hospital (F15666) 1995 /M.G. Rinaldi UTHSC 95-1180. Cellulolytic.
- 8504 soil France J. Guillemat & J. Montegut (AS75) 1956 /NRRL A-7373.
- 8887 root of grape (*Vitis vinifera*) Italy M. Curzi /W. Untereiner MUCL 9050 [=CBS 277.34].
- 8888 (T *Torula paisii*) ex man Italy G. Pollacci 1927 /W. Untereiner MUCL 7915 [=CBS 213.27 =LSHB Sc. 84 =IMI 36480].
- 8978 ear D. Fennell (E-7-16) 11 Oct 1972 /NRRL A-20199. Benomyl: resistant (2 ppm).
- 9325 California, USA G. Orr (O-380) 29 Aug 1958 /NRRL A-8023 [=Orr O-380]. Benomyl: resistant (2 ppm) // culture conditions: no ascomata produced.
- 9326 Arizona, USA G. Orr (O-381) 29 Aug 1958 /NRRL A-8024 [=O-381]. Benomyl: resistant (2 ppm).
- 9327 G. Orr (O-424) 29 Aug 1958 /NRRL A-8021 [=O-424]. Benomyl: resistant (2 ppm).
- 9389 (T *Microascus cirrosus*) decayed leaf of *Prunus* Italy M. Curzi 1930 /CBS 217.31 [=UAMH 965 =GenBank JQ434680 LSU]. Molecular systematics: ITS sequence (fide UAMH).
- 10001 shed dorsal skin ex Honduran milksnake (*Lampropeltis triangulum hondurensis*), female Pueblo Zoo, Pueblo, CO UAMH (UW086B-D) 27 Mar 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10240 ex nail male 60 yr; DE positive for nondermatophytic hyphae Hamilton, New Zealand Medlab 10-02 /K. Rogers MR 2341. Human/animal pathogen: onychomycosis nails thickened with chalky black streaks, isolated twice // molecular systematics: ITS sequence 100% identical to UAMH 9389 T M. cirrosus (fide UAMH 2011); ITS sequence 1 bp different from UAMH 9389 T M. cirrosus; ITS sequence 100% identical to UAMH 10316 M. cirrosus.
- 11523 ex blood culture, male 36 yr with cystic fibrosis, following lung and heart transplant Nantes University Hospital, France F. Morio 30-Jun-2009 /F. Morio 70024521 [=GenBank HQ676488 D1D2]. Culture conditions: ascumata not observed by Miossec et al. or at UAMH // human/animal pathogen: fatal invasive infection with fungemia in cystic fibrosis patient after heart and lung transplant (Miossec C, Morio F, Lepoivre T, Le Page P et al, J Clin Microbiol 49:2743-2747, 2011) // molecular systematics: identification determined by D1D2 sequence (fide Miossec et al).

***Microascus exsertus* Skou (syn. *Pithoascus exsertus*)**

- 8698 (T) cocoon of leaf-cutting bee (*Megachile willoughbiella*) Denmark J.P. Skou (825) /DAOM 146087 [=CBS 819.70 =ATCC 28361]. Cycloheximide: slightly sensitive // culture conditions: no anamorph observed // systematics/taxonomy: relationship of *Pithoascus* with *Microascus* (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).

Microascus giganteus* Malloch (morph *Wardomyces an.***Microascus giganteus*)**

- 9425 (T *Microascus giganteus*) insect frass in dead log S of Coldwater, Simcoe Co., Ontario D. Malloch 12 Oct 1968 /CBS 746.69 [=TRTC 45434 =ATCC 18771]. Benomyl: resistant (2 ppm) // culture conditions: no ascumata produced on deposit but conidia present.

***Microascus intermedius* Emmons & Dodge (syn. *Pithoascus intermedius*; morph *Scopulariopsis an. Microascus intermedius*)**

- 656 (T *Microascus intermedius*) diseased roots *Fragaria vesca* Charlborn, N.C. Emmons & Dodge 1930 /CBS 217.32 [=IMI 86917]. Systematics/taxonomy: relationship of *Pithoascus* with *Microascus* (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).
- 2469 hair ex scalp Edmonton, Alta. J.W. Carmichael 1 Mar 1965 /J.W. Carmichael.
- 6954 field soil Bidar, Karnataka State, India R. Khan 18 Dec 1989 /R. Khan TRTC 51200.
- 8697 seed of lowbush blueberry (*Vaccinium angustifolium*) Kentville, Nova Scotia C.O. Gourley (KP 3080a) Jun 1978 /DAOM 169158 [=ATCC 38876]. Cycloheximide: slightly sensitive // plant pathogen: seed pathogen of blueberry (*Vaccinium angustifolium*) (Gourley & Nickerson, 1979, CJB 57: 1218-1219).
- 8840 soil Japan T. Ito (1724-E3) 1989 /T. Ito IFO 32232. Cycloheximide: resistant (MYC).
- 9043 soil from interior building of ruins of Bidar Fort 3 km north of Bidar, Bidar Dist., Karnataka State, India R.S. Khan 18 Dec 1989 /J.C. Krug TRTC 52054. Benomyl: resistant (2 ppm).
- 9136 ex man, tinea plantaris Germany H. Listemann /CBS 103.85. Benomyl: resistant (2 ppm) // systematics/taxonomy: reidentified from *Pithoascus nidicola* (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).
- 9328 soil Georgia, USA C. Emmons (5916) Oct 1956 /NRRL A-6904. Benomyl: resistant (2 ppm).

Microascus longirostris* Zukal (morph *Scopulariopsis an.***Microascus longirostris*)**

- 408 ex finger nails Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 823 CBS.
- 4833 coyote dung Slave Lake, Alta. L. Sigler 1 Sep 1983 /L. Sigler. Cellulolytic.
- 7957 ex bronchial wash New Britain, CT /M.G. Rinaldi UTHSC 95-696.
- 8354 indoor air of woodroom ex RCS strip Prince Albert, Sask. S.P. Abbott (SA-M52) 8-Dec-1995 /S.P. Abbott (SA-M52) [=IFO 33041]. Benomyl: tolerant @ 10 ppm.
- 8841 skin of squirrel (*Sciurus vulgaris*) Netherlands 1949 /T. Ito IFO 7029 [=CBS 267.49].
- 9042 lung of northern flying squirrel (*Glaucomys sabrina*) north of Lac La Biche, Alta J. Csotonyi 31 Jan 1997 /R.S. Currah J31/21-1BT.
- 9151 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 8-14I) T. Lumley (EI-13-S5C 14 Aug 1996 /R.S. Currah EI-13-S5C, 8-14I. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 9329 wasp nest Kittery Point, Maine, USA Harvard University (51) Jun 1940 /NRRL 1717 [=IMI 86908 =LSHB Sc. 43 =CBS 196.61 =MUCL 9058]. Benomyl: resistant (2 ppm).
- 9432 C. Emmons (5701) Jan 1947 /NRRL A-2018.

Microascus manginii* see *Scopulariopsis candida***Microascus manginii* (Loub.) Curzi (morph *Scopulariopsis candida*)**

- 238 skin from chin Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael - mates with UAMH 931 (infertile), 938, 3568. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 931 CBS + infertile ascumata in crosses with UAMH 238, 8404. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 934 (T *Scopulariopsis albiflavescens*) diseased skin of man

- Austria F. Zach /CBS 399.34 - mates with UAMH 938, 3568. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001) // culture conditions: originally described with sexual stage, but no ascomata produced on deposit; ascomata produced only in matings.
- 938 abnormal cheese Bureau of Dairy Industry, USDA L.A. Rogers Jun 1938 /NRRL 1109 [=LSHB Sc.106] + mates with 238, 934, 9004, infertile ascomata with 961, 8404. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 961 soil 1952 /Smith LSHB Sc.12 (BB 299) - mates with UAMH 938, 3568. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 1923 milled rice Burma 1954 /S.-I. Udagawa NHL 2278 [=?CBS 250.64 =?IFO 7555]. Cellulolytic.
- 2642 chicken litter Guelph, Ont. Jan 1966 /G.L. Barron 10490 [=ATCC 16685 =CBS 506.66]. Cellulolytic.
- 2710 head lesions ex chicken Edmonton, Alta. J.W. Carmichael 1967 /E. Burroughs.
- 3568 soil? Chile /L. Zaror T59 [=DAOM 225613] + mates with 238, 934, 961, 8404, 9004 & forms many sterile ascomata-like structures in self-self pairings. Cellulolytic // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 7921 outside air ex RCS strip Red Deer, Alta. S.P. Abbott (SA-M73) 9 Mar 1995 /S.P. Abbott (SA-M73) [=IMI 377813 =IFO 33042].
- 7924 ex nail, Rt great toe, male 63 yrs, DE+ Edmonton, Alta. C. Sand 20 Feb 1995 /R. Rennie MY 0563 - mates with UAMH 3568. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 8404 carpet dust from home Wallaceburg, Ont D. Malloch (138-110.1) 14-Mar-1994 /D. Malloch - mates with UAMH 931, 938, 3568. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 8796 Lucknow, India J.N. Rai 1967 /IMI 128461.
- 8797 buckwheat chaff UK A. Donnelly 1974 /IMI 182498.
- 8977 dung Arizona G.F. Orr (O-425) 29 Aug 1958 /NRRL A-8022 [=O 425]. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC).
- 9004 indoor air of office building ex Andersen sampler Chilliwak, BC S.P. Abbott (SA-M175) 27 Mar 1997 /S.P. Abbott (SA-M175) [=DAOM 225614 =IFO 33043] - mates with UAMH 938, 3568. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9135 (T *Microascus manginii*) France L. Mangin /CBS 170.27 [=IMI 86931 =LSHB Sc. 83] - mates with UAMH 3568. Benomyl: resistant (2 ppm) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9147 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-11A) T. Lumley (EI-09-S3E 11 Feb 1997 /R.S. Currah EI-09-S3E, 2-11A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 9174 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-11A) T. Lumley (EI-09-S3B 11 Feb 1997 /R.S. Currah EI-09-S3B, 2-11A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- =LSHB Sc. 44 =NRRL A-6894]. Benomyl: resistant (2 ppm) // systematics/taxonomy: redescription and selection as epitype (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).
- 8980 soil Utah C.W. Emmons (A 1836) Oct 1956 /NRRL A-6913 [=NRRL A-6913]. Benomyl: resistant (2 ppm) // systematics/taxonomy: redescription (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).
- 9487 single ascospore isolate ex UAMH 8979 UAMH S.P. Abbott (Mn-4) 10 Jul 1998 /S.P. Abbott (Mn-4). Systematics/taxonomy: homothallic (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).
- 9488 single ascospore isolate ex UAMH 8979 UAMH S.P. Abbott (Mn-8) 10 Jul 1998 /S.P. Abbott (Mn-8). Systematics/taxonomy: homothallic (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).

***Microascus niger* (Sopp) Curzi (morph *Scopulariopsis asperula*)**

- 923 (T *Monilia arnoldii*) strain Magnin /CBS [=LSHB Sc. 49] + mates with UAMH 9037 (infertile ascomata with 924, 930, 8984, 9029). Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 924 (T *Torula bestae*) strain Pollacci /CBS 289.38 [=LSHB Sc.51 =IMI 86927] - mates with UAMH 7879, 8362 (infertile ascomata with 923, 8847). Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 930 (T *Scopulariopsis fusca*) carcass of rabbit Austria strain Zach /CBS 401.34 [=IMI 86934 =LSHB Sc.58] - mates with UAMH 7879, 8362 (infertile ascomata with 923, 8847). Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 8779 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 207) 30 Jan 1994 /S.P. Abbott (OHS 207) [=IFO 33047 =IMI 377811] + mates with UAMH 924, 930, 9029, 9037 (infertile with 8984). Pigment: rose-brown // cellulolytic // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 8362 swab from home Ottawa, Ont. D. Malloch (M22-2C) Dec-1995 /D. Malloch + mates with UAMH 924, 930, 8984, 9029, 9037. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 8847 (T *Scopulariopsis roseola*) wheat flour Japan N. Inagaki (I-391) 1962 /T. Ito IFO 7564 + mates with UAMH 9029, 9037 (infertile ascomata with 924, 930, 8984). Cycloheximide: resistant (MYC) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 8984 ex hay consumed by crows; suspected of causing adverse health effects in crows Missouri D.T. Wicklow (DTW-001) 12 Feb 1992 /NRRL A-28654 - mates with UAMH 7879, 8362, 8847 (infertile ascomata with 923). Benomyl: resistant (2 ppm) // systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9029 dung of skunk (*Mephitis mephitis*) on ground in farm yard 10 km south of Leduc, Alta S.P. Abbott (SA-M183) 10 Jun 1997 /S.P. Abbott (SA-M183) [=IMI 377816 =IFO 33048] - mates with UAMH 7879, 8362, 8847 (infertile ascomata with 923). Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9037 outside air ex RCS strip Saskatoon, SK S.P. Abbott (SA-M24) 28 Nov 1994 /S.P. Abbott (SA-M24) - mates with UAMH 923, 7879, 8362, 8847. Systematics/taxonomy: mating tests (Abbott & Sigler, Mycologia 93:1211-1220, 2001).
- 9489 (T neotype *Microascus niger*) mated cross UAMH 8362 X 9037 UAMH S.P. Abbott 17 Apr 1998 /S.P. Abbott.
- 9490 mating cross UAMH 7879 X 9037 UAMH S.P. Abbott 17 Apr 1998 /S.P. Abbott.
- 9491 mating cross UAMH 8847 X 9037 UAMH S.P. Abbott 17 Apr 1998 /S.P. Abbott.

***Microascus microcordiformis* T. Matsushima (morph *Scopulariopsis an. Microascus microcordiformis*)**

- 9176 (T *Microascus microcordiformis*) soil Pella Mission Station, South Africa T. Matsushima (MFC-6K057) 09 Sep 1995 /T. Matsushima MFC-6K057. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC).

***Microascus nidicola* Masee & E.S. Salmon (syn. *Pithoascus nidicola*)**

- 8979 kangaroo rat (*Dipodomys merriami*) Utah C.W. Emmons (A 1671) Oct 1956 /NRRL A-6894 [=CBS 197.61 =IMI 86918

- 11533 passive air sample (60 min on V8-dichloran medium) ex living room of home; 4 colonies isolated from original plate and then self-crossed Lyngby, Denmark B. Andersen 28-Feb-2011 /B. Andersen d/d. Culture conditions: ascomata observed on original plate but ascomata with ascospores not produced in subculture // biodiversity: indoor air fungi.
- 11534 passive air sample (60 min on V8-dichloran medium) ex living room of home; source plate for UAMH 11533 and 3 other colonies Lyngby, Denmark B. Andersen 28-Feb-2011 /B. Andersen source plate. Culture conditions: ascomata and asospores observed on original air sample plate but fertile ascomata not observed in subcultures // molecular systematics: Blast match 99% D1D2 similarity with *Scopulariopsis fusca* (anamorph of *M. niger*) // systematics/taxonomy: heterothallism in *Microascus niger* and other *Microascaceae* (Abbott & Sigler, *Mycologia* 93:1211-1220, 2001) // biodiversity: indoor air fungi.

Microascus niger see *Scopulariopsis asperula*

Microascus pyramidus Barron & Gilman (morph *Scopulariopsis an. Microascus pyramidus*)

- 9400 (T *Microascus pyramidus*) desert soil California, USA G.F. Orr /CBS 212.65 [=ATCC 36763 =IMI 109887]. Benomyl: resistant (2 ppm).

Microascus schumacheri (Hansen) Curzi

- 9137 soil Peurto de la Quesera, Spain A. Martinez 1985 /CBS 435.86. Benomyl: resistant (2 ppm).

Microascus senegalensis von Arx

- 8799 stored grains Venezuela C. Mazzani (7-1C) 1982 /IMI 269128.
9388 (T *Microascus senegalensis*) mangrove soil Senegal J.A. von Arx /CBS 277.74. Benomyl: resistant (2 ppm).

Microascus singularis (Saccardo) Malloch & Cain (morph *Wardomyces an. Microascus singularis*)

- 2637 barrel bottom Cambridge, MA Thaxter (Harvard Univ. 47) 1904 /G.L. Barron OAC 10484 [=ATCC 16684 =CBS 505.66 =IMI 86909].
- 8618 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, AB 8-8F) T. Lumley (EI-09-S3G 08-Aug-1996 /R.S. Currah EI-09-S3G, 8-8F. Biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9152 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 4-29C) T. Lumley (EI-09-S1C 29 Apr 1996 /R.S. Currah EI-09-S1C, 4-29C. Biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9153 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-01-S4F-2-11B) 11 Feb 1997 /R.S. Currah EI-01-S4F-2-11B. Cellulolytic.
- 9175 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 5-30A) T. Lumley (EI-13-S3D 30 May 1996 /R.S. Currah EI-13-S3D, 5-30A. Benomyl: resistant (2 ppm) // cycloheximide: sensitive // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9330 laboratory contaminant Tokyo, Japan S. Udagawa 1962 /NRRL A-13013 [=UAMH 1938 =NHL 2297 =CBS 414.64]. Benomyl: resistant (2 ppm).

Microascus soppii S.P. Abbott (morph *Scopulariopsis soppii*)

- 942 sandy loam Pacific Grove, Calif. A.L. Cohen /NRRL 1848 [=LSHB Sc.68 =IMI 86923 =NRRL 1848] infertile ascomata in cross with 9171. Systematics/taxonomy: mating studies (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002); listed as *Scopulariopsis flava* by Morton & Smith (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).

- 9167 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-09-S3E) 09 Jan 1997 /R.S. Currah EI-09-S3E self-fertile. Benomyl: resistant (2 ppm) // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9168 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-11B1) T. Lumley (EI-09-S3F 11 Feb 1997 /R.S. Currah EI-09-S3F, 2-11B1 self-fertile. Biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9169 (T *Microascus soppii*) dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta T. Lumley (EI-13-S4G) 09 Jun 1997 /R.S. Currah EI-13-S4G [=K(M)106070 (isotype)] self-fertile. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000) // systematics/taxonomy: description (*Mycologia* 94:364 (362-369)).
- 9170 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 8-9E) T. Lumley (EI-09-S3D 09 Aug 1996 /R.S. Currah EI-09-S3D, 8-9E - mates with UAMH 9202. Systematics/taxonomy: mating studies (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).
- 9171 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-11E) T. Lumley (EI-09-S3G 11 Feb 1997 /R.S. Currah EI-09-S3G, 2-11E - mates with UAMH 9202. Systematics/taxonomy: mating studies (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).
- 9172 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 7-5B) T. Lumley (EI-09-S3J 05 Jul 1996 /R.S. Currah EI-09-S3J, 7-5B - mates with UAMH 9202. Systematics/taxonomy: mating studies (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).
- 9201 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 11-26B) T. Lumley (EI-02-S3A 26 Nov 1996 /R.S. Currah EI-02-S3A, 11-26B - mates with UAMH 9202. Benomyl: resistant (2 ppm) // systematics/taxonomy: mating studies (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).
- 9202 dry, rotted wood (stage 3 decay), aspen log (*Populus tremuloides*) in 25 yr post-harvest site Slave Lake, Alta 2-25A) T. Lumley (H681-01-S2F 25 Feb 1997 /R.S. Currah H681-01-S2F, 2-25A + mates with UAMH 9170, 9171, 9172, 9201. Benomyl: resistant (2 ppm) // systematics/taxonomy: mating studies (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).
- 9492 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 12-6A) T. Lumley (EI-13-S3G 6 Dec 1997 /R.S. Currah EI-13-S3G, 12-6A).

Microascus sp.

- 8852 Received as *Microascus staurosporus* Orr G.F. Orr (O-461) /T. Ito IFO 9813 [=Orr O-461]. Cycloheximide: resistant (MYC) // culture conditions: produced anamorph only.
- 11744 swab ex skin of bat Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 53 C.1skin [=Untereiner WUC M53]. Biodiversity: mycobiota of bat caves // culture conditions: produced perithecia in culture after 1 mo and ascospores after 4 mo (fide UAMH 2013); produces conidia on PDA (fide UAMH 2013).
- 11745 swab ex skin of living male *Myotis lucifugus* Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 81 C.3 skin ox [=Untereiner WUC M81]. Biodiversity: mycobiota of bat caves // culture conditions: produced perithecia in culture after 1 mo and ascospores after 4 mo (fide UAMH 2013); no conidia observed (fide UAMH 2013).
- 11746 swab ex skin of living bat Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 83 C.2 skin ox

- [=Untereiner WUC M83]. Culture conditions: produces conidia (fide UAMH 2013); produced perithecia in culture after 1 mo and ascospores after 4 mo (fide UAMH 2013).
- 11747 swab ex fur of living male *Myotis lucifugus* Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 88 C.1 fur [=Untereiner WUC M88]. Biodiversity: mycobiota of bat caves // culture conditions: produced perithecia in culture after 1 mo and ascospores after 4 mo (fide UAMH 2013); produces conidia (fide UAMH 2013).
- 11748 swab ex fur of living male *Myotis lucifugus* Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 90 C.5 fur [=Untereiner WUC M90]. Biodiversity: mycobiota of bat caves // culture conditions: produces conidia (fide UAMH 2013); produced perithecia in culture after 1 mo and ascospores after 4 mo (fide UAMH 2013).

Microascus stoveri (Arx) S.P. Abbott (syn. *Pithoascus stoveri*; morph *Papulaspora stoveri*)

- 9138 (T *Pithoascus stoveri*) root of sugar beet (*Beta vulgaris*) seedling Ohio W.L. White /CBS 176.71 [=ATCC 11173]. Benomyl: tolerant @ 2 ppm // systematics/taxonomy: relationship of *Pithoascus* with *Microascus* (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002) // culture conditions.

Microascus trigonosporus Emmons & Dodge (syn.

Microascus trigonosporus v. *terreus*; morph *Scopulariopsis trigonospora*)

- 655 leaf lesion *Avena sativa* Madison, Wisconsin M.D. Whitehead (3) /CBS 272.49.
- 7922 soil Kuwait C. Sand 17 Mar 1995 /R. Rennie MY 0676L.
- 7943 ex sputum, immunosuppressed male Danville, PA /M.G. Rinaldi UTHSC 95-467. Cellulolytic.
- 8398 deer dung in moist chamber near Soquel, California J. Scott (JS 164) 3-May-1991 /D. Malloch.
- 8503 soil at base of Saguaro cactus Arizona, USA NRRL isolate Feb 1957 /NRRL A-7078.
- 8850 milled rice Burma S. Udagawa (NHL 2265) 1957 /T. Ito IFO 7027 [=IMI 86912 =LSHB Sc. 132 =CBS 199.61]. Cycloheximide: resistant (MYC).
- 9331 lung of pocket mouse Palo Verde, California, USA H. Kuehn 2 Aug 1960 /NRRL A-10058 [=O-745]. Benomyl: resistant (2 ppm).
- 9332 kangaroo rat (*Dipodomys merriami*) Utah, USA C. Emmons (U675) Oct 1956 /NRRL A-6898. Benomyl: resistant (2 ppm).
- 9333 soil California, USA G. Orr (O-382) 29 Aug 1958 /NRRL A-8019 [=O-382 =CBS 665.71]. Benomyl: resistant (2 ppm).
- 9334 Puerto Rico B.O. Dodge (48) /NRRL 1570 [=IMI 86911 =LSHB Sc. 40 =CBS 198.61]. Benomyl: resistant (2 ppm).
- 9335 (T *Microascus trigonosporus* v. *terreus*) soil USSR I.A. Beljakova (VKM F-1144) /NRRL A-18283 [=O-2502 =CBS 601.67 =ATCC 22360]. Benomyl: resistant (2 ppm).
- 9387 (T *Microascus trigonosporus*) USA C. Emmons /CBS 218.31 [=IMI 113702 =GenBank AF400870 LSU =GenBank DQ471006 18S =GenBank DQ471150 RPB1 =GenBank DQ470908 RPB2 =GenBank DQ471077 EF1 =GenBank JQ434679 LSU]. Benomyl: resistant (2 ppm) // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000).
- 9579 blood, male 30 yr Texas 1999 /J. Harris BY99 1529.

Microascus trigonosporus* v. *terreus see ***Microascus trigonosporus***

Microascus trigonosporus* var. *macrosporus Orr

- 9336 soil California, USA G. Orr (O-12) 29 Aug 1958 /NRRL A-8018 [=O-12 =CBS 662.71]. Benomyl: resistant (2 ppm).

Microdochium bolleyi de Hoog & Hermanides-Nijhof

- 8413 pleural fluid Quebec G. St-Germain /G. St-Germain MY 7091.

Microdochium dimerum see ***Fusarium dimerum***

Microhilum oncooperae Yip & Rath

- 6729 (T *Microhilum oncooperae*) ex *Oncopera intricata* larva Mawbana, Tasmania, Australia P. Dunford (DATH 64D6) Oct 1986 /M. Priest DAR 62280 [=IMI 31965].

Microsphaeropsis arundinis (Ahmad) Sutton

- 8208 tissue from left lower leg, male 60 yr, kidney transplant patient, histopathology +; isolated twice UCI Medical Center, Irvine, CA 28-3-95 /G. Tan 1082962. Pigment: brown // human/animal pathogen: deep infection of left lower leg in transplant patient.
- 8426 core rot in red delicious apple (*Malus* sp.) from supermarket Washington state, US J.H. Ginns & R.A. Shoemaker (G 9313) 1988 /DAOM 198536.
- 8599 USA J.H. Andrews 1985 /IMI 294735.
- 10391 nodule on ankle Sydney Hospital, Sydney, Australia J. Walker 12-01-81 /M. Priest DAR 35822 [=IMI 255890 =UAMH 9428]. Pigment: brown.
- 10392 ex foot Royal North Shore Hospital, St. Leonard's, NSW, Australia /M. Priest DAR 76500 [=AMMRL 159.03 =GenBank EF094556]. Pigment: brown.
- 10393 ex right foot Royal North Shore Hospital, St. Leonard's, NSW, Australia /M. Priest DAR 76031 [=AMMRL 159.02 =GenBank EF094555]. Culture conditions: non sporulating on deposit; no conidia obtained.
- 10394 leg tissue Royal North Shore Hospital, St. Leonard's, NSW, Australia /M. Priest DAR 76499 [=AMMRL 159.01 =GenBank EF094554]. Culture conditions: non sporulating on deposit; no conidia obtained.

Microsphaeropsis centaureae Morgan-Jones

- 8427 (T) ex *Centaurea diffusa* Vernon, British Columbia A.K. Watson 1971 /DAOM 148750 [=ATCC 32058]. Hyperparasite: parasitizes the sclerotia of *Sclerotinia sclerotiorum* (Can J. Bot. 52:2575-2578, 1974).

Microsphaeropsis concentrica (Desm.) Morgan-Jones

- 8428 *Yucca elephantipes* for ornamental planting intercepted from Apopka, FL by Canada Customs at Ottawa, ON /DAOM 179747. Pigment: red.

Microsphaeropsis olivacea (Bonord.) Hohn.

- 1389 ex *Abies balsamea* Ontario Linzon /DAOM 71271. Cellulolytic // pigment: brown.
- 5051 heap of coal Poland Ulfig /K. Ulfig 18.
- 7471 left first toe, female Boston, MA Boston University Medical Centre (F510) 1993 /M.G. Rinaldi UTHSC 93-2035.
- 8126 ex roots of *Cyclanthus* sp. (*Cyclanthaceae*) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 15 May 1991 /R.S. Currah K140b. Mycorrhizae: root endophyte *Cyclanthus* sp. (*Cyclanthaceae*).
- 8286 air of underground parkade ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M67) 31-Aug-1995 /S.P. Abbott (SA-M67).
- 8429 soil in *Acer* - *Carya* forest Lacolle, PQ P. Widden (LP 121) /DAOM 172782.
- 8430 oak (*Quercus macrocarpa*) Winnipeg, MB M. Desjardins (3191) /DAOM 212377.
- 10606 sterile glucose solution Lot# 2005-11/12-3N London Health Science Centre, London, ON /R. Rennie MY 7833 [=OMH FR 1097]. Mesophilic: grows @ 30 C but not @ 35 C (fide UAH) // cycloheximide: sensitive (no growth MYC) (fide UAH).

***Microsphaeropsis* sp.**

- 8325 skin, Lt. leg, male 46 yr Alberta Provincial Lab for Southern

- Alberta Oct 1995 /R. Rennie MY 3511.
 8425 rose in University of Guelph greenhouse Guelph, Ontario L.V. Busch /DAOM 169263.
 8431 wheat seeds (*Triticum aestivum*) Canada S.M. Needham (9 BRD 17A) /DAOM 176471.
 8432 soil in Acer forest Lacolle, PQ P. Widden (LP 120) /DAOM 172783.

Microsporium aenigmaticum Hubka, Dobiasova & M. Kolarik

- 11827 (T *Microsporium aenigmaticum*) skin scales ex annular lesion on right dorsal wrist, female 46 yr; DE + for dermatophytic hyphae Ostrava, Czech Republic S. Dobiasova May 2012 /V. Hubka DMF 1545/12 [=CCF 4608 =CBS 134549 =Genbank HG518404 ITS =Genbank HG518421 Btub =Genbank HG793055 RPB2 =Genbank HG793060 Actin]. Culture conditions: produces chlamydospores and possible ascematal initials but no conidia (fide Hubka et al 2014); hair perforation and urease test positive (fide Hubka et al 2014); slow growing; No sporulation observed at UAMH // mesophilic: NG @ 37C // human/animal pathogen: etiology confirmed by positive direct microscopy and growth of the same fungus on multiple slants (Hubka V, Dobiasova S, Dobias R, Kolarik M, Med Mycol Epub 2014 Mar 7 [doi 10.1093/mmy/myt033]) // molecular systematics: description of *Microsporium aenigmaticum* within the *Microsporium gypseum* complex (Hubka V, Dobiasova S, Dobias R, Kolarik M, Med Mycol Epub 2014 Mar 7 [doi 10.1093/mmy/myt033]).

Microsporium amazonicum see ***Arthroderma borellii***

Microsporium audouinii Gruby

- 147 scalp hairs Alberta A. Bakerspigel Mar 1953 /A. Bakerspigel.
 905 hair, scalp Edmonton, Alta. J.W. Carmichael 30 Mar 1961 /J.W. Carmichael [=ATCC 26340]. Culture conditions: BCP-MS-G moderate growth; no alkalinity; urea positive.
 912 hair, scalp Edmonton, Alta. J.W. Carmichael 13 Apr 1961 /J.W. Carmichael [=ATCC 26341]. Culture conditions: BCP-MS-G moderate growth; no alkalinity; urea positive.
 3254 skin scraping ex leg Edmonton, Alta. J.W. Carmichael 11 Jul 1969 /J.W. Carmichael. Culture conditions: BCP-MS-G moderate growth; weak alkalinity; urea positive; somewhat degenerate but otherwise typical on PDA.
 8714 small scalp lesion surrounded by hair loss, male infant 3 mo. Alberta Provincial Lab for Southern Alberta 20 Aug 1996 /R. Rennie MY 3694.
 10239 skin scraping ex scalp, female 4 yr Edmonton, Alta. C. Sand 10-02 /R. Rennie MY 6583. Culture conditions: BCP-MS-G moderate growth; no alkalinity; some hydrolysis; urea negative or slow positive; produces sparse macroconidia on TAK; poor growth on rice grains // application: QC & teaching strain.
 10252 skin ex female 33 yr B.C. 2003 /R. Rennie DM 140. Culture conditions: BCP-MS-G moderate growth; no alkalinity; some hydrolysis; urea negative or slow positive; poor growth on rice grains.
 10501 skin scraping, scalp, 8 yr Vancouver, B.C. 8-9-04 /R. Rennie MY 5660 [=BC CDC A4MR357]. Culture conditions: BCP-MS-G moderate growth; no alkalinity; urea positive.
 10502 hair, tinea capitis, male 4 yr; KOH negative Vancouver, BC 21-7-04 /R. Rennie MY 6158 [=MY 4662 =BC CDC A4MR281]. Culture conditions: BCP-MS-G moderate growth; no alkalinity; urea positive.
 10506 ex hair, female 3 yr; DE KOH + Burnaby, B.C. Oct-2004 /R. Rennie MY 6844. Culture conditions: BCP-MS-G moderate growth; no alkalinity; urea negative; produces pectinate hyphae.
 10507 ex scalp, male, 9 yr old immigrant from Sudan; DE calcofluor + Vancouver, B.C. 9-8-04 /R. Rennie MY 6843. Culture

conditions: BCP-MS-G moderate growth; no alkalinity; urea negative.

Microsporium boullardii Dominik & Majchrowicz (morph *Arthroderma corniculatum*)

- 3408 (T *Microsporium boullardii*) soil Africa T. Dominik /CBS 599.66 [=ATCC 22399].
 9933 shed dorsal/ventral skin ex Southern copperhead (*Agkistrodon contortrix contortrix*), female 2yr Central Florida Zoological Park, Lake Monroe FL UAMH (UW022B-A) 5 Dec 2000 mated with UAMH 10002. Cycloheximide: resistant // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
 10002 shed dorsal skin ex timber rattlesnake (*Crotalus horridus*), male 10yr Greenville Zoo, Greenville, SC UAMH (UW081B-B) 27 Mar 2001 mated with UAMH 9933. Cycloheximide: resistant // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
 10038 shed dorsal skin ex collared lizard (*Crotaphytus collaris*), male about 2 yr Hogle Zoo, Salt Lake City, Utah UAMH (UW126B-B) May 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Microsporium canis Bodin (syn. *Microsporium distortum*, *Microsporium canis* var. *distortum*; morph *Arthroderma otae*)

- 148 ex scalp Edmonton, Alta. A. Bakerspigel 1952 /A. Bakerspigel.
 558 ringworm lesion ex forehead Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
 586 "distortum phenotype" /CDC B-0101.
 903 scalp hair Edmonton, Alta. J.W. Carmichael 9 Mar 1961 /J.W. Carmichael.
 2289 hair ex hind hip of 1 yr old canine Edmonton, Alta. J.W. Carmichael 9 Dec 1964 /J.W. Carmichael.
 2290 upper arm, female 7 yr Edmonton, Alta. J.W. Carmichael 14 Jan 1965 /J.W. Carmichael.
 2291 hair and skin ex nose of dog Edmonton, Alta. J.W. Carmichael 1965 /J.W. Carmichael.
 2292 hairs ex scalp of male, 4 yr Edmonton, Alta. J.W. Carmichael 18 Jan 1965 /J.W. Carmichael.
 2293 skin ex neck, female 37 yr Edmonton, Alta. J.W. Carmichael 20 Jan 1965 /J.W. Carmichael.
 2326 scalp scrapings ex male, 7 yr Edmonton, Alta. J.W. Carmichael Feb 1965 /J.W. Carmichael.
 2335 scalp hair ex male, 7 yrs. Edmonton, Alta. J.W. Carmichael 10 Feb 1965 /J.W. Carmichael.
 2338 scrapings and hair ex male, 5 yr Edmonton, Alta. J.W. Carmichael 9 Feb 1965 /J.W. Carmichael [=ATCC 26342 =GenBank AY176735 (LSU)]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002) // application: teaching strain.
 2348 scrapings ex male 2.5 yr Edmonton, Alta. J.W. Carmichael 19 Feb 1965 /J.W. Carmichael.
 2349 neck ex female Edmonton, Alta. J.W. Carmichael Feb 1965 /J.W. Carmichael.
 2358 scrapings Edmonton, Alta. J.W. Carmichael Mar 1965 /J.W. Carmichael.
 3299 ex human; "distortum phenotype" 1962 /J.M.B. Smith My 7.
 3300 ex dog; "distortum phenotype" 1961 /J.M.B. Smith D1.
 3302 "distortum phenotype" /M.D. McCarthy MM 1.
 3303 "distortum phenotype" /M.D. McCarthy MM 2.
 3304 "distortum phenotype" /M.D. McCarthy MM 4.
 3305 "distortum phenotype" /M.D. McCarthy MM 9.
 3306 "distortum phenotype" /M.D. McCarthy MM 11.

- 3383 ex gibbon as *Microsporium obesum* Inst. of Dermatol., Holland A.H. Klokke Jul 1961 /CBS 284.63. Culture conditions: atypical isolate.
- 3384 ex monkey as *Microsporium obesum* Germany H. Seeliger /CBS 274.62. Culture conditions: atypical isolate; no conidia observed.
- 3385 dwarf chimpanzee (*Pan paniscus*), 4 yr, as *Microsporium obesum* Zoological Garden, Rotterdam, NE A.H. Klokke Jul 1961 /CBS 276.62. Human/animal pathogen: tinea capitis in chimpanzees (Klokke, A.H. & G.A. de Vries, Sabouraudia 2:268-270, 1963) // culture conditions: atypical isolate.
- 3386 Liberian male chimpanzee (*Pan troglodytes*) age 1.5 yr, as *Microsporium obesum* Zoological Garden, Rotterdam, NE A.H. Klokke Jul 1961 /CBS 275.62. Human/animal pathogen: tinea capitis in chimpanzees (Klokke, A.H. & G.A. de Vries, Sabouraudia 2:268-270, 1963) // culture conditions: atypical isolate.
- 4174 hair with sheath of arthrospores ex skin specimen Edmonton, Alta. L. Sigler Oct 1978 /L. Sigler. Application: QC & teaching strain (Summerbell, Clinical Microbiology Procedures Handbook 2002) // culture conditions: good growth on rice grains.
- 8713 Alberta /R. Rennie.
- 10229 Teaching strain, ex human but other data unknown Y 3663. Application: teaching strain.
- 10766 a dysgonic isolate ex cat with pseudomycetoma on both flanks A. Woodgyer /A. Woodgyer 2006-14388. Culture conditions: macroconidia not readily formed (fide A. Woodgyer); reduced aerial mycelium (fide A. Woodgyer).

Microsporium canis see *Arthroderma otae*

Microsporium canis var. *distortum* see *Microsporium canis*

Microsporium cookei see *Arthroderma cajetani*

Microsporium distortum see *Microsporium canis*

- Microsporium equinum*** (Delacroix & Boidin) Gueguen
- 4965 J. Kane OMH 1468 or 1469.
- 5343 ex body lesion, horse Saskatchewan H. Congly /H. Congly 2726M. Human/animal pathogen.
- 5531 ringworm lesion ex left arm, female 34 yr Moose Jaw, Sask. H. Congly 1986 /H. Congly 1531M.
- 5705 forearm ex female 8 yr Sask. H. Congly 1987 /H. Congly 8M.
- 5894 scalp male 9 yr Saskatchewan H. Congly 1987 /H. Congly 2164M.
- 5895 arm male 39 yr Saskatchewan H. Congly 1987 /H. Congly 2168M.
- 5896 buttocks male 28 yr Saskatchewan H. Congly 1987 /H. Congly 2169M.
- 5897 forearm female 38 yr Saskatchewan H. Congly 1987 /H. Congly 2382M.
- 5961 lesion leg female 29 yr Sask. H. Congly 1987 /H. Congly 2189M.
- 5962 lesion feet, female 62 yr Sask. H. Congly 1987 /H. Congly 2196M.
- 6129 skin scraping horse Barrhead Alta. S. Rollick Apr 1988 /S. Rollick 1000.
- 6305 forearm lesion, male 80 yr Sask. H. Congly 1988 /H. Congly 2525M. Culture conditions: poor growth on Takashio agar // application: QC & teaching strain.
- 6634 groin lesion, female 25 yr Saskatchewan H. Congly /H. Congly 581M.
- 7638 ex scalp, male 5 yr Provincial Laboratory for Southern Alberta 2 Jun 1994 /R. Rennie MY 2501.

Microsporium ferrugineum Ota

- 1463 Atlanta, GA L. Georg 1 Nov 1962 /CDC B-0251.
- 2412 scalp ex Korean child LBVA hospital /UCLA 99.
- 2461 L.A. County Hospital, L.A., California /UCLA M331.
- 2606 Port Elizabeth, E. Cape, S. Africa 1965 /P. Martin 25.
- 3293 CDC 34.
- 3295 CDC B-0472.
- 3339 groin Edmonton, Alta. J.W. Carmichael 14 May 1970 /J.W. Carmichael.
- 3506 skin ex feet of male 60 yr Edmonton, Alta. J.W. Carmichael 16 Aug 1972 /J.W. Carmichael.
- 6853 scalp, female 10 yr; DE +, patient from Korea currently resides on farm in Alta. Edmonton, Alta. R. McWhirter 3 Apr 1991 /P. Kibsey MY 1021.
- 11030 tinea capitis ex Karen refugee Melbourne, Australia A. Woodgyer /A. Woodgyer 2008-12296.
- 11031 tinea capitis ex Karen refugee Melbourne, Australia A. Woodgyer /A. Woodgyer 2008-12297.
- 11032 tinea capitis ex Karen refugee Melbourne, Australia A. Woodgyer /A. Woodgyer 2008-16439.

Microsporium fulvum see *Arthroderma fulvum*

Microsporium gallinae (Megnin) Grigorakis (syn.

Trichophyton gallinae)

- 283 ex collection Fritz Blank, McGill University /Dr. Munroe.
- 2945 A.T. Londero 67.3.2350.
- 2946 A.T. Londero 67.4.2356.
- 2947 A.T. Londero 67.12.2359.
- 3474 unknown source /M.A. Gordon c24 [=Silva Hutner 299.14]. Human/animal pathogen: induced typical white comb ringworm lesions in roosters in experimental inoculation (Gordon & Little, Sabouraudia 6:207-212, 1968).
- 3475 unknown source /M.A. Gordon c82 [=Silva Hutner 399.32]. Human/animal pathogen: induced typical white comb ringworm lesions in roosters in experimental inoculation (Gordon & Little, Sabouraudia 6:207-212, 1968).

Microsporium gypseum (Bodin) Guiart & Grigorakis (morph

Arthroderma gypseum, *Arthroderma incurvatum*)

- 149 ex patient Ontario / .
- 278 Dr. Munroe.
- 285 Dr. Munroe.
- 292 Dr. Munroe.
- 589 hair ex scalp, human ringworm Edmonton, Alta. J.W. Carmichael Nov 1957 /J.W. Carmichael.
- 1615 soil Oklahoma City, Medical School J.M. Hale /E.S. Keeping 1.
- 1617 soil Oklahoma City J.M. Hale /E.S. Keeping 4.
- 2195 soil ex river bed Big Sur, Calif. P. Martin Dec 1962 /P. Martin 1263.
- 2197 soil ex river bed Big Sur, Calif. P. Martin Nov 1962 /P. Martin 1264.
- 2199 soil ex river bed Big Sur, Calif. P. Martin Nov 1962 /P. Martin 1266.
- 2224 soil Big Sur, Calif. P. Martin Nov 1962 /P. Martin 1234.
- 2615 P. Martin 23.
- 3146 soil /R.K. Benjamin RSA 1494 [=O-528].
- 3201 sandy loam, bottom of wash under shrubs Claremont, Calif. J.W. Carmichael 30 Jan 1969 /J.W. Carmichael.
- 3206 soil ex mole hill, grassy area Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
- 3208 soil, entrance to rodent burrow, grassy area Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
- 3209 soil, entrance to rodent burrow, grassy area Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
- 3211 soil, entrance to rodent burrow, grassy area Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
- 3213 sandy soil, grass and weed covered Ontario, Calif. J.W.

- Carmichael 3 Feb 1969 /J.W. Carmichael.
3215 sandy soil with cow dung Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
3216 sandy soil with some cow dung Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
3496 soil Chile /L. Zaror T75C.
3497 soil Chile /L. Zaror T75B.
3522 soil Sudan /CDC 39.
3578 hair baited soil India Ghosh /G.F. Orr 153#2.
3619 soil ex garden Edmonton, Alta. M. Johnson 22 Oct 1973 /M. Johnson.
5842 arm, male 23 yr Saskatchewan H. Congly 1984 /H. Congly 1304M.
9957 shed distal tail skin ex frilled lizard (*Chlamydosaurus kingii*), male >7yr San Diego Zoo, San Diego, CA UAMH (UW076B-G) 31 Jan 2001. Cycloheximide: resistant // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Microsporium gypseum see *Arthroderma incurvatum*

Microsporium gypseum see *Arthroderma gypseum*

Microsporium magellanicum Caretta & Piontelli
4051 (T *Microsporium magellanicum*) /A. Padhye [=IMI 195827].

Microsporium nanum see *Arthroderma obtusum*

Microsporium persicolor see *Arthroderma persicolor*

Microsporium praecox Riv.
3390 (T *Microsporium praecox*) /F. Blank.
6083 ex achilles area; DE- Ottawa 24 Dec 1987 /R.C. Summerbell F 15230.87.

Microsporium racemosum see *Arthroderma racemosum*

Microsporium ripariae Hubalek & Rush-Munro
3638 (T *Microsporium ripariae*) nest of sand-martin, *Riparia riparia* Ostresany ad Pardubice, Bohemia Z. Hubalek 7 Sep 1967 /Z. Hubalek 100 A [=CBS 529.71 =ATCC 28005].

Microsporium sp.
1294 Sicilian donkey paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.

Microsporium vanbreuseghemii see *Arthroderma grubyi*

Mollisia cinerella Sacc. (morph *Cadophora an. Mollisia cinerella*)
1442 timber of *Fagus sylvatica* Genicourt, Meuse, France F. Manganot Mar 1959 /DAOM 82825 [=CBS 312.61].

Monascella botryosa Guarro & von Arx
5381 (T *Monascella botryosa*) soil Costa den Blanes, Mallorca, Spain J. Guarro Oct 1984 /J. Guarro FMR 724.

Monascus floridanus Cannon & Barnard (morph *Basipetospora an. Monascus floridanus*)
4180 (T *Monascus floridanus*) pitch-soaked roots of *Pinus clausa* Santa Rosa Co. Florida E.L. Barnard (DOF 49) 1982 /E.L. Barnard DPI 078-2409 [=IMI 282587 =FLAS F54662 (isotype) =GenBank AY629418 =ATCC 64205].
Thermotolerant: opt 30C; slow growth at 37C.

Monascus pilosus K. Sato ex D. Hawksw. & Pitt
9616 garden soil Aman, Jordan A.M. Stchigel 10 Mar 1999 /J.

Guarro FMR 6727. Pigment: rose on OAT // thermotolerant: slow growth @ 37C.

- Monascus ruber* van Tiegh (morph *Basipetospora rubra*)
416 silage West Virginia 1952 /H.L. Barnett 139. Pigment: red pigment not produced on PDA; red on OAT.
1114 skin, contaminant UCLA Derm. Dept. /G.F. Orr 0-659.
6420 soil Karachi Dist., Sind Prov., Pakistan R.S. Khan 9 Sep 1987 /R. Khan TRTC 51006 [=CBS 246.89 =ATCC 66229].
Pigment: pink.
7027 This strain has been cited in a US or other patent and should not be used to infringe patent claims. A. Endo (1005) /J. Vederas [=ATCC 20657 =FERM-P 4822]. Pigment: red.
9016 right nail plate, male 67 yr Ontario 22-May-1996 /R.C. Summerbell FR 1624. Pigment: brown.
9403 rt. renal pelvis fluid, male 70 yr with multiple kidney stones & intrarenal stent, DE +septate hyphae; culture positive twice Victoria, BC Victoria General Hospital 28 Sep 1998 /P. Kibsey 19681. Human/animal pathogen // thermotolerant: grows well @ 37C // cycloheximide: sensitive // pigment: red.

Monilia amelanchieris see *Monilinia amelanchieris*

Monilia cinerea see *Monilinia laxa*

Monilia versiformia Funk
5790 (T *Monilia versiformia*) canker of *Pseudotsuga menziesii* McBride, B.C. A. Funk Jun 1983 /A. Funk 541 [=DAVFP 23306 =ATCC 62966].

Moniliella acetoabutens Stolk & Dakin
2498 mint sauce (acidity 5) /D. Adcock.
6850 (T *Moniliella acetoabutens*) sweet fruit sauce J. Dakin 1958 /CBS 169.66 [=ATCC 18455 =IMI 159918 =UAMH 2354 =GenBank EU252153 D1D2]. Molecular systematics: phylogeny of *Moniliella* and *Trichosporonoides* (Rosa CA, Jindamorakot S, Limtong S, Nakase T, Lachance MA, et al, Int J Syst Evol Microbiol.;59:425-429, 2009).
7104 ex bronchial aspirate, female 58 yr with congestive heart failure Binghamton, NY 1991 /M. Kemna M867-91.
Thermotolerant: grows @ 37C, NG @ 45C // culture conditions: urea +, nitrate assim +, ferments glucose.

Moniliella sp.
113 Nagao Institute NI 4247.

Moniliella suaveolens var. *nigra* (Burri & Staub) de Hoog
4570 P. Lindner /CBS 314.31 [=MUCL 7907].

Moniliella suaveolens var. *suaveolens* (Lindner ex Lindner) von Arx
4580 (T *Sachsia suaveolens*) mash syringe Berlin, Germany P. Lindner /CBS 126.42 [=GenBank AF335520 LSU].
4581 margarine /CBS 545.78a.
7250 M. McGinnis NCMH 1959. Pigment: brown.

Monilinia amelanchieris Honey (morph *Monilia amelanchieris*)
9758 berries ex saskatoon (*Amelanchiers alnifolia*) Alberta H. Bennypaul 1999 /H. Bennypaul CB-99-13.
9759 berries ex saskatoon (*Amelanchiers alnifolia*) Alberta H. Bennypaul /H. Bennypaul JB-99-1-8.

Monilinia laxa (Aderh. & Ruhl.) Honey (morph *Monilia cinerea*)
1781 soft rot of peach Edmonton, Alta. J.W. Carmichael 12 Sep 1963 /J.W. Carmichael.
1783 soft rot of plum Edmonton, Alta. J.W. Carmichael 16 Sep

- 1963 /J.W. Carmichael.
3523 plum Fanny Bay, B.C. J.W. Carmichael 19 Sep 1972 /J.W. Carmichael.
4801 brown rot of cherry B.C. L. Sigler Jul 1983 /L. Sigler. Cellulolytic.

Moniliophthora roreri (Ciferri) Evans et al.

- 4413 causes watery pod rot, quevedo disease & ceriza of cacao H.E. Carley /ATCC 26389. Plant pathogen: frosty pod rot disease of cacao (*Theobroma cacao*).
4608 canker on *Theobroma angustifolium* Pichilingue, Ecuador H.C. Evans (C) 18 Sep 1974 /IMI 193075. Plant pathogen: frosty pod rot disease of cacao (*Theobroma cacao*).

Moniliopsis anomala Burgeff ex Currah (syn. *Rhizoctonia anomala*)

- 6451 (*T Moniliopsis anomala*) endophyte of long-bracted green orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (289c) 14 Jul 1987 [=ATCC 90390 =CBS 193.90 =GenBank AF345557 LSU]. Mycorrhizae: endophyte with orchid *Coeloglossum viride* // molecular systematics: orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093, 2001; Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).

Moniliopsis solani see ***Rhizoctonia solani******Monochaetia dimorphospora*** Yokoyama (morph

- Scytalidium flavo-brunneum*)
8228 soil Japan Y. Tsurumi (FERM-P 7936) /ATCC 60324. Chaetiacandin (J. Antibiot. (Tokyo) 38: 455-459 & 544-546, 1985). Culture conditions: black light recommended.

Monochaetia dimorphospora see ***Scytalidium flavo-brunneum******Monochaetia*** sp.

- 4621 leaf Penn. State College, Penn. L. Sigler Sep 1982 /L. Sigler.
9841 skin ex left heel, male 9 yr Vancouver, BC 02 Mar 2000 /R. Rennie MY 3790. Crystals.

Monocillium indicum Saksena

- 1499 (*T Monocillium indicum*) soil India S.D. Saksena (GC 968) 1956 /IMI 62202 [=GenBank GQ169328 ITS]. Culture conditions: produces sclerotia // thermotolerant: growth strongly inhibited @ 35 C // cycloheximide: resistant (MYC) // molecular systematics: anamorphic Niessliaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).

Monocillium nordinii (Bourchier) W. Gams

- 4515 *Endocronartium harknessii* on *Pinus contorta* Blue River, B.C. A. Tsuneda Jul 1979 /Y. Hiratsuka C-690. Nordinone, nordinonediol, monorden, monocillins I-IV, sterigmatocystin (Ayer WA, Pena-Rodriguez L, Phytochemistry 26:1353-1355, 1987). Mesophilic: grow at 18 to 22C // pigment: yellow on PDA // hyperparasite: destructive mycoparasite of the pine stem rust *Cronartium coleosporoides* and *Endocronartium harknessii* (Tsuneda A, Hiratsuka Y, Phytopathology 70:1103, 1980) // molecular systematics: ITS sequence identical to *Monocillium nordinii* UAMH 11401 and 4810 (fide UAMH 2011) // chemotaxonomy: survey for sterigmatocystin production (Rank C, Nielsen KF, Larsen TO, Varga J, Samson RA, Frisvad JC, Fungal Biology 115:406-420, 2011).
4810 ex posterior end of cadaver of *Dendroctonus rufipennis* on Engleman spruce Dry Creek, Revelstoke, B.C. L. Sigler Jul 1983 /H.S. Whitney. Mesophilic: grow at 18 to 22C //

pigment: yellow on PDA // molecular systematics: ITS sequence identical to *Monocillium nordinii* UAMH 11401 and 4515 (fide UAMH 2011) // chemotaxonomy: survey for sterigmatocystin production (Rank C, Nielsen KF, Larsen TO, Varga J, Samson RA, Frisvad JC, Fungal Biology 115:406-420, 2011).

- 11401 (*T Isotype Cephalosporium nordinii*) ex wood *Pinus contorta* var. *latifolia* Stracham, Alta. R.J. Bourchier (C-458) May-1957 /DAOM 59811 [=CBS 101.63 =MUCL 4047 =MUCL 9725 =C-458 =CBS H-7364 herbarium]. Molecular systematics: ITS sequence identical to UAMH 4515 and 4810 (fide UAMH 2011).

Monodictys arctica M.J. Day & Currah

- 10718 ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 18-Sep-2000 /R.S. Currah 73. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006) // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).
10719 ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 20-Dec-2000 /R.S. Currah 86. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).
10720 (*T Monodictys arctica*) ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 17-Jan-2001 /R.S. Currah 121. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).
10721 ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 16-Nov-2000 /R.S. Currah 192. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).
10722 ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 25-Sep-2000 /R.S. Currah 607. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).
10723 ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 13-Oct-2000 /R.S. Currah 729. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).
10724 ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 13-Oct-2000 /R.S. Currah 732. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).
10725 ex roots of *Saxifraga oppositifolia* Alexandra Fiord, Ellesmere Island, Nunavut M. Day 13-Sep-2000 /R.S. Currah 217. Systematics/taxonomy: description of a dark septate endophyte with affinity to *Leptosphaeria* // mycorrhizae: dark septate endophyte (DSE) (Day MJ, Gibas CFC, Fujimura KE, Egger KE, Currah RS, Mycotaxon 98:261-272, 2006).

Monodictys nigrosperma (Schwein.) W. Gams

- 10705 ex moss *Pylaisiella polyantha* Perryvale Bog, Alta. M.L. Davey 25-Feb-2005 /R.S. Currah Pp2-A. Biodiversity: First report of *Monodictys nigrosperma* from a moss host (Davey

ML, Diversity, systematics and ecology of bryophilous fungi, University of Alberta Ph.D. thesis, 2009) // cellulolytic.

Monosporium venezuelense J. trop. Med. Hyg. 36:307

807 (T *Monosporium venezuelense*) strain Ciferri from man /CBS 325.51 [=CBS 325.51]. Cycloheximide: sensitive // benomyl: resistant // mesophilic: NG @ 37C // culture conditions: slow growing grey colonies, conidia in chains, probably a *Scopulariopsis*.

Morchella angusticeps see *Morchella elata*

Morchella deliciosa see *Morchella esculenta*

Morchella elata Fries (syn. *Morchella angusticeps*)

- 7408 multiascospore germination ex fruiting body under mixed Picea, Populus & Pinus spp. Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 748) 30 May 1993. Pigment: brown // edible: morel mushroom // molecular systematics: taxonomic revision of true morels (*Morchella*) species reveals several phylogenetic species among North American isolates named *M. elata* (Kuo M, Dewsbury DR, O'Donnel K, Carter C, Rehner SA et al, Mycologia 104 1159-1177, 2012).
- 8015 ex ascocarp Alberta S. Davies /S. Davies FC-323. Edible: morel mushroom // pigment: brown.
- 8016 ex ascocarp Alberta S. Davies /S. Davies FC-369. Edible: morel mushroom.
- 10559 urban lawn, isolated from ascocarp CA Victoria, B.C. R.S. Winder (CA4) 04-03 /R.S. Winder DAVFP 28858. Edible: morel mushroom // culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // molecular systematics: taxonomic revision of true morels (*Morchella*) species reveals several phylogenetic species among North American isolates named *M. elata* (Kuo M, Dewsbury DR, O'Donnel K, Carter C, Rehner SA et al, Mycologia 104 1159-1177, 2012).
- 10560 rural garden near forest, isolated from ascocarp DA Sooke, B.C. R.S. Winder (DA2) 04-03 /R.S. Winder DAVFP 28864. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10561 rural garden near forest, isolated from ascocarp DB Sooke, B.C. R.S. Winder (DB4) 04-03 /R.S. Winder DAVFP 28865. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10562 rural garden near forest, isolated from ascocarp DC Sooke, B.C. R.S. Winder (DC7) 04-03 /R.S. Winder DAVFP 28866. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10563 rural garden near forest, isolated from ascocarp DD Sooke, B.C. R.S. Winder (DD1) 04-03 /R.S. Winder DD1. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10564 rural garden near forest, isolated from ascocarp DE Sooke, B.C. R.S. Winder (DE4) 04-03 /R.S. Winder DE4. Culture conditions: fast-growing (Winder RS (unpublished)); grows better @ 20 - 24 C (Winder RS (unpublished)); grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10565 rural lawn near forest, isolated from ascocarp HA Sooke, B.C. R.S. Winder (HA2) 04-03 /R.S. Winder DAVFP 28860. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10566 rural lawn near forest, isolated from ascocarp HB Sooke, B.C. R.S. Winder (HB1) 04-03 /R.S. Winder DAVFP 28861.

Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.

- 10567 rural lawn near forest, isolated from ascocarp HC Sooke, B.C. R.S. Winder (HC1A) 04-03 /R.S. Winder DAVFP 28862. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10568 urban roadside leaves, isolated from ascocarp JA Langford, B.C. R.S. Winder (JA1A) 04-03 /R.S. Winder DAVFP 28867. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.
- 10569 urban roadside leaves, isolated from ascocarp JB Langford, B.C. R.S. Winder (JB4) 04-03 /R.S. Winder DAVFP 28868. Edible: morel mushroom // culture conditions: slow growing (Winder RS (unpublished)); grows better @ 16 C (Winder RS (unpublished)); grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006).
- 10570 urban roadside leaves, isolated from ascocarp JC Langford, B.C. R.S. Winder (JC1A) 04-03 /R.S. Winder DAVFP 28869. Culture conditions: grow on morel growth agar (MGA) (Winder RS, Mycological Research 110:612-623, 2006) // edible: morel mushroom.

Morchella esculenta Linnaeus: Fries (syn. *Morchella deliciosa*)

- 7409 multiascospore germination ex fruiting body under Populus sp. Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 796) 26 May 1993. Pigment: brown // edible: mushroom // molecular systematics: taxonomic revision of true morels (*Morchella*) species reveals several phylogenetic species among North American isolates named *M. esculenta* (Kuo M, Dewsbury DR, O'Donnel K, Carter C, Rehner SA et al, Mycologia 104 1159-1177, 2012).
- 9180 sporocarp scattered among balsam poplars Alberta R.M. Danielson 24 May 1981 /R.M. Danielson RMD 3058. Edible: mushroom // pigment: brown // molecular systematics: taxonomic revision of true morels (*Morchella*) species reveals several phylogenetic species among North American isolates named *M. elata* (Kuo M, Dewsbury DR, O'Donnel K, Carter C, Rehner SA et al, Mycologia 104 1159-1177, 2012).

Mortierella alpina Peyronel

- 980 soil, grassy field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
- 1084 soil under lilac Edmonton, Alta. J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
- 1138 soil, cultivated Edmonton, Alta. J.W. Carmichael 13 Sep 1961 /J.W. Carmichael.
- 1335 soil and dead vegetation in front of Pembina Hall Univ. Alberta campus J.W. Carmichael (19-6-i) 23-Jul-1962. Culture conditions: yellow sclerotia // molecular systematics: BLAST match 100% ITS similarity with *Mortierella alpina* AJ271630 (CBS 224.37) (fide UAMH) // benomyl: tolerant @ 2 ppm.
- 1689 soil under bushes Edmonton, Alta. J.W. Carmichael 14 Jun 1963 /J.W. Carmichael.
- 1697 Alnus log Fort Langely, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael.
- 1823 leaf mould Edmonton, Alta. J.W. Carmichael 23 Oct 1963 /J.W. Carmichael.
- 1824 leaf mould Edmonton, Alta. J.W. Carmichael 23 Oct 1963 /J.W. Carmichael.
- 2228 soil V11 San Jacinto, Calif. P. Martin Nov 1962 /P. Martin 1308.
- 4998 kidney ex rainbow trout with severe nephrocalcinosis Fish Disease Lab., Edmonton B. Larson Aug 1984 /B. Larson 84-149.
- 7623 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 245)

23 Mar 1993 /S.P. Abbott (OHS 245). Benomyl: resistant @ 2 ppm // pigment: yellow // mesophilic: NG @ 37C.

Mortierella elasson Sideris & Paxton

- 1291 soil ex nursery paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
2196 soil ex river bed Big Sur, Calif. P. Martin Dec 1962 /P. Martin 1223.

Mortierella elongata Linnemann

- 2796 flower bed South Edmonton, Alta. D. Remington Jun 1967 /D. Remington.

Mortierella gamsii Milko

- 2804 soil ex roadway Edmonton, Alta. D. Remington Jul 1967 /D. Remington.

Mortierella hyalina (Harz) Gams

- 1459 soil under sparrow tree Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.

Mortierella jenkinsii (Smith) Naumov

- 1695 rotting log ex Populus? Fort Langely, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael.

Mortierella nana see *Umbelopsis nana*

Mortierella polycephala Coemans

- 1152 sandy soil ex black bear cubs pen Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.

Mortierella reticulata Tiegh. & Le Monn.

- 1313 sandy soil ex Black bear cubs pen Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
1314 sandy soil ex Black bear cubs pen Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.

***Mortierella* sp.**

- 632 garden soil Edmonton, Alta. J.W. Carmichael Feb 1959 /J.W. Carmichael.
1006 lung ex Cottontail rabbit Slave Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
3926 alfalfa root lesions Bretton, Alta. Jul 1974 /F. Cooke.
4680 spikes ex litter under old Pinus Devonian Bot. Garden, Alta. J.W. Carmichael Oct 1982 /J.W. Carmichael.
5982 egg mass Lymantria dispar Dexter, Lane Co., Oregon G. Carroll /R. Humber ARSEF 2063.

Mortierella stylospora Dixon-Stewart

- 647 soil under sparrow tree Edmonton, Alta. J.W. Carmichael Mar 1959 /J.W. Carmichael.
774 soil ex pig yard, no vegetation Alberta J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.
1118 rabbit dung Palmdale, Calif. G. Orr 1960 /G.F. Orr O-1059.
1148 sandy soil ex Black bear cubs pen Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1311 sandy soil ex Black bear cubs pen Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
2299 C.C. Campbell Y8 [=CDC S-64-165].

Mortierella verticillata Linnem.

- 6025 ex washed feeder-root surface, Picea mariana Burt Lake, Burt Twp., Timiskaming Dist., Ont. R.C. Summerbell 6 Jun 1982 /R.C. Summerbell W 227. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989).

Mucor circinelloides van Tieghem

- 7624 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 66) 23

Mar 1993 /S.P. Abbott (OHS 66). Benomyl: tolerant @ 2 ppm // mesophilic: NG @ 37C.

- 7625 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Watino, Alta. S.P. Abbott (OHS 250) 23 Apr 1994 /S.P. Abbott (OHS 250). Benomyl: tolerant @ 2 ppm // thermotolerant: grows @ 37C.
8306 piglet manure /I. Weitzman NRRL 3614 [=NRRL 3614 =CBS 192.68 =GenBank DQ837219 (ITS)] + mates with UAMH 8307, Weitzman et al., JCM 33:781-783, 1995. Culture conditions: produces zygospores with UAMH 8307 on OATC @ 30 C.
8307 post-mortem ex spleen of 10 month old baby born with Down's syndrome from a HIV+ mother, histopathology + New York /I. Weitzman PH1 [=GenBank DQ837220 (ITS)] - mates with UAMH 8306, Weitzman et al., JCM 33:781-783, 1995. Human/animal pathogen: systemic mycosis, isolate confirmed by compatibility (Weitzman I, Whittier S, McKittrich JC, Della-Latta P, J Clin Microbiol 33:781-783, 1995) // culture conditions: produces zygospores with UAMH 8306 on OATC @ 30 C.
10385 ulcer on left calf, male 90 yr; biopsy + for hyphae with few septa and thick-walled yeast forms Univ. Nebraska Medical Center P. Iwen 10-03 /P. Iwen UNMC 090803 [=GenBank DQ787159 (ITS)] did not mate with 8306 or 8307. Molecular systematics: ITS sequence comparison showed 99% similarity with GenBank sequence for *Mucor circinelloides* // human/animal pathogen: primary cutaneous infection (Iwen PC, Sigler L, Freifeld AG, J Clin Microbiol 45:636-640, 2007) // culture conditions: no zygospores in matings with UAMH 8306 or 8307.
10704 ex brain tissue, male 19 mo, head trauma Children's Hospital of Eastern Ontario, Ottawa, ON /R. Rennie MY 4060 [=FRR 699]. Thermotolerant: restricted growth @ 40C; grows @ 35 C, NG @ 42 C // culture conditions: no zygospores in matings with UAMH 8306 or 8307.
11289 ex juvenile zebra shark (*Stegostoma fasciatum*) (UAMH 11288 *Exophiala pisciphila* also isolated) /D.A. Sutton UTHSC 08-3089.

Mucor circinelloides* f. *griseocyanus (Hagem) Schipper (syn. *Mucor griseo-cyanus*)

- 9195 Netherlands A.F. Blakeslee /ATCC 1207a [=CBS 223.56 =IMI 116946 =FHP 753 =ATCC 1207a] +. Imipramine (J. Pharm. Sci. 70: 151-155, 1981); oxoalkylxanthines (Can. Pat. 1022867; Ger. Fed. Rep. Pat. 2,302,772). Application: steroid conversions (J. Am. Chem. Soc. 80: 3382-3389, 1958; Can. J. Microbiol. 13: 1271-1281, 1967); transformations of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979).

Mucor griseo-cyanus see *Mucor circinelloides* f. *griseocyanus*

Mucor hiemalis Wehmer

- 10190 living moss (*Sphagnum fuscum*) in bog with black spruce (*Picea mariana*), Labrador tea (*Rhododendron groenlandicum*) & moss (*Sphagnum fuscum*) nr Perryvale, AB (54D28'N, 113D16'W) M.N. Thormann 8 May 1998 /R.S. Currah MNT 49 [=ALTA 10697]. Biodeteriogen/biodegradation: in vitro decomposition, degrades cellulose, utilizes starch (Thormann, Currah & Bayley, Can. J. Microbiol. 48:204-211, 2002); enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001) // molecular systematics: Blast match ITS 100% similarity to *Mucor hiemalis* AY243949 CBS 242.35 (fide UAMH 2011) // mesophilic: grows better @ 25C than at 18C or 30C.

Mucor indicus Lendner

- 10830 ex pus from pericardium, female 9 mo, with an implantable

ventricular assist device Montreal, Que. L. de Repentigny 20-Feb-2007 /G. St-Germain LSPQ-00722. Culture conditions: grows @ 40C (fide G. St-Germain) // human/animal pathogen: fatal zygomycosis (de Repentigny L, St-Germain G, Charest H, Kokta V, Vobecky S, *Pediatr Infect Dis J.* 27:365-369, 2008).

***Mucor mucedo* Link ex Fries**

- 850 rodent hair Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
1149 soil & quills ex porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
4912 ex dietary Ca supplement on ground in greenhouse Fanny Bay, B.C. J.W. Carmichael 7 Jan 1984 /J.W. Carmichael.
8363 indoor air of woodroom ex RCS strip Prince Albert, Sask. S.P. Abbott (SA-M59) 08-Dec-1995 /S.P. Abbott (SA-M59).

***Mucor nidicola* Madden, Stchigel, Guarro, Sutton, et Starks**

- 11442 (T *Mucor nidicola*) ex nest material of invasive European paper wasp (*Polistes dominulus*) Tufts University, Medford, MA (C) A. A. Madden Aug 2008 11-Feb-2009 /A. A. Madden F53 [=GenBank HQ913647 =NRRL 54520 =CBS 130359]. Molecular systematics: novel mucoralean fungus from nest of the invasive paper wasp, *Polistes dominulus* (Madden AA, Stchigel AM, Guarro J, Sutton D, Starks PT, *Int J Syst Evol Microbiol* 62:1710-714, 2012).

***Mucor plumbeus* Bonorden**

- 453 Sputa 1, 2, 3 Edmonton, Alta. J.W. Carmichael 12 Oct 1955 /J.W. Carmichael.
509 sputum Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
7013 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, post-defecation Lethbridge, Alta. D. Inglis (MR 792) Aug 1990 /D. Inglis (MR 792).
7607 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 61) 2 Dec 1993 /S.P. Abbott (OHS 61).
8312 sputum, female 41 yr with fatal liver failure, DE- Edmonton, Alta. C. Sand 20 Oct 1995 /R. Rennie MY 3565. Mesophilic: NG @ 37C.
8720 ATCC 4740. Application: oxidation of sclareol (Tetrahedron Lett. 32:1783-1786, 1991); Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
11531 ex tomato-based sauce Edmonton, Alta. S. Kozak Jun-2011 /J. McDonald KIS 11-1586. Mesophilic: NG @ 35C.

Mucor pusillus* see *Rhizomucor pusillus***Mucor racemosus* Fres.**

- 158 shoe New Guinea? Unit 1) QM Labs (APO 503 /Cutter 600 [=QM 79J].
7364 red color on casing of sausage St. Louis, MO M. Hamilton 1993 /V. Collett 1.
7609 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 62) 2 Dec 1993 /S.P. Abbott (OHS 62).
8346 air ex RCS strip in cab of 'D-10 CAT' while operating on hardwood chip pile Prince Albert, Sask S.P. Abbott (SA-M57) 13-Dec-1995. Culture conditions: sporangiospores globose to subglobose; produces arthroconidia in sporangiophores and mycelia // mesophilic: grows slower at 30C than at 25C.
10551 ex soil-less growth medium (2B) Fort Langley, B.C. L. Sigler 30-Mar-2005 /Westcreek Farms. Molecular systematics: BLAST match 98% with *Mucor racemosus*; produces arthroconidia in sporangiophores and mycelia.

***Mucor rouxii* (Calmette) Wehmer sensu Bartnicki-Garcia**

- 8113 fermenting rice S. Bartnicki-Garcia (IM 80) /S. Davies FC-346

[=ATCC 24905 =CBS 416.77 =IM 80] +. Chitosan (Appl. Environ. Microbiol. 38: 323-328, 1979); chitin synthetase (J. Biol. Chem. 246: 3999-4007 & 4008-4015, 1971; J. Biol. Chem. 252: 3338-3343, 1977; J. Gen. Microbiol. 71: 301-309, 1972; J. Gen. Microbiol. 97: 241-249, 1976; J. Gen. Microbiol. 130: 2095-2102, 1984; Biochem. Biophys. Acta 629: 201-216, 1980; Arch. Microbiol. 130: 195-197, 1981; J. Biol. Chem. 246:3999-4007 & 4008-4015, 1971); polyuronide biosynthesis (J. Gen. Microbiol. 128: 2023-2027, 1982); glucuronosyl transferase (Exp. Mycol. 9: 294-301, 1985); mannoproteins (Carbohydr. Res. 119: 129-140, 1983). Culture conditions: mold/yeast dimorphism (Fuller, M.S., Lower fungi in the laboratory, Athrns, GA, U. Georgia, 1978, p. 146); Chinese yeast morphogenesis (Science 165: 302-304, 1969; J. Bact. 84: 829-840 & 841-858, 1962).

***Mucor* sp.**

- 156 Ithaca, N.Y. /V. Cutter 764.
214 contaminant Edmonton, Alta. J.W. Carmichael 9 Dec 1954 /J.W. Carmichael.
245 skin ex hands Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
259 skin ex finger Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
261 scalp hair Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
329 sputum Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
333 skin ex finger Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
361 throat swab Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
365 skin ex foot Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
383 skin ex finger Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
442 sputum Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
444 rodent Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
456 urine Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
472 sputum Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
474 sputum Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
476 sputum Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
491 sputum Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
498 sputum Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
501 skin ex left hand Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
571 lung Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
1013 spleen ex Striped Ground Squirrel Camrose, Alta. J.W. Carmichael Aug 1960 /J.W. Carmichael.
1018 lung ex Red Squirrel Sundre, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
1023 lung ex Red Squirrel Caroline, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
1025 spleen ex Red-Backed Shrew Caroline, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
1070 soil ex Sask. River bank Alberta J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
1150 soil & quills ex porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1203 soft rot ex cedar cooling tower Toronto, Ont. J.W. Carmichael 1962 /J.W. Carmichael.
1316 sandy soil ex badger paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
1320 soil ex falcon roost Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
1566 soil Kansas /C.L. Kramer K 11.

2003 sputum ex male 48 yr Edmonton, Alta. J.W. Carmichael 14 Apr 1964 /J.W. Carmichael.

Mutatoderma populneum (Peck) Gomez

6725 ex dead trunk & branches *Populus tremuloides* on sandy soil Auburn-Kingston Sand Plain, Kings Co., N.S. G. Thorn 7 Sep 1986 /G. Thorn T-348 [=DAOM 212386 =RGT 860907/08 =TRTC 51223].

Myceliophthora an. Corynascus sepedonium see
Corynascus sepedonium

Myceliophthora an. Corynascus verrucosus see
Corynascus verrucosus

Myceliophthora fergusii see ***Corynascus thermophilus***

Myceliophthora hinnulea Awao & Udagawa

4856 (T *Myceliophthora hinnulea*) cultivated soil Nirayama-machi, Tagatagun, Shizuoka-pref., Japan T. Awao 24 Feb 1973 /T. Awao AJ-6773. Thermophilic: opt. 37C.

Myceliophthora lutea Costantin (syn. *Chrysosporium luteum*)

506 skin ex toes Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
819 IMUR 829 [=QMCC-514].
830 CBS 157.59.
843 ex mushroom beds Westchester, Pa. T.F. (J.W. Sinden) Manns Jan 1942 /CBS 146.50 [=CBS 147.50].
844 ex mushroom beds Westchester U., Pa. J.W. Sinden Jan 1942 /CBS 146.50 [=CBS 147.50].
845 ex mushroom beds Paloni plant, Hockessin, Del. E.T. Reese Jan 1940 /CBS 146.50.
866 contaminant, single colony on plate in fridge Edmonton, Alta. J.W. Carmichael 6 Jan 1961 /J.W. Carmichael.
876 L.R. Kneebone.
1505 bovine ringworm (*Trichophyton verrucosum*) Prov. Vet. Lab., Edmonton J.W. Carmichael 17 Dec 1962 /J.W. Carmichael.
1624 scrapings ex foot Edmonton, Alta. J.W. Carmichael 21 Mar 1963 /J.W. Carmichael.
1930 skin scrapings ex bovine Edmonton, Alta. Prov. Vet. Lab. (64-740) 26 Feb 1964 /Prov. Vet. Lab. (64-740).
2070 ex horse Edmonton, Alta. J.W. Carmichael 19 Aug 1964 /J.W. Carmichael.
2471 ex equine hair Edmonton, Alta. J.W. Carmichael Apr 1965 /J.W. Carmichael.
4306 ex sheep pasture soil U of A Farm, Edmonton V. (5) Mann 17 May 1980 /V. (5) Mann.
7123 contaminant ex skin scraping from chest & face, male 12 yr Edmonton, Alta. C. Sand 24 Feb 1992 /P. Kibsey MY 786.
7261 bronchial wash Edmonton, Alta. C. Sand 14 Oct 1992 /R. Rennie MY 4800.
7802 ex face, female 11 yr Alberta 14 Nov 1994 /R. Rennie MY 5054B.
9464 indoor air of arena ex RCS strip Edmonton, Alta S.P. Abbott (SA-M274) 17 Dec 1998 /S.P. Abbott (SA-M274). Pigment: brown.

Myceliophthora thermophila (Apinis) van Oorschot (syn. *Sporotrichum thermophile*, *Chrysosporium thermophilum*; morph *Corynascus heterothallicus*)

2015 molding silage G. Semeniuk /G. Semeniuk 200-2 [=QM 10,128]. Cellulase (Coutts & Smith, Appl. & Env. Microbiol. 31:819-825, 1976; Bhat & Maheshwari, Appl. & Env. Microbiol. 53:2175-2182, 1987); beta-glucosidase, endoglucanase, exoglucanase (Bhat & Maheshwari, *ibid.*). Cellulolytic // thermotolerant: range 25-54C.
2016 molding silage; sector of 200-2 (UAMH 2015) G. Semeniuk

/G. Semeniuk 200-1. Thermotolerant: range 25-54C.
2017 molding silage G. Semeniuk /G. Semeniuk 214-2. Thermotolerant: range 25-54C.
2018 molding silage G. Semeniuk /G. Semeniuk 243-1. Thermotolerant: range 25-54C.
2240 balsam fir & black spruce pulpwood New Brunswick /J.K. Shields 6479-4. Thermotolerant: range 25-54C.
2355 alfalfa & grass forage Brookings, S. Dakota 1953 /G. Semeniuk 207. Thermotolerant: range 25-54C.
2356 alfalfa & grass silage Brookings, S. Dakota 1953 /G. Semeniuk 219. Thermotolerant: range 25-54C.
2474 (T *Sporotrichum thermophile*) dried pasture soil Attenborough, Notts., Engl. Jul 1951 /Apinas BDUN 274 [=IMI 91789 =CBS 117.65 =Genbank HQ724320 partial LSU =Genbank HQ724321 ITS]. Thermotolerant: range 25-54C // molecular systematics: phylogeny of thermophilic fungi (Morgenstern I, Powlowski J, Ishmael N, Darmond C et al, Fungal Biology 116:489-502, 2012).
3643 stored birch wood chips Waterville, Maine /W.E. Eslyn Me-BIC-2. Thermotolerant: range 25-54C.
4977 cornea /NIH B-4173 [=ATCC 56769]. Thermotolerant: range 25-54C.
5162 mycosis, equine guttural pouch Japan K. Takatori 1985 /K. Takatori M-936. Thermotolerant.
6109 soil India /R. Maheshwari IIS-272. Thermophilic.
6110 soil India /R. Maheshwari IIS-277. Thermophilic.
6168 mutant ex ATCC 20494 Japan Ajinomoto Co. Inc. (AJ 6987) /ATCC 20493 [=CBS 669.85 =FERM-P 3696]. Cellulase. Thermophilic.
6713 post mortem lung, human with acute myelomonocytic leukemia Geisinger Medical Center, Danville, PA P. Bourbeau (AAO-123) 1990 /M.G. Rinaldi UTHSC 90-1045. Thermophilic: good growth @ 50C // human/animal pathogen: fatal disseminated infection (Bourbeau et al., J. Clin. Microbiol. 30:3019-3023, 1992) // cycloheximide: resistant.
7886 ex polluted river sediment Rawa River, Katowice, Poland K. Ulfig 12 Jul 1993 /K. Ulfig IEIA 425. Pigment: brown // thermophilic: good growth @ 42C.
8712 skin scrapings, male 7 yr Quebec /G. St-Germain MY 8145. Thermophilic.
9423 swab, rt. ear canal, male, 20 yr with otitis externa Victoria, BC P. Kibsey 23 Oct 1998 /P. Kibsey 51764. Cycloheximide: sensitive // thermophilic.
10368 dust ex filter of home Denver, CO S. P. Abbott 03-Mar-2003 /S.P. Abbott SA 1423. Thermophilic.
11479 ex bronchoalveolar fluid, neutropenic male 52 yr with acute myeloblastic leukemia Nantes University Hospital, Nantes, France F. Morio 13-Mar-2009 /F. Morio 70015228 [=Genbank HQ676489 ITS =Genbank HQ676490 D1D2]. Human/animal pathogen: invasive infection mimicking aspergillosis in a neutropenic patient (Morio F, Fraissient F, Gastinne T, Le Pape P, Delaunay J, Sigler L, Gibas FC, Miegerville M, Med Mycol subm 2010); serial samples positive for galactomannan (fide Morio et al.) // thermophilic.

Mycelium radialis atrovirens see **Root associated fungus**

Mycelium radialis atrovirens alpha see **Root associated fungus**

Mycelium radialis atrovirens pro parte see **Phialocephala fortinii**

Mycena citricolor (Berk. & Curt.) Sacc.

5348 lesions, American Leaf Spot of coffee (*Coffea arabica*) Costa Rica Amy Wang (2) /W.A. Ayer H2 [=ATCC 76114]. Citricolic acid (Ayer & Dufresne, Bull. Soc. Chim. Belg. 95:699-706, 1986).
5349 parasite ex coffee plant Costa Rica /W.A. Ayer H4.

- 5694 parasite ex Coffea Costa Rica /W.A. Ayer MCH9A.
6384 leaf lesion on *Erogoga acuminata* (epicaucuana) San Jose Costa Rica S. Brezden Aug 1988 /W.A. Ayer MP1.

***Mycena* sp.**

- 11174 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.23II [=GenBank HQ157912 ITS]. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).

***Mycocentrospora acerina* (Hartig) Deighton**

- 4368 verrucous lesion ex face, Indonesian boy C.W. Emmons /M. McGinnis NCMH 708 [=CDC B205 =CDC A1310 =ATCC 14281 =IMI 207280].

***Mycoleptodiscus indicus* (Sahni) Sutton**

- 8516 rt wrist, male with cancer Pensacola, Florida West Florida Regional Medical Center (# 1875) /M.G. Rinaldi UTHSC 96-188 [=GenBank GU980693 D1D2 =GenBank GU980694 ITS]. Culture conditions: no conidia observed // molecular systematics: 99% ITS similarity among UAMH 8516, 8520 and 10746 (Dewar CL, Sigler L, *Clinical Rheumatology* 29:1061-1065, 2010).
- 8520 hand & foot ex patient on cancer chemotherapy with fatal lymphoma, histopathology preparations positive for fungal elements at both sites 1995 /R. Ramani 244-95 [=UTMB 4088 =GenBank GU980695 D1D2 =GenBank GU980696 ITS]. Thermotolerant: grows @ 37C // human/animal pathogen: subcutaneous lesion in hand & foot // culture conditions: no conidia observed // molecular systematics: 99% ITS similarity among UAMH 8516, 8520 and 10746 (Dewar CL, Sigler L, *Clinical Rheumatology* 29:1061-1065, 2010).
- 10746 aspirate ex joint, male 54 yr, otherwise healthy Vancouver General Hospital (T60227), Vancouver, B.C. /R. Rennie MY 3321 [=CBS 127677 =BC CDC M23996 =GenBank GU980697 D1D2 =GenBank GU980698 ITS]. Thermotolerant: grows best @ 25C & 35 but restricted at 42C (fide UAH) // cycloheximide: sensitive (no growth MYC) // culture conditions: sporulates on tap water agar in window // human/animal pathogen: arthritis of knee in immunocompetent male (Dewar CL, Sigler L, *Clinical Rheumatology* 29:1061-1065, 2010) // molecular systematics: 99% ITS similarity among UAMH 8516, 8520 and 10746 (fide UAMH).
- 11157 aspirate from lymph node and skin lesions, 8 yr old male neutered pointer dog with immune-mediated hemolytic anemia; histopathology + for hyphae University of Illinois Veterinary Teaching Hospital, Urbana, IL Apr-2009 /D.A. Sutton UTHSC R-4334 [=GenBank GU220382 ITS =GenBank GU220383 D1D2]. Culture conditions: sporulates on PDA and CER after 7-15d (fide UAMH 2010); conidia with lateral as well as polar appendages (fide Metry et al.) // human/animal pathogen: subcutaneous infection in an immunosuppressed dog (Metry CA, Hoiem-Dalen PS, Maddox CW, Thompson EH, Sutton DA, Romanelli AM, Wickes BL, MacNeill AL, *J Clin Microbiol* 48:3008-3011, 2010).

***Mycoleptodiscus* sp.**

- 11158 progressive necrotizing cellulitis and fasciitis, foot and calf ex male 31 yr, with glioblastoma multiforme treated with temozolomide and corticosteroids; histopathology + for hyphae Boston, MA 2008 /D.A. Sutton UTHSC 08-1754 [=UTHSC R-4426 =GenBank JN654999 ITS =GenBank JN654989 D1D2]. Culture conditions: sporulates on PDA and CER after 7-15d (fide UAMH 2010) // molecular systematics: High ITS similarity with *Mycoleptodiscus terrestris* type, but

morphologically divergent // human/animal pathogen: High ITS similarity (100%) but lower D1D2 similarity (92.5%) with *Mycoleptodiscus terrestris* type strain and morphologically divergent (fide Koo et al.); Invasive fungal cellulitis and myositis in an immunosuppressed patient (Koo S, Sutton DA, Yeh WW, Thompson EH, Sigler L, Shearer JF, Hofstra DE, Wickes BL, Marty FM, *Medical Mycology* in press 2012) // thermotolerant: grows well at 35C and 40°C (fide submitting lab) // benomyl: NG.

Mycosphaerella populorum* see *Davidiella populorum***Mycosylva clarkii* Tulloch**

- 3757 (T *Mycosylva clarkii*) dung Monk's Park Wood, Warwickshire, U.K. M.C. Clark (2960) 3 Oct 1971 /IMI 163345 [=CBS 608.73 =ATCC 32970]. Psychrophilic: opt. 18C.
- 4038 sphagnum bog peat Northern Wisconsin /M. Christensen TC 185. Psychrophilic: range 4-18C.

***Mycotypha microspora* Fenner**

- 1126 CDC B-0428.
1127 CDC.

Myrioconium* an. *Sclerotinia sclerotiorum* see *Sclerotinia sclerotiorum***Myriodontium keratinophilum* Samson & Polonelli (morph *Neoarachnotheca keratinophila*)**

- 1120 soil Palo Verde, Calif. /G.F. Orr O-1060.
1121 soil Inyokern, Calif. /G.F. Orr O-1073.
1852 sputum California /G.F. Orr HO-1028.
1880 soil Dugway, Utah G. Orr 1963 /G.F. Orr 100F.
1886 G.F. Orr O-258.
1888 soil Merced Co., S. Calif. G.F. Orr /G.F. Orr O-164.
1957 soil S. California G. Orr 1957 /G.F. Orr O-524.
2522 soil Oahu, Hawaii G. Orr 1964 /G.F. Orr L 3.
3435 feather, pheasant (*Phasianus colchicus*) Uvaly near Venice, Czech. Hubalek 12 May 1970 /G.F. Orr O-3297.
3668 CDC 64996.
3816 soil Arizona /G.F. Orr O-1292.
4442 soil ex prairie dog burrow Little Bo Reservoir, Alta. R. Currah 1981 /R.S. Currah 81-18-5.
6117 J. Kane 1466.
7359 nail, male 60 yr, DE +, etiology not confirmed Toronto, Ont. 18 Nov 1993 /R.C. Summerbell F 11052.
8774 soil in backyard Edmonton, Alta. M. Hoadley 26 Sep 1996 /M. Hoadley.
9118 bronchial wash Columbus, Ohio 1997 /M.G. Rinaldi UTHSC 97-1569.
9959 shed ventral skin ex albino corn snake (*Elaphe guttata*), female 2yr Oglebay's Good Zoo, Wheeling, WV UAMH (UW068B-B) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. *Herpetol. Med. Surg.* 13:10-15, 2003).
10373 carpet dust from hall of building Reno, NV S.P. Abbott 23-Oct-2002 /S.P. Abbott SA 1418.

***Myrothecium acadensis* Seifert & G. Sampson**

- 7653 (T *Myrothecium acadensis*) ex colt's foot (*Tussilago farfara*) Shubenacadie, Nova Scotia G. Sampson 2 Oct 1989 /K. Seifert CCFC 221473 [=CBS 123.96 =GenBank AY283563 =DAOM 221473 (holotype) =DA 133 Lot# 94M-57].

Myrothecium indicum* see *Xepicula leucotricha***Myrothecium inundatum* Tode ex Link**

- 2802 E. Simmons QM 206.
5530 contaminant on *Collybia* sp. Rocky-Clearwater Forest, Alta. R.

Currah (C) 28 Jul 1986 /R. Currah (C).

Myrothecium leucotrichum see *Xepicula leucotricha*

Myrothecium roridum Tode ex Fries

- 1369 tomato plant roots Kentville, N.S. /DAOM 70175 [=GenBank DQ676588 rpb2H =GenBank DQ676613 tef1H =GenBank DQ676576 tri5H =GenBank DQ680056 SSU]. Molecular systematics: presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009).

Myrothecium setiramosum R.F. Castaneda

- 5999 fallen leaves Andira inermis Santiago de las Vegas, Cuba R. Castaneda 9 Jul 1987 /R. Castaneda C87/234.

Myrothecium verrucaria (Alb. & Schw.) Ditm. ex Fries

- 638 hairs Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael.
857 soil ex chicken yard Edmonton, Alta. J.W. Carmichael 14 Jun 1960 /J.W. Carmichael.
2760 flower bed soil Edmonton, Alta. D. Remington May 1967 /D. Remington.
7508 indoor air of office bldg. ex RCS strip Calgary, Alta. S.P. Abbott (SA-M240) 1 Dec 1993 /S.P. Abbott (SA-M240).
9019 toenails, female 73 yr, DE+; Scopulariopsis brevicaulis also isolated Cambridge, Ont. 06-Dec-1995 /R.C. Summerbell F 12618.
9767 nail, male 32 yr Alberta 13 Jan 2000 /R. Rennie MY 1036.
10367 dust ex filter of home Elk Grove, CA S.P. Abbott 06-Feb-2003 /S.P. Abbott SA 1441.
10544 nail (?toenail) ex male 42 yr; KOH + for non-dermatophytic hyphae; same fungus grew on 4/4 slopes inoculated Melbourne, Australia A. Woodgyer 2005 /A. Woodgyer 2005-04940. Culture conditions: poor sporulation; sporulated on CMA and CER // cycloheximide: slightly sensitive // thermotolerant: grows @ 35 C.
11592 indoor environment New Jersey S.P. Abbott 4-Aug-2011 /S.P. Abbott SA1508. Biodiversity: indoor air fungi.

Myxofusicoccum an. Pseudophacidium garmanii see

Pseudophacidium garmanii

Myxotrichum aeruginosum Montagne

- 11539 tissue, right lower lobe, female 63 yr; calcofluor negative; also isolated from tissue of right middle lobe Royal Alexandra Hospital, Edmonton, Alta. 9-Jul-2011 /R. Rennie MY 5939. Molecular systematics: Blast match high ITS similarity among *Myxotrichum* species // mesophilic: NG @ 35C // pigment: yellow on PDA; yellow-brown on PYE // culture conditions: arthroconidia of *Malbranchea* type produced; ascomata having awl shaped spines and uncinata appendages produced on OATC.

Myxotrichum arcticum Udagawa, Uchiyama & Kamiya (morph *Oidiodendron an. Myxotrichum arcticum*)

- 7565 (T *Myxotrichum arcticum*) forest soil George Parks Hwy Road, Willow, north of Wasilla, Alaska, USA S.-I. Udagawa 18 Aug 1992 /S.-I. Udagawa BF 40000 [=GenBank AF062810 (ITS) =GenBank NR_111037 ITS]. Cellulolytic // molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998) // culture conditions: produced ascomata and arthroconidia of *Oidiodendron* type.
9243 decayed wood (stage 3 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 10-30C T. Lumley (ML-06-S4J 30 Oct 1997 /R.S. Currah TCL 029. Pigment: brown // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000) // culture conditions: produced ascomata and arthroconidia of

Oidiodendron type.

- 9244 decayed wood (stage 3 decay), unburned white spruce log (*Picea glauca*) in 2 yr post-fire site Mariana Lake, Alta. 8-5C T. Lumley (F953-04-S5A 5 Aug 1997 /R.S. Currah TCL 030 (F953-04-S5A, 8-5C). Biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000) // culture conditions: produced ascomata and arthroconidia of *Oidiodendron* type.
9337 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*), 29 yr post-fire site Slave Lake, Alta. 3-7B T. Lumley (F681-03-S1E 7 Mar 1997 /R.S. Currah F681-02-S2B, 3-7B. Pigment: brown // biodiversity: rotting wood (Lumley et al., *Mycotaxon* 74:395-414, 2000) // culture conditions: produced arthroconidia of *Oidiodendron* type only.

Myxotrichum cancellatum Phillips (morph *Oidiodendron an. Myxotrichum cancellatum*)

- 1911 frozen blueberry pastry Camden, New Jersey Keuhn 1961 /G.F. Orr K1983 [=NRRL A-11492 =GenBank AF062811 (ITS)]. Cellulolytic // molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998).
1996 soil Tokyo, Japan S.I. Udagawa 1959 /G.F. Orr [=DAOM 198940 =NHL 2283]. Mycorrhizae: non mycorrhizal with *Vaccinium angustifolium* seedlings (Dalpe, *New Phytol.* 113:523-527, 1989) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989).
8727 rotted conifer wood under orchid (*Calypso bulbosa*) Mount Robson, BC 7-10C T. Lumley (MR-07 10 Jul 1995 /R.S. Currah MR-07, 7-10C. Pigment: brown.

Myxotrichum carminoparum Robak (morph *Malbranchea an. Myxotrichum carminoparum*)

- 1597 (T *Myxotrichum carminoparum*) wood pulp Norway Robak /G.F. Orr [=CBS 224.31 =NRRL 11984 =GenBank AF062812 (ITS)]. Cellulolytic // molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998).
1906 G.F. Orr O-1063. Cellulolytic.

Myxotrichum chartarum (Nees) Kunze

- 1997 soil Japan /G.F. Orr [=DAOM 198939 =NHL 2212 =GenBank AF062813 (ITS)]. Mycorrhizae: non-mycorrhizal with *Vaccinium angustifolium* seedlings (Dalpe, *New Phytol.* 113:523-527, 1989) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989) // molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998) // culture conditions: no arthroconidia.
10244 drywall paper Didsbury Hospital, Didsbury, AB L. Sigler 11-02 /L. Sigler. Culture conditions: produced ascomata and arthroconidia of *Malbranchea* type.

Myxotrichum deflexum Berkeley

- 1651 (T *Myxotrichum deflexum*) soil S.W. Avenal, Calif. G.F. Orr 1958 /G.F. Orr O-249 [=NRRL A-9992 =ATCC 15686 =CBS 228.61 =IFO 31718 =GenBank AB015777 =GenBank AB040689]. Cellulolytic // molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, *Mycoscience* 40:251-258, 1999; Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001) // pigment: yellow-brown.
3200 soil under mixed wood North Bay, Ont. G.L. Barron 1961 /IMI 109888 [=DAOM 195975]. Mycorrhizae: non-mycorrhizal with *Vaccinium angustifolium* seedlings (Dalpe, *New Phytol.* 113:523-527, 1989) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989).
5831 house dust Senriigaoka, Suita-shi, Osaka, Japan N. Toyazaki 11 Oct 1983 /S.-I. Udagawa NHL 2929. Cycloheximide: resistant // pigment: red // biodeteriogen/biodegradation: house dust (Udagawa, Awao & Toyazaki, *Trans. mycol. Soc. Japan*

- 27:303-311, 1986).
- 5958 skin contaminant, human arm Toronto 5 Jan 1987 /R.C. Summerbell FR 3.87. Pigment: brown.
- 6044 ex toenail Toronto 1 Dec 1987 /R.C. Summerbell FR 2262. Pigment: red.
- 6365 soil Toronto, Ont. (C) S. Teoh Oct 1988 /L. Hutchison [=GenBank AF062814 (ITS) =GenBank EU678467 Cox1]. Molecular systematics: phylogenetic relationships in Oidiiodendron and Myxotrichaceae (Hambleton et al., Mycologia 90:854-869, 1998).
- 6531 contaminant ex nail scraping Toronto, Ont. R.C. Summerbell Jan 1989 /R.C. Summerbell 173. Pigment: pink.
- 7179 bronchial lavage /M.G. Rinaldi UTHSC 92-565. Pigment: pink.
- 7569 ex cardboard B.C. L. Sigler 8 Apr 1994 /J. Hutchinson. Pigment: brown // biodiversity: ascomatal dispersal by arthropods (Greif & Currah, Mycological Research 107:77-81, 2003).
- 8534 human nails Ontario 1994 /R.C. Summerbell FR 2766.
- 9265 toenail female 63 yr, DE - Fort Saskatchewan, Alta 1998 /R. Rennie MY 708. Pigment: pink on MYC // cycloheximide: resistant.
- 10696 ex ant (Hymenoptera: Formicidae) (UASM 90078) caught in a trap baited with coyote dung site adjacent to Elk Island National Park, Alta. M. Greif 3-Jul-2002 /R.S. Currah C 80.
- Myxotrichum ochraceum* Berk. & Broome**
- 8532 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 12-14B) T. Lumley (EI-13-S2D 14 Dec 1995 /R.S. Currah EI-13-S2D, 12-14B. Pigment: brown // biodeteriogen/biodegradation: from decayed wood (Lumley & Currah, Rep. Tottori Mycol. Inst. 33:7-13, 1995) // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000) // culture conditions: produced ascomata and arthroconidia of Malbranchea type.
- Myxotrichum setosum* (Eidam) Orr & Plunkett (morph *Oidiiodendron an. Myxotrichum setosum*)**
- 3835 soil Mt. Allen, Kananaskis, Alta. /J. Bissett JB 922 [=ATCC 42435 =DAOM 144716 =GenBank AF081426 =GenBank AF062815 (ITS)]. Mycorrhizae: ericoid mycorrhiza with *Vaccinium angustifolium* seedlings (Dalpe, New Phytol. 113:523-527, 1989); not mycorrhizal with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989) // pigment: green // molecular systematics: phylogenetic relationships in Oidiiodendron and Myxotrichaceae (Hambleton et al., Mycologia 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999).
- 4535 washed mineral soil particle Mt. Allan, Kananaskis, Alta. J. Bissett (JB922) 4 Sep 1971 /DAOM 175101. Pigment: green.
- Myxotrichum sp.***
- 6505 ex human toe Windsor, Ont. R.C. Summerbell Jul 1989 /R.C. Summerbell FR 1490.89. Pigment: brown // culture conditions: produces infertile ascomata and arthroconidia of Malbranchea type.
- 6664 ex naturally preserved human body Urbino, Italy J. Mouchacca /J. Mouchacca Italy. Pigment: grey // culture conditions: produces infertile ascomata and arthroconidia of Malbranchea type.
- 9187 finger nail, male 40 yr, DE -; patient with nail changes over several years; treated with itraconazole pulse therapy Delitzsch, Germany 1997 /P. Nenoff 2035/97. Culture conditions: produces infertile ascomata and arthroconidia of Malbranchea type.
- 9742 hand, female 19 yr Alberta /R. Rennie MY 5499. Culture conditions: produces infertile ascomata and arthroconidia of Malbranchea type.
- 11335 swab ex fur of living Eastern pipistrelle bat (*Perimyotis subflavus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 93 C.1. Pigment: yellow to orange-brown // culture conditions: produces infertile ascomata of *Myxotrichum* type; produces alternate arthroconidia of Malbranchea type.
- Myxotrichum stipitatum* (Lindfors) Orr & Kuehn**
- 1510 (T Neotype *Myxotrichum aeruginosum*) sand dunes England J.C. Brown (S 759) 1955 /IMI 61192 [=DAOM 198936 =NRRL A-10747 =RSA 1556 =UAMH 3165 =UAMH 3086 =GenBank AF062816 (ITS)]. Mycorrhizae: non-mycorrhizal with *Vaccinium angustifolium* seedlings (Dalpe, New Phytol. 113:523-527, 1989) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989) // molecular systematics: phylogenetic relationships in Oidiiodendron and Myxotrichaceae (Hambleton et al., Mycologia 90:854-869, 1998).
- 3086 (T *Myxotrichum aeruginosum*) sand dunes England J.C. Brown 1955 /IMI 61192 [=DAOM 195974 =RSA 1556 =UAMH 3165 =UAMH 1510 =NRRL A-10747]. Mycorrhizae: non mycorrhizal with *Vaccinium angustifolium* seedlings (Dalpe, New Phytol. 113:523-527, 1989) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989).
- 3165 (T *Myxotrichum stipitatum*) sand dunes England J.C. Brown 1955 /R.K. Benjamin RSA 1556 [=NRRL A-10747 =IMI 61192 =UAMH 1510 =UAMH 3086 =GenBank AF062816 (ITS)].
- 7291 soil Japan /R.S. Currah TMI 32111. Pigment: brown.
- 7587 ex soil from date palm plantation Basrah, Iraq Jul 1983 /S.-I. Udagawa NHL 2962.
- Myxotrichum striatosporum* (Barron & Booth) Sigler (syn. *Byssosascus striatosporus*; morph *Oidiiodendron an. Myxotrichum striatosporum*)**
- 3572 (T *Arachniotus striatosporus*) soil Bradford Marsh, Ont. G.L. Barron 1960 /CBS 642.66 [=DAOM 198942 =IMI 115998 =NCMH 356 =UAMH 3758 =GenBank AF062817 (ITS) =GenBank AB015776 =GenBank AB040688]. Mycorrhizae: non mycorrhizal with *Vaccinium angustifolium* seedlings (Dalpe, New Phytol. 113:523-527, 1989) // molecular systematics: phylogenetic relationships in Oidiiodendron and Myxotrichaceae (Hambleton et al., Mycologia 90:854-869, 1998); phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
- 3758 (T *Arachniotus striatosporus*) soil Bradford Marsh, Ont. G.L. Barron 1960 /IMI 115998 [=CBS 642.66 =UAMH 3572].
- Naemospora aurea* see *Diatrype stigma***
- Naemospora strobi* Allesch.**
- 10843 ex living roots of *Picea abies* (Pinaceae) Inst. forest. bot. & pathol., Stockholm, Sweden L. Beyer & Lundeberg Feb 1971 /CBS 435.71 [=CBS H-14962]. Culture conditions: grow on cherry decoction agar (CHA) (fide CBS); grow on malt extract agar (MEA).
- Nakazawaea holstii* (Wick.) Y. Yamada, K. Maeda & Mikata (syn. *Hansenula holstii*, *Pichia holstii*; morph *Candida silvicola*)**
- 5318 (T *Hansenula holstii*) ex frass conifer L.J. Wickerham /CBS 4140 [=NRRL Y-2155 =GenBank EF568068 ITS =GenBank EF599430 RPB1 =GenBank EU011649 26S =GenBank EU018549 SSU =GenBank EF550485 18S].
- Nannizzia borellii* see *Arthroderma borellii***
- Nannizzia cajetani* see *Arthroderma cajetani***

Nannizzia fulva see *Arthroderma fulvum*

Nannizzia grubyia see *Arthroderma grubyi*

Nannizzia gypsea see *Arthroderma gypseum*

Nannizzia incurvata see *Arthroderma incurvatum*

Nannizzia obtusa see *Arthroderma obtusum*

Nannizzia otae see *Arthroderma otae*

Nannizzia persicolor see *Arthroderma persicolor*

Nannizzia racemosa see *Arthroderma racemosum*

***Nannizziopsis barbata* Sigler, Hambleton & Pare**

- 11185 (T *Nannizziopsis barbata*) ex skin of coastal bearded dragon (*Pogona barbata*) with deep ulcerative mycotic dermatitis; GMS + for hyphae; animal kept in outdoor enclosure South Penrith Veterinary Clinic, Penrith, NSW, Australia R. Johnson 10-Jun-2009 /R. Johnson 7015.1 [=GenBank JF323871 ITS =GenBank KF466861 SSU =GenBank NR_111613.1 ITS]. Human/animal pathogen: deep cutaneous mycosis in *Pogona barbata* (Case 5) (Johnson RSP, Sangster CR, Sigler L, Hambleton S, Pare JA, Aust Vet J 89:515-519, 2011) // keratinophilic: digests hairs with penetrating bodies // mesophilic: NG @ 35C (Tested three times.) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).

***Nannizziopsis crocodili* Sigler, Hambleton & Pare**

- 9664 plaque-like skin lesion on crocodile (*Crocodylus porosus*); histopathology + for hyphae & arthroconidia Edward River, Gulf of Carpentaria, Australia 1999 /A. Thomas 9744993 - 1B. Human/animal pathogen: fatal cutaneous mycosis in saltwater crocodile (Thomas, Sigler, Peucker, Norton & Nielan, Med. Mycol. 40:143-151, 2002) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // mesophilic: NG @ 37C // cycloheximide: resistant (MYC).
- 9665 plaque-like skin lesion on crocodile (*Crocodylus porosus*); histopathology + for hyphae & arthroconidia Edward River, Gulf of Carpentaria, Australia 1999 /A. Thomas 9744993 - 2B [=GenBank KF477203 ITS]. Human/animal pathogen: fatal cutaneous mycosis in saltwater crocodile (Thomas, Sigler, Peucker, Norton & Nielan, Med. Mycol. 40:143-151, 2002) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // mesophilic: NG @ 37C // cycloheximide: resistant (MYC).
- 9666 (T *Nannizziopsis crocodili*) plaque-like skin lesion on crocodile (*Crocodylus porosus*); histopathology + for hyphae & arthroconidia Edward River, Gulf of Carpentaria, Australia 1999 /A. Thomas 9744993 - 3B [=GenBank KF477204 ITS =GenBank KF466860 SSU =GenBank NR_111876.1 ITS]. Human/animal pathogen: fatal cutaneous mycosis in saltwater crocodile (Thomas, Sigler, Peucker, Norton & Nielan, Med. Mycol. 40:143-151, 2002) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // mesophilic: NG @ 37C // cycloheximide: resistant (MYC).
- 9908 plaque-like skin lesion on crocodile (*Crocodylus porosus*); histopathology + for hyphae Edward River, Gulf of Carpentaria, Australia 2000 /A. Thomas D 47384 7 [=GenBank KF477205 ITS]. Human/animal pathogen: fatal

cutaneous mycosis in saltwater crocodile (Thomas, Sigler, Peucker, Norton & Nielan, Med. Mycol. 40:143-151, 2002) // thermotolerant: grows @ 30 C but more slowly @ 35 C // molecular systematics: 98% ITS similarity (544/554 bp) with 9666 T *Nannizziopsis crocodili*; phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).

***Nannizziopsis dermatitidis* Sigler, Hambleton & Pare**

- 6610 cutis & muscles of day gecko (*Phelsuma* sp.) animal from Madagascar, isol. in Germany B.J. Schildger 1989 /CBS C88-360 (5955) [=GenBank KF477199 ITS]. Benomyl: sensitive // cycloheximide: resistant // molecular systematics: 100% ITS similarity with UAMH 7583 chameleon clade; phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // human/animal pathogen: deep necrotizing dermatitis (Schildger et al, Herpetopathologia 2:81-97, 1991 (Case 9)) // mesophilic: grows @ 30 C but more slowly @ 35 C // culture conditions: slow growing with predominance of arthroconidia and yeast-like cells (Sigler et al 2013).
- 7582 skin biopsy ex male Parson's chameleon (*Calumna* [Chamaeleo] parsonii); histopathology + hyphae Oakville, Ont 18 Oct 1993 /R.C. Summerbell FR 3417 [=BB 1485]. Human/animal pathogen: cutaneous & subcutaneous infection in chameleons (Pare JA, Sigler L, Hunter DB, Summerbell RC, Smith DA, Machin KL, J. Zoo Wildlife Medicine 28:443-453, 1997) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 7583 (T *Nannizziopsis dermatitidis*) liver & kidney ex male jewel chameleon (*Furcifer* [Chamaeleo] lateralis); histopathology + for hyphae Oakville, Ont 24 Nov 1993 /R.C. Summerbell FR 3737 [=BB 1491 =GenBank KF477200 ITS =GenBank KF466859 SSU =GenBank NR 111875.1 ITS]. Human/animal pathogen: cutaneous & subcutaneous infection in chameleons (Pare JA, Sigler L, Hunter DB, Summerbell RC, Smith DA, Machin KL, J. Zoo Wildlife Medicine 28:443-453, 1997) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 7861 ex skin biopsy, adult male Jackson's chameleon *Trioeros* [Chamaeleo] jacksonii with fungal dermatitis; histopathology + hyphae Guelph, Ont. L. Sigler 24 Jan 1995 /J. Pare [=GenBank KF477201 ITS]. Human/animal pathogen: cutaneous & subcutaneous infection in chameleons (Pare JA, Sigler L, Hunter DB, Summerbell RC, Smith DA, Machin KL, J. Zoo Wildlife Medicine 28:443-453, 1997) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 11231 ex skin lesion leopard gecko (*Eublepharis macularius*); histopathology + for hyphae & arthroconidia University of Florida Veterinary College, Gainesville, FL Jul-2010 /E. Jacobson 754/N10-290 [=GenBank JX457149 ITS]. Human/animal pathogen: dermatitis and cellulitis in leopard geckos *Eublepharis macularius* in breeding facility (Toplon DE, Terrell SP, Sigler L, Jacobson ER, Vet Pathol 50:585-589, 2013 (Epub Nov 16, 2012)) // molecular systematics: placement in ITS phylogenetic tree intermediate between *N. dermatitidis* & *N. vriesii* (Sigler et al 2013); phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 11232 skin lesion ex leopard gecko (*Eublepharis macularius*) with ulcerative ventral dermatitis; histopathology + for hyphae & arthroconidia University of Florida Veterinary College,

- Gainesville, FL Jul-2010 /E. Jacobson 756/N10-291 [=GenBank KF477202 ITS]. Human/animal pathogen: dermatitis and cellulitis in leopard geckos *Eublepharis macularius* in breeding facility (Toplon DE, Terrell SP, Sigler L, Jacobson ER, Vet Pathol 50:585-589, 2013 (Epub Nov 16, 2012)) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- Nannizziopsis guarroi*** (J. Cabanes & Abarca) J. Cabanes, Abarca, Stchigel & Cano (syn. *Chrysosporium guarroi*)
- 10171 oral lesion ex inland bearded dragon (*Pogona vitticeps*); histopathology + for hyphae School of Vet. Medicine, U of Wisconsin, Madison, WI J. Pare 28-03-92 /J. Pare 624 [=GenBank KF466862 SSU =GenBank KF477206 ITS]. Keratinophilic: digests hairs with penetrating bodies // human/animal pathogen: deep fungal dermatitis in bearded dragon (*Pogona vitticeps*) (Bowman MR, Pare JA, Sigler L et al, Med Mycol 45:291-296, 2007) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex.
- 10211 cutaneous scabs ex inland bearded dragon (*Pogona vitticeps*) housed in Florida; histopathology + hyphae Madison, WI J. Pare 3-9-02 /J. Pare Helmer B [=GenBank KF477207 ITS]. Keratinophilic: digests hairs with penetrating bodies // human/animal pathogen: deep fungal dermatitis in bearded dragon (*Pogona vitticeps*) (Bowman MR, Pare JA, Sigler L et al, Med Mycol 45:291-296, 2007) // thermotolerant: grows @ 30 C but more slowly @ 35 C // molecular systematics: 100% ITS similarity with most *Chrysosporium guarroi* strains, 1bp difference with EU018452 *C. guarroi*; phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex.
- 10351 amputated leg of bearded dragon (*Pogona vitticeps*); histopathology + hyphae in many fungal granulomas Madison, WI J. Pare 12-9-03 /J. Pare Knowles. Keratinophilic: digests hairs with penetrating bodies // human/animal pathogen: deep fungal dermatitis in bearded dragon (*Pogona vitticeps*) (Bowman MR, Pare JA, Sigler L et al, Med Mycol 45:291-296, 2007) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 10352 lesion on face of bearded dragon (*Pogona vitticeps*); lesion heavily crusted, disfiguring; histopathology + hyphae Madison, WI J. Pare 09-03 /J. Pare Short [=GenBank KP691517 IGS =GenBank KF477208 ITS]. Keratinophilic: digests hairs with penetrating bodies // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); specificity of TaqMan real-time PCR for detection of *Ophidiomyces ophidiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Bleher DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8) // human/animal pathogen: fungal dermatitis in bearded dragon (*Pogona vitticeps*).
- 10353 lesion on bearded dragon (*Pogona vitticeps*); histopathology + hyphae Bayshore Veterinary Hospital, Tampa, FL J. Pare aysore 1 [=Bayshore 2]. Molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // human/animal pathogen: fungal dermatitis in bearded dragon (*Pogona vitticeps*).
- 10409 swab of deep lesion on bearded dragon (*Pogona vitticeps*) that died; histopathology + hyphae New York J. Pare 02-04 /J. Pare NY 1 [=GenBank KF477209 ITS]. Human/animal pathogen: fatal mycotic infection in bearded dragon (*Pogona vitticeps*) // molecular systematics: 100% ITS similarity with most *Chrysosporium guarroi* strains, 1bp difference with EU018452 *C. guarroi*; phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 10918 tail abscess & leg, green iguana (*Iguana iguana*); histopathology + for numerous hyphae Centro Veterinario Madrid Exoticos, Madrid, Spain M. Gallego 23-May-2008 /M. Gallego 1250 [=GenBank KF477210 ITS]. Keratinophilic: digests hairs with penetrating bodies // thermotolerant: growth equivalent at 30 & 35C // human/animal pathogen: dermatomycosis in green iguana // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 10923 left leg, green iguana (*Iguana iguana*) Centro Veterinario Madrid Exoticos, Madrid, Spain M. Gallego 17-Jun-2008 /M. Gallego Bichi [=GenBank KF477211 ITS]. Thermotolerant: growth equivalent at 30 & 35C // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // human/animal pathogen: deep mycosis in green iguana.
- 10938 ex skin around eye, green iguana (*Iguana iguana*) Tango 1 Centro Veterinario Madrid Exoticos, Madrid, Spain M. Gallego 3-Aug-2008 /M. Gallego eye [=GenBank KF477212 ITS]. Thermotolerant: growth equivalent at 30 & 35C // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // human/animal pathogen: dermatomycosis in green iguana.
- 10944 ex leg green iguana (*Iguana iguana*) "Tango 2" Centro Veterinario Madrid Exoticos, Madrid, Spain M. Gallego 16-Jul-2008 /M. Gallego Tango 2 [=GenBank KF477213 ITS]. Thermotolerant: growth equivalent at 30 & 35C // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // human/animal pathogen: deep mycosis in green iguana.
- 10960 ex hyperkeratotic lesion on tail of green iguana (*Iguana iguana*), 8 mo old, with stomatitis and severe pneumonia; biopsy and histopathology not done Centro Veterinario Madrid Exoticos M. Gallego Oct-2008 /M. Gallego 1934 [=GenBank KF477214 ITS]. Keratinophilic: digests hairs with penetrating bodies // human/animal pathogen: dermatomycosis on tail of green iguana // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- Nannizziopsis hominis*** Sigler, Hambleton & Pare
- 7859 (T *Nannizziopsis hominis*) ex intramuscular biopsy, Rt thigh mass, male HIV positive; isolated from two other sites; histopathology + for hyphae UC Davis Medical Centre, Sacramento, CA /M.G. Rinaldi UTHSC 94-1427 [=UAMH 7860 =UAMH 7932 =GenBank KF466864 SSU =GenBank KF477215 ITS =GenBank NR_111877.1]. Cycloheximide: resistant // human/animal pathogen: disseminated infection in human // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 7860 ex Rt groin lesion, male, HIV positive, same patient as UAMH 7859 Sacramento, California UC Davis Medical Centre Oct 1994 /T. Dang [=UAMH 7859 =UAMH 7932]. Odor: pungent // human/animal pathogen: disseminated infection in human // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 7932 ex abscess Rt leg, male, HIV positive, same patient as UAMH 7859 Woodland, CA /M.G. Rinaldi UTHSC 95-497 [=UAMH 7859 =UAMH 7860]. Human/animal pathogen: disseminated

- infection in human // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 9852 biopsy of swollen inguinal node ex non-immunocompromised Nigerian male, 32 yr with disseminated adenopathy Boston, MA May 2000 /M.G. Rinaldi UTHSC 00-1109 [=GenBank KF477216 ITS]. Thermotolerant: grows @ 37C // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // human/animal pathogen: disseminated infection in human.
- Nannizziopsis infrequens** Sigler, Hambleton & Pare
10417 (T Nannizziopsis infrequens) bronchial washing, HIV positive male, 40 yr Iowa Methodist Hospital, Des Moines, Iowa 3-Nov-2003 /CDC 2004000638-001-A [=GenBank KP691518 IGS =GenBank AY744467 ITS =GenBank KF466863 SSU =GenBank NR_111181.1 ITS]. Cycloheximide: resistant // keratinophilic: digests hairs with penetrating bodies // culture conditions: BCP-MS-G profuse growth; no alkalinity; no hydrolysis; urea positive; AccuProbe test + for Histoplasma capsulatum on 2 occasions (fide Brandt et al 2005); false-positive Histoplasma capsulatum Gen-Probe chemiluminescent test caused by a Chrysosporium-like species (Brandt ME, Gaunt D, Iqbal N, McClinton S, Hambleton S, Sigler L, J Clin Microbiol 43:1456-1458, 2005) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); specificity of TaqMan real-time PCR for detection of Ophidiomyces ophiodiicola, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8) // thermotolerant: growth @ 37-42C (fide submitting laboratory).
- Nannizziopsis mirabilis** Uchiyama, Kamiya & Udagawa
7712 (T Nannizziopsis mirabilis) soil sample New Jersey, USA 1993 /S.-I. Udagawa SIU 5954 [=GenBank KF477243 ITS]. Culture conditions: ascomata produced on OAT after 2 mos (fide UAMH 2011) // systematics/taxonomy: description (Uchuyama S, Kamiya S, Udagawa S-I, Mycoscience 36:205-209, 1995) // molecular systematics: excluded from Nannizziopsis clade (Sigler L et al 2013); phylogeny of Nannizziopsis and related onygenalean fungi (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- Nannizziopsis obscura** Sigler, Hambleton & Pare
5875 (T Nannizziopsis obscura) biopsy ex abscess right ankle, African-American male 24 yr, with 2 mo history of osteomyelitis; histopathology + for hyphae & budding yeast New York 1982 /M. McGinnis NCMH 2852 [=GenBank KF477217 ITS =GenBank KF466865 SSU =GenBank NR_111878.1]. Human/animal pathogen: deep infection treated with amphotericin (Stillwell, Rubin, Axelrod, Clin. Orthopedics 184:190-192, 1984) // keratinophilic: digests hairs with penetrating bodies // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // thermotolerant: grows @ 37 C.
- Nannizziopsis tropicalis** Cano, Vidal & Guarro
8391 (T Nannizziopsis tropicalis) soil Kuriange, Bubanza, Burundi J. Guarro (RV 24821) Jun 1968 /J. Guarro FMR 3808 [=IMI 369266 =RV 24821]. Pigment: brown // culture conditions: ascomata produced on OAT after 1 month (fide UAMH 2011) // systematics/taxonomy: disposition in Nannizziopsis uncertain due to problems obtaining sequence data (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013);
- assay of amphotericin B; description (Cano J, Ulfig K, Guillamon JM, Vidal P, Guarro J, Ant v Leeuw 72:149-158, 1997) // mesophilic: NG @ 35C.
- Nannizziopsis vriesii** (Apinis) Currah (morph *Chrysosporium an. Nannizziopsis vriesii*)
3526 soil South California /G.F. Orr O-3469 [=GenBank KF477197 ITS]. Culture conditions: opt. 30 C for ascocarp development // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
3527 (T Rollandina vriesii) skin & lungs of lizard (Ameiva sp.) Holland G.A. de Vries /G.F. Orr O-3640 [=ATCC 22444 =ATCC 24074 =CBS 407.71 =IMI 149994 =UAMH 3598 =UAMH 3712 =UAMH 3713 =GenBank AJ131687 ITS =GenBank HF547893 ACT =GenBank AY176715 28S =GenBank KF477198 ITS =GenBank KF466858 SSU =GenBank KP691519 IGS =GenBank NR_111874.1 ITS =GenBank HF547894 TUB]. Culture conditions: opt. 30 C for ascocarp development // molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002); phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); specificity of TaqMan real-time PCR for detection of Ophidiomyces ophiodiicola, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
3598 (T Rollandina vriesii) skin & lungs of lizard (Ameiva sp.) Holland de Vries /IMI 149994 [=CBS 407.71 =ATCC 22444 =ATCC 24074 =IMI 149994 =UAMH 3527 =UAMH 3712 =UAMH 3713]. Culture conditions: opt. 30 C for ascocarp development.
3712 (T Rollandina vriesii) skin & lungs of lizard (Ameiva sp.) Holland de Vries /G.F. Orr [=ATCC 24074 =ATCC 22444 =CBS 407.71 =IMI 149994 =UAMH 3527 =UAMH 3598 =UAMH 3713]. Culture conditions: opt. 30 C for ascocarp development.
3713 (T Rollandina vriesii) skin & lungs of lizard (Ameiva sp.) Holland de Vries /G.F. Orr [=ATCC 22444 =ATCC 24074 =CBS 407.71 =IMI 149994 =UAMH 3527 =UAMH 3598 =UAMH 3712 =GenBank AY176715]. Culture conditions: opt. 30 C for ascocarp development.
- Narasimhella hyalinospora** see *Gymnascella hyalinospora*
- Narasimhella poonensis** see *Gymnascella marginospora*
- Nectria alata** see *Viridispora alata*
- Nectria aurantiaca** (Tul.) Jaczewski
1447 ex Ulmus South Warwickshire, England E.A. Ellis Aug 1956 /DAOM 88165 [=IMI 63581a].
- Nectria cinnabarina** see *Tubercularia vulgaris*
- Nectria decora** (Wallroth) Fuckel (morph *Fusarium?*)
9190 (in ATCC as Calonectria decora, in CBS as Fusarium ciliatum) ex Epichloe zahlbruckneriana Pretoria, South Africa H.W. Wollenweber (4658) 1932 /ATCC 14767 [=ATCC 14767]. Application: production of steroids by conversion (J. Org. Chem. 27:1468, 1962); transformation of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979); transformation of pergolide to pergolide sulfoxide and pergolide sulfone (J. Pharm. Sci. 72:733-736, 1983) // systematics/taxonomy: non-sporulating isolate fide Rossman (Rossman, Mycol. Papers 150:83, 1983);

connection to *Fusarium ciliatum* not confirmed fide Rossman (Rossman, Mycol. Papers 150:83, 1983).

Nectria fuckeliana see *Neonectria fuckeliana*

Nectria haematococca see *Haematonectria haematococca*

Nectria ochroleuca see *Bionectria ochroleuca*

Nectria pallidula Cooke (morph *Gliocladium an. Nectria pallidula*)
1425 ex *Aesculus* England C. Booth /DAOM 87886 [=IMI 89574a].

Nectria peziza see *Hydropisphaera peziza*

Nemania serpens (Pers.:Fr.) S.F. Gray (syn. *Hypoxyylon serpens*; morph *Geniculosporium serpens*)
1583 stroma of wood Columbia, Missouri P. Martin 1962 /P. Martin 1094.
1649 stroma on wood Columbia, Missouri P. Martin 1962 /P. Martin 1094.
4769 conifer wood bearing *Coniosporium olivaceum* Tarzwell, Ont. G.P. White 6 Aug 1982 /DAOM 185433. Cellulolytic.
5371 seeds *Goodyera repens* (#154) Obed Summit, Alta. L.Sigler Apr 1986 /L.Sigler. Pigment: orange.
6736 endophyte ex surface-disinfested cranberry leaves (*Vaccinium macrocarpon* cultivar Searless) Wood Co., WI S. Jeffers 1987 /S. Jeffers L-X-18. Pigment: brown.
6737 endophyte ex surface-disinfested cranberry leaves (*Vaccinium macrocarpon* cultivar Searless) Wood Co., WI S. Jeffers 1987 /S. Jeffers L-XI-12. Pigment: brown.

Nematoctonus concurrens Drechsler (morph *Hohenbuehelia*)
3054 soil under scrub, el. 700' McKittrick, Kern Co., Calif. R.K. Benjamin (S-8) 3 Apr 1961 /R.K. Benjamin RSA 1123. Nematode-trapping.
4716 litter under old *Picea* Devonian Bot. Garden, Alta. L. Sigler Nov 1982 /L. Sigler. Nematode-trapping.

Nematoctonus geogenius see *Hohenbuehelia petalodes*

Nematoctonus robustus Jones
3275 air Rabat, Morocco J. Chabert 9 Jan 1968 /J. Nicot 5118. Nematode-trapping.

Nematoloma frowardii (C.L. Spegazzini) E. Horak
9377 wood of *Nothophagus* sp. Bariloche, Argentina M. Hofrichter (b19) /M. Pickard DSM 11239 [=ATCC 201144]. Lignin peroxidase, manganese peroxidase, and laccase (Hofrichter M & Fritsche W. Appl. Microbiol. Biotechnol. 47: 419-424, 1997); highly stable manganese peroxidase (Hofrichter M & Fritsche W. Appl. Microbiol. Biotechnol. 47: 566-571, 1997). Application: depolymerizes low-rank coal (Hofrichter M & Fritsche W., Appl. Microbiol. Biotechnol. 47: 566-571, 1997; Hofrichter M & Fritsche W., Appl. Microbiol. Biotechnol. 46: 220-225, 1996; Hofrichter M & Fritsche W., Appl. Microbiol. Biotechnol. 47: 419-424, 1997) // crystals // biodeteriogen/biodegradation: degrades humic acids (fide DSM).

Neoarachnotheca keratinophila see *Myriodontium keratinophilum*

Neobulgaria species
11508 swab ex fur of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J.

Vanderwolf 2-Feb-2010 /K.J. Vanderwolf Bat 31 C.2 CC1. Crystals: abundant // pigment: tan to vinaceous // biodiversity: mycobiota of bat caves // molecular systematics: Blast match 98% ITS similarity with *Neobulgaria pura* HM051080 and unclassified Helotiales (fide UAMH 2012) // culture conditions: no ascospores produced; produces small conidia on branched gliocladium-like conidiophores; conidia appear similar to those illustrated for *Neobulgaria pura* (See Ginns, Fungi Canadenses 85, 1976).

Neocosmospora africana see *Neocosmospora vasinflecta var. africana*

Neocosmospora boninensis Udagawa, Horie & Cannon
6870 soil Iron Range National Park, Cape York, Australia N. Dengler 20 Feb 1990 /R. Khan TRTC 51334 [=IMI 346678 =ATCC 76350 =CBS 554.94]. Pigment: brown.

Neocosmospora vasinflecta var. africana (von Arx) Cannon & Hawksworth (syn. *Neocosmospora africana*)
8572 soil Agra, India J. Guarro Nov 1995 /J. Guarro FMR 5546.

Neocosmospora vasinflecta var. vasinflecta E.F. Smith
6965 rodent dung Punta Santa Tomas, Baja California J. Krug 1 Feb 1989 /R. Khan BJ-13C.
10375 burn patient Galveston, TX /M.G. Rinaldi UTHSC 03-1457. Culture conditions: produces perithecia on OAT cello @ 30C // thermotolerant: grows @ 35 C // molecular systematics: determined to species (fide Dr. K. O'Donnell; fide Dr. K. O'Donnell, USDA-ARS, Peoria, IL).

Neocudoniella radiceola Kohn, Summerbell & Malloch
5794 (T paratype *Neocudoniella radiceola*) on fine rootlets of black spruce seedling (*Picea mariana*) among Sphagnum in boreal forest Rib Lake, Dunmore Township, Timiskaming District, Ont. (C) L. Kohn & D. Malloch 9 Sep 1982 /D. Malloch DM 359 [=TRTC 50817 =ATCC 60774 =GenBank AY524843 (SSU-ITS) =GenBank AY524843 (ITS)]. Mycorrhizae: ectomycorrhizal? producing irregular mantle & Hartig netlike structures in resynthesis (Kohn, Summerbell & Malloch, Mycologia 78:934-940, 1986).

Neofusicoccum arbuti (D.F. Farr & M. Elliott) Crous, Slippers & A.J.L. Phillips
6799 canker on *Arbutus menziesii* Northwest Bay, Vancouver Island, BC G. Helem 6 Jan 1972 /B. Callan 405. Pigment: black // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003) // culture conditions: produced pycnidia.
6800 canker on *Arbutus menziesii* Nanoose Bay, BC A. Funk 8 Mar 1972 /B. Callan 406 [=GenBank AY819725 (ITS) =GenBank AY820312 (beta tubulin)]. Pigment: black // culture conditions: produced pycnidia // molecular systematics: *Fusicoccum arbuti* causing cankers on pacific madrone (Farr DF, Elliott M, Rossman AY, Edmonds RL, Mycologia 97:730-741, 2005).
6801 canker on *Arbutus menziesii* British Columbia A. Flis 21 Mar 1991 /B. Callan. Pigment: black.

Neofusicoccum mangiferae (Syd. & P. Syd.) Crous, Slippers & A.J.L. Phillips
10775 ex mango (*Mangifera* sp.) pulp Edmonton, Alta. L. Sigler. Molecular systematics // culture conditions: no conidia observed; no arthroconidial synanamorph.

Neogymnomycetes demonbreunii (Ajello & Cheng) Orr
3382 (T *Neogymnomycetes demonbreunii*) Missouri soil NIH,

Bethesda, Maryland J. Brandsburg /G.F. Orr O-3200 [=ATCC 18394 =CBS 427.70 =GenBank AJ315842 (ITS) =GenBank AY176716]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).

Neonectria coccinea (Pers.:Fr.) Rossman & Samuels (morph *Cylindrocarpon candidum*)

7118 ex Acer macrophyllum (big leaf maple) shoots S. Shamoun /S. Shamoun PFC 4051. Pigment: orange-brown.

Neonectria fuckeliana (C. Booth) Castl. & Rossman (syn. *Nectria fuckeliana*; morph *Cylindrocarpon cylindroides* var. *tenue*)

11402 unknown Dept. of Fisheries and Forestry, Fredericton, NB A. van Sickle (F 144-3) /DAOM 127427. Molecular systematics: Blast match 99% ITS similarity with *Neonectria fuckeliana* sequences (fide UAMH 2011).

Neonectria radicolica (Gerlach & L. Nilsson) Mantiri & Samuels (morph *Cylindrocarpon destructans*)

7226 ex roots of epiphytic orchid *Stelis* sp. La Selva, Heredia Prov., Costa Rica K. Richardson 5 Apr 1991 /R.S. Currah K208e. Pigment: brown // mycorrhizae: root endophyte epiphytic orchid *Stelis* sp. // culture conditions: produced ascospores.

Neosartorya citrispora see ***Sclerocleista thaxteri***

Neosartorya fischeri (Wehmer) Malloch & Cain (morph *Aspergillus fischerianus*)

7705 contaminant on Takashio medium UAMH, Alta S.P. Abbott (SA-M43) 8 Jan 1994 /S.P. Abbott (SA-M43).

Neosartorya fischeri var. *glabra* see ***Neosartorya glabra***

Neosartorya fischeri var. *spinosa* see ***Neosartorya spinosa***

Neosartorya glabra (Fennell & Raper) Kozakiewicz (syn. *Neosartorya fischeri* var. *glabra*; morph *Aspergillus neoglaber*)

6429 sandy soil Danning River, Guangxi Prov., China (C) S. Scott Oct 1988 /R. Khan TRTC 51109 [=CBS 318.89].

Neosartorya hiratsukae Udagawa, Tsubouchi & Horie (morph *Aspergillus hiratsukae*)

7588 (T *Neosartorya hiratsukae*) pasteurized aloe juice National Institute of Hygienic Sciences, Tokyo Japan 5-9-86 /S.-I. Udagawa SUM 3008 [=GenBank AF057324 btub =GenBank AF057344 hydrophobin =NHL 3008 =CBS 294.93 =IMI 349859 =GenBank AY870699 cal =GenBank DQ534184 actin =GenBank AB025498]. Pigment: brown // molecular systematics: *Aspergillus* section *fumigati* (Hong SB, Cho HS, Shin HD, Frisvad JC, Samson RA, Int J Syst Evol Microbiol 56:477-486, 2006).

10315 grown twice from CAPD fluid and from tenckhoff catheter tip, female 30 yr with peritonitis; all DE + for hyphae Auckland Hospital, Auckland, NZ K. Rogers 2003 /K. Rogers UN 8443. Molecular systematics: ITS 100% identical with UAMH 7588 T *Neosartorya hiratsukae* (fide UAMH); Blast match ITS 99-100% similarity with *Neosartorya hiratsukae* isolates // human/animal pathogen: peritonitis in patient with renal failure.

Neosartorya laciniosa S.B. Hong, Frisvad & Samson 2006

6422 soil Karachi Dist., Sind Prov., Pakistan R.S. Khan 9 Sep 1987 /R. Khan TRTC 51017 [=CBS 315.89 =GenBank AY870754

Btub =GenBank AY870714 cal]. Molecular systematics: determined as *Neosartorya laciniosa* (Hong SB, Cho HS, Shin HD, Frisvad JC, Samson RA, Int J Syst Evol Micro 56:477-486, 2006).

11627 ex debrided hemorrhagic necrotic orbit tissue, male 66 yr bone marrow transplant patient with aplastic anemia; histopathology + for numerous fungal elements and vascular invasion University of Alberta Hospital, Edmonton, Alta. B. Jansen 3-Jun-2011 /R. Rennie MY 4771 [=GenBank JX845619 caM =GenBank JX845620 Btub]. Benomyl: no growth (fide UAH) // thermotolerant: grows @ 45C, NG @ 50C (fide UAH) // molecular systematics: Blast match 99-100% beta tubulin and calmodulin similarity with *Neosartorya laciniosa* (fide UAMH 2012); Blast match 98-100% calmodulin similarity with *Neosartorya laciniosa* (fide UAMH 2012); Blast match 99-100% beta tubulin similarity with *Neosartorya laciniosa* // human/animal pathogen: invasive sino-orbital infection in an aplastic anemia patient (Malejczyk K, Sigler L, Gibas CFC, Smith SS. J Clin Microbiol 51:1316-1319, 2013) // serology: exoantigen positive for *Aspergillus fumigatus* (fide UAH); serum galactomannan positive.

Neosartorya multiplicata Yaguchi, Someya & Udagawa (morph *Aspergillus multiplicatus*)

8331 (T *Neosartorya multiplicata*) soil Houli, Taichung, Taiwan T. Yaguchi 14 Sep 1993 /T. Yaguchi PF 1154 [=CBS 646.95 =GenBank DQ114129 btub =IBT 17517 =GenBank DQ534185 actin =GenBank DQ114137 calmodulin].

Neosartorya primulina Udagawa, Toyazaki & Tsubouchi (morph *Aspergillus primulinus*)

7590 ex canned oolong tea beverage Okinawa Prefecture, Japan 22 Jul 1991 /S.-I. Udagawa SUM 3014 [=CBS 253.94 =GenBank DQ534170 calmodulin =GenBank DQ534158 btub =GenBank DQ534128 actin]. Molecular systematics: considered a synonym of *Neosartorya quadricincta* by Samson et al (Samson RA, Hong S, Peterson SW, Frisvad JC, Varga J, Stud Mycol 59: 147-203, 2007).

Neosartorya pseudofischeri Peterson (morph *Aspergillus thermomutatus*)

464 pus ex breast abscess Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.

7109 endocarditis, vegetations associated with calf pericardium graft, male 7 yrs Sainte-Justine Hospital, Montreal, Quebec G. St-Germain (MY 1671) 1 Dec 1989 /R.C. Summerbell FR 84.90. Human/animal pathogen: endocarditis (Summerbell et al, J. Clin. Microbiol. 30:1580-1582, 1992 as *N. fischeri* var. *spinosa*); reidentified as *N. pseudofischeri* by ascospore morphology (Padhye et al, J. Clin. Microbiol. 32:2832-2836, 1994) // molecular systematics: Blast match 99-100% beta tubulin similarity with *Neosartorya pseudofischeri*.

7436 air sampling in clean room /J. Harris.

7519 (T *Neosartorya pseudofischeri*) osteomyelitis of L2 & L3 vertebrae of 77 yr old male CDC, Atlanta, GA Jul 1989 /CDC B-4812 [=NRR 20748 =GenBank AF057325 =GenBank AF057345 =GenBank EF669946 ITS =GenBank EF669734 RBP =GenBank AF433057 LSU =GenBank AF057345 hydrophobin =GenBank U28451 D1D2 =CBS 208.92 =NRR A-27707 =GenBank EF669805 btub =GenBank AF057325 btub]. Human/animal pathogen: isolated at autopsy but not cause of death (Padhye et al, J. Clin. Microbiol. 32:2832-2836, 1994; Peterson, Mycol. Res. 96:547-554, 1992) // molecular systematics: comparison of *Aspergillus* section *Fumigati* (Peterson, Mycol. Res. 96:547-554, 1992; Geiser et al., Mycologia 90:831-845, 1998).

7724 ex leg ulcer, male 79 yr Edmonton, Alta. C. Sand 3 Aug 1994 /R. Rennie MY 3357.

11628 ex skin of nasal area, female 7 yr, with acute lymphocytic

leukemia who developed a necrotic lesions in nose and hard palate; DE + hyphae University of Alberta Hospital, Edmonton, Alta. B. Jansen 19-Oct-2011 /R. Rennie MY 9440. Thermotolerant: grows @ 45C, NG @ 50C (fide UAH) // human/animal pathogen: invasive nasal infection in immunocompromised child // molecular systematics: Blast match 99-100% beta tubulin and calmodulin similarity with *Neosartorya pseudofischeri* (fide UAMH 2012) // serology: exoantigen negative for *Aspergillus fumigatus* (fide UAH).

Neosartorya sp.

4614 soil, survey of keratinophilic fungi & related dermatophytes India /S.K. Deshmukh SD-2. Thermotolerant // molecular systematics: BLAST match 99% ITS similarity with *Neosartorya* species // culture conditions: no ascospores produced.

Neosartorya spinosa (Raper & Fennell) Kozakiewicz (syn.

Neosartorya fischeri var. *spinosa*; morph *Aspergillus spinosus*)

- 5991 field soil Nile silt, Northern Province, Letti Basin, Letti Jogob, Sudan (C) A. Hollett 3 Nov 1986 /R. Khan TRTC 50994 [=CBS 161.88 =GenBank DQ378094 glc3 and atp2 =GenBank DQ378072 sec61 and sec61-ecm40 =GenBank DQ378083 y11034C and y11034C-erb1].
- 6408 soil Karachi Dist., Sind Prov., Pakistan (C) R.S. Khan 9 Sep 1987 /R. Khan TRTC 51018 [=GenBank DQ378089 glc3 and atp2 =GenBank DQ378078 y11034C and y11034C-erb1 =ATCC 66231 =GenBank DQ378067 sec61-ecm40 and sec61 =CBS 316.89]. Cycloheximide: resistant.
- 6416 desert sand SE of Swakopmund nr Gobabeb, Namibia (C) J. Krug 7 Jan 1986 /R. Khan N-17.

Neosartorya sublevispora Someya, Yaguchi & Udagawa (morph *Aspergillus sublevisporus*)

10175 soil /S.-I. Udagawa SUM 3197. Pigment: orange // systematics/taxonomy: variant; UAMH 10175 represents new variety but not yet described (fide Udagawa).

Neosartorya tatenoi Horie, Miyaji, Yokoyama, Udagawa & Takagi (morph *Aspergillus tatenoi*)

7641 (T *Neosartorya tatenoi*) ex soil in sugar cane plantation Timbauba, Pernambuco, Brazil Y. Horie 17 Jun 1970 /Y. Horie CBM-FA-0022 [=CBS 407.93 =GenBank DQ534135 actin =GenBank DQ114139 cal =GenBank DQ114130 Btub].

Neoscytalidium dimidiatum (Penz.) Crous & Slippers (syn. *Hendersonula toruloidea*, *Fusicoccum dimidiatum*, *Scytalidium dimidiatum*)

- 3770 human fingernail Jamaica C. Campbell /C.C. Campbell M 40 [=MUCL 31210]. Human/animal pathogen: Form 1 // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 3812 root of *Mangifera indica* Mali J. Brun /CBS 499.66 [=GenBank FM211432 ITS =GenBank FM211334 D1D2 =GenBank FM211198 CHS =GenBank FM211167 tub =MUCL 11763 =NCMH 353 =GenBank AY819727 ITS =GenBank DQ377925 LSU]. Molecular systematics: genotyping *Neoscytalidium dimidiatum* (Madrid H, Ruiz-Cendoya M, Cano J, Stchigel A, Orofino R, Guarro J, Int J Antimicrob Agents 34:341-354, 2009); phylogeny of Botryosphaeriaceae (Crous et al., Stud Mycol 55:235-253, 2006).
- 4755 chronic suppurative infection left foot, male 45 yr, KOH dematiaceous hyphae Florida T. Cleary 1979 /M. McGinnis NCMH 1255 [=ATCC 52538]. Human/animal pathogen: deep infection (Dickinson et al., J. Clin. Microbiol. 17:155-158, 1983); Form 1.

- 4781 skin & nail scrapings ex foot, Jamaican patient on extended visit in Montreal Montreal, Que. 3 Dec 1981 /L. Kapica M 2088/81 [=IMI 266565 =MUCL 31214]. Human/animal pathogen: Form 1, pycnidia produced.
- 5396 toenail lesion, East Indian male 47 yr, DE fungal hyphae on several occasions southern Sask. H. Congly 1986 /H. Congly 1324M. Thermotolerant: grows @ 37C // cycloheximide: sensitive // human/animal pathogen: Form 3.
- 6027 ex Rt toenail, DE + Toronto, Ont. 29 Oct 1987 /R.C. Summerbell F 13089.87. Human/animal pathogen: dermatomycosis, Canadian record (Summerbell et al, Mycoses 32:609-619, 1989); Form 1, pycnidia produced.
- 6028 ex arch of sole, DE + Toronto, Ont. 28 Oct 1987 /R.C. Summerbell F 13047.87. Human/animal pathogen: dermatomycosis, Canadian record (Summerbell et al, Mycoses 32:609-619, 1989); Form 1, pycnidia produced // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 6268 Toronto /J. Kane. Human/animal pathogen: Form 1.
- 6290 biopsy left foot tissue, patient ex Sri Lanka? Downsview, Ont. 23 Jun 1988 /R.C. Summerbell SF4007.88. Human/animal pathogen: Form 3.
- 6350 nails ex immigrant from Southern India Toronto, Ont. R.C. Summerbell 29 Nov 1988 /R.C. Summerbell F 12352.88. Human/animal pathogen: Form 3; no pycnidia.
- 6390 skin/nail London, UK M. Moore (MKM 6) 1983 /C.C. Campbell NCPF 2572. Human/animal pathogen: Form 2; no pycnidia.
- 6392 skin/nail London, UK M. Moore (MKM 4) 1983 /C.C. Campbell NCPF 2573. Human/animal pathogen: Form 2.
- 6393 skin/nail London, UK M. Moore (MKM 5) 1983 /C.C. Campbell NCPF 2574. Human/animal pathogen: Form 2.
- 6394 skin/nail London, UK M. Moore (MKM 11) 1983 /C.C. Campbell NCPF 2575. Human/animal pathogen: Form 3.
- 6395 skin/nail London, UK M. Moore (MKM 14) 1983 /C.C. Campbell NCPF 2577. Human/animal pathogen: Form 3.
- 6569 face lesions & onychomycosis, male 30 yr, DE + hyaline single cells & short hyphae Algeria /E. Gueho 1093. Human/animal pathogen: verrucose dermatitis (Marill et al, Soc. Francaise Mycol. Medicale Bulletin 2:73-74, 1973; Marill et al, Bull. Soc. Path. Exotique 68:359-367, 1975; Mariat et al, Sabouraudia 16:133-140, 1978); Form 1, no pycnidia produced.
- 6673 forearm skin, diabetic male on prednisone, 73 yr, histopathology of punch skin biopsy + for hyphae Tucson, AZ 1990 /M.G. Rinaldi V-90-54. Cycloheximide: sensitive // human/animal pathogen: subcutaneous infection in diabetic male with COPD (Sigler et al., J. Clin. Microbiol. 35:433-440, 1997); Form 1, pycnidia produced.
- 6802 ex Prunus sp. twig Egypt R. Nattrass (# 68) /CBS 204.33 [=GenBank FM211164 tub =GenBank FM211429 ITS =GenBank FM211331 D1D2 =GenBank FM211195 CHS =GenBank AY307356 SSU =GenBank AY819728 (ITS)]. Pigment: black // molecular systematics: genotyping *Neoscytalidium dimidiatum* (Madrid H, Ruiz-Cendoya M, Cano J, Stchigel A, Orofino R, Guarro J, Int J Antimicrob Agents 34:341-354, 2009) // culture conditions: no arthroconidial synanamorph.
- 6803 ex Juglans regia (Persian walnut) California E. Wilson /CBS 251.49 [=GenBank FM211430 ITS = GenBank FM211333 D1D2 =GenBank FM211197 CHS =GenBank FM211166 tub =GenBank DQ377923 LSU =IMI 031449]. Pigment: black // molecular systematics: phylogeny of Botryosphaeriaceae (Crous et al., Stud Mycol 55:235-253, 2006); genotyping *Neoscytalidium dimidiatum* (Madrid H, Ruiz-Cendoya M, Cano J, Stchigel A, Orofino R, Guarro J, Int J Antimicrob Agents 34:341-354, 2009).
- 6804 cutaneous infection Brazil E. Costa /E. Costa. Human/animal pathogen: Form 1.

- 6860 dieback & cankers on *Eucalyptus camaldulensis* southwestern Arizona M. Matheron /M. Matheron [=ATCC 96293]. Pigment: black // plant pathogen: first report on *Eucalyptus* dieback (Matheron & Sigler, Plant Disease 78:432, 1994).
- 7064 foot, male 63 yr, DE- Toronto, Ont. 26 Jun 1991 /R.C. Summerbell FR 1782. Pigment: pink/brown // cycloheximide: sensitive // human/animal pathogen: Form 2.
- 7262 ex ingrown toenail, male 63 yr Fort McMurray, Alta. Ft. McMurray Regional Hospital 7 Oct 1992 /R. Rennie MY 4825. Cycloheximide: sensitive // human/animal pathogen: Form 3.
- 7801 ex Rt first toe, male 56 yr Calgary, Alta. 19 Oct 1994 /R. Rennie MY 5021. Pigment: brown // cycloheximide: sensitive // human/animal pathogen: Form 3.
- 7911 ex toenail, East Indian female 40 yr Edmonton, Alta. C. Sand 23 Jan 1995 /R. Rennie MY 0268. Cycloheximide: sensitive // human/animal pathogen: Form 3.
- 7915 dystrophic fingernails & toenails (*Scopulariopsis brevicaulis* also isolated), African American male 72 yr, DE- Cleveland, OH /M. Kemna CMM 1390-94. Human/animal pathogen: onychomycosis; Form 1.
- 8203 nail, male 80 yr, DE+ Edmonton, Alta. C. Sand 8 Aug 1995 /R. Rennie MY 2509. Cycloheximide: sensitive // human/animal pathogen: Form 1.
- 8314 toenail, Fijian male 41 yr with long standing nail infection Edmonton, Alta. J. Fielding 21 Nov 1995 /Kasper & Associates F 35812. Cycloheximide: sensitive // pigment: black // human/animal pathogen: Form 1 // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 8437 right hallux, female 59 yr Alberta Provincial Lab for Southern Alberta Mar 1996 /R. Rennie MY 1625. Pigment: black // human/animal pathogen: Form 1.
- 8438 nail, right hallux, female 58 years Alta. Prov. Laboratory for Southern Alberta (22744) Apr 1996 /R. Rennie MY 1049. Pigment: black // human/animal pathogen: Form 1, no pycnidia produced.
- 8439 foot; sex not given Alta. Prov. Laboratory for Southern Alberta Apr 1996 /R. Rennie MY 1050. Pigment: black // human/animal pathogen: Form 1, no pycnidia produced.
- 8931 foot, male 42 yr Alberta Prov. Lab. for Southern Alberta Mar 1997 /R. Rennie MY 2046. Human/animal pathogen: Form 1, no pycnidia produced.
- 9047 toenail, LT1, female 57 yr, DE+ hyphae & arthroconidia Edmonton, Alta. C. Sand 1 Aug 1997 /R. Rennie MY 4039. Pigment: brown // human/animal pathogen: Form 3 // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 9980 foot, male 38 yr Quebec 2000 /G. St-Germain MY 55516 [=LSPQ 545]. Human/animal pathogen: Form 3.
- 10364 tissue rt foot, female 62 yr Rexdale, Ont. /R. Rennie MY 4703 [=OMH SF-5830]. Cycloheximide: sensitive // thermotolerant: good growth @ 35 C // culture conditions: Form 3.
- 10614 CSF ex male 32 yr; same patient as UAMH 10549 St. Michael's Hospital, Toronto, ON /R. Rennie MY 1070 [=OMH FR 95 =see also 10549 =GenBank EF570499 (ITS)]. Thermotolerant: grows @ 35 C, NG @ 42 C (fide UAH) // human/animal pathogen: dual infection in renal transplant patient (Tan DHS, Sigler L, Gibas C, Fong IW, Med Mycol 46:285-292, 2008) // cycloheximide: sensitive (MYC).
- Stud Mycol 55:235-253, 2006); Beta-tubulin sequence matches UAMH 11256 (fide UAMH 2011); Beta tubulin sequence differs at posn 66 (C instead of T in untrimmed seq) compared with data of Madrid C et al (Madrid H, Ruiz-Cendoya M, Cano J, Stchigel A, Orofino R, Guarro J, Int J Antimicrob Agents 34:351-354, 2009) // pigment: orange brown.
- 4070 skin lesions ex man U.K. /IMI 201657.
- 4760 multiple calcified cysts, left foot, male 51 yrs Emory University Clinic, Atlanta, GA Nov 1982 /CDC LD Haley. Human/animal pathogen: subcutaneous hyalohyphomycosis (Zaatari et al, Am. J. Clin. Path. 82:252-256, 1984).
- 5954 foot plantar surface Toronto R.C. Summerbell 1986 /R.C. Summerbell K229 [=OMH F12464.86]. Human/animal pathogen: dermatomycosis, Canadian record (Summerbell et al, Mycoses 32:609-619, 1989).
- 6031 ex Lt great toenail, DE+ Scarborough, Ont. 30 Sep 1987 /R.C. Summerbell F 11841.87. Human/animal pathogen: dermatomycosis, Canadian record (Summerbell et al, Mycoses 32:609-619, 1989).
- 6032 ex toenail, DE+ Toronto, Ont. 30 Oct 1987 /R.C. Summerbell F 113111.87. Human/animal pathogen: dermatomycosis, Canadian record (Summerbell et al, Mycoses 32:609-619, 1989).
- 7216 lesion on heel after surgical removal of bone-spur, histopathology + for hyphae New Orleans, Louisiana D. Greer May 1992 /D. Greer 5-25-92. Cycloheximide: sensitive // benomyl: sensitive.
- 7354 CDC B-5381. Cycloheximide: sensitive.
- 8900 sole of feet, native of Ghana male 49 yr, with scaly palm and sole with severe cracking & bleeding for 5 yr Moose Jaw, Saskatchewan H. Congly 1997 /H. Congly 247M-97. Cycloheximide: sensitive.
- 9204 toenail, male 76 yr Quebec G. St-Germain 1997 /G. St-Germain MY 51106. Cycloheximide: sensitive, overcoming cycloheximide with age // crystals // pigment: light brown.
- 9730 atypical dark pigmented isolate from right hallux, female 35 yr, DE few irregular filaments seen (8+ colonies recovered) Toronto, ON /R.C. Summerbell F 6808.
- 9739 right toe, female 55 yr Edmonton, Alta. 16 Feb 2000 /R. Rennie MY 1288. Cycloheximide: sensitive.
- 10180 ex L hallux, R hallux also affected, female 49 yr Loyola University Medical Center, Maywood, IL P. Kammeyer Apr 2002 /P. Kammeyer S18265. Benomyl: resistant (2 ppm) // cycloheximide: sensitive (no growth MYC).
- 11256 ex foot skin scraping, male 44 yr, with superficial thrombophlebitis of the left leg & ulcerative colitis Memorial Sloan Kettering Cancer Center, New York, NY 13-Jul-2010 /T.E. Kiehn 00952640. Cycloheximide: sensitive (MYC) // molecular systematics: Beta-tubulin sequence identical to UAMH 4069 *T. Scytalidium hyalinum* (fide UAMH 2011).

Neotestudina bilgramii see *Ulospora bilgramii*

Neotestudina rosatii Segretain & Destombes

- 4342 (T *Neotestudina rosatii*) ex maduromycosis /CBS 427.62 [=ATCC 24280]. Cellulolytic // human/animal pathogen.
- 4351 soil India /CBS 271.75. Cellulolytic // molecular systematics: distinct from *Neotestudina rosatii* (De Hoog, Adelman, Ahmed & van Belkum, Mycoses 47:121-130, 2004).

Neta patuxentica Shearer & Crane

- 3481 (T *Neta patuxentica*) ex balsa wood blocks Patuxent Wild Life Res. Cen., Laurel, Md. Shearer & Crane 10 Oct 1967 /C. Shearer CS64-2 [=ATCC 18854].

Neurospora africana Huang & Backus

- 8569 soil Jaipur, India J. Guarro Oct 1995 /J. Guarro FMR 5547.

Neoscytalidium dimidiatum var. *hyalinum* (C.K. Campb.

& J.L. Mulder) Madrid, Cano, Stchigel & Guarro

- 4069 (T *Scytalidium hyalinum*) sole ex feet, Jamaican man U.K. Campbell & Mulder (M56) 1973 /IMI 198935 [=CBS 145.78 =MUCL 31211 =ATCC 38906 =GenBank DQ377922 LSU =GenBank AY213688 ITS as ATCC 38906]. Molecular systematics: phylogeny of Botryosphaeriaceae (Crous et al.,

Neurospora pannonica Krug & Khan

6867 (T) open soil in pusztá Hortobágyi, Hungary J. Krug 21 Aug 1990/R. Khan TRTC 51327.

Neurospora sitophila Shear & Dodge (morph *Chrysonilia sitophila*)

165 B.O. Dodge 56.2 aPc.
167 B.O. Dodge 6.22 aPc.
455 Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
3501 coffee grounds Edmonton, Alta. J.W. Carmichael 24 Aug 1972 /J.W. Carmichael. Cellulolytic.
3577 wooden boxes containing soil & manure, mushroom farm Spruce Grove, Alta. J.W. Carmichael 4 Dec 1972 /J.W. Carmichael. Cellulolytic.
8568 ex mold contaminated stored wood in logging company for allergy testing against sera from patient with occupational asthma Toronto, Ont. R.C. Summerbell 1994 /R.C. Summerbell BB 1532. Serology: skin testing & RAST for specific IgE antibodies confirmed sensitization in male with occupational asthma (Tarlo et al., J. Allergy Clin. Immunol. 97:1409-1413, 1996).

Nidula niveo-tomentosa (Henn.) Lloyd

8101 soil under Pteridium R.J. Bandoni /S. Davies FR 321 [=ATCC 38357]. Phenolic metabolites (Phytochemistry 19:2717-2721, 1980). Benomyl: tolerant @2 ppm // crystals: not found on V8 or PDA agars.

Nigrosabulum globosum Malloch & Cain

4433 coyote dung Elkwater, Alta. R. Currah (116) 6 Jul 1981 /R. Currah (116). Systematics/taxonomy: ascematal development (Plishka MJR, Tsuneda A, Currah RS, Mycol Res 113:815-821, 2009).
6868 elephant dung Terangire Game Park, Tanzania M. Keeling 24 Dec 1988 /R. Khan TRTC 51201 [=CBS 268.91].

Nigrospora oryzae (Berk. & Br.) Petch (morph *Khuskia oryzae*)

3387 lab. contam. from skin scrapings specimen Calgary, Alta. J.W. Carmichael /J.W. Carmichael.

Nigrospora sphaerica (Saccardo) Mason

4139 nail clippings ex 11 mo. old female Singapore, India R.G. Bell 9 May 1978 /R.G. Bell.
6674 subungual keratin, female 64 yr Saskatchewan H. Congly 1990 /H. Congly 1645M.
7691 indoor air ex RSC strip, from Apis mellifera (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 426) 21 Mar 1994 /S.P. Abbott (OHS 426).

Nomuraea anemonoides Hocking

5301 (T) soil Blue Mts. NSW Australia A. Hocking 1974 /A. Hocking FRR 1925 [=ARSEF 2467 =ATCC 34948 =IMI 214110]. Pigment: purple.

Nomuraea owariensis Uchiy. & S.I. Udagawa (morph *Cordyceps owariensis* f. *viridescens*)

10173 (T *Nomuraea owariensis*) ex underground nymph of cicada (*Platypleura kuroiwae*) in moist fallen litter of laurel forest Amami-oshima, Kagoshima, Japan S. Uchiyama 11-00 /S.-I. Udagawa SUM 3174 [=CBM-FD-9169 (holotype) =IFO 33258]. Culture conditions: discharged ascospores of *Cordyceps owariensis* f. *viridescens* from (Uchiyama & Udagawa, Mycoscience 43:135-141, 2002) // systematics/taxonomy: anamorph connection (Uchiyama & Udagawa, Mycoscience 43:135-141, 2002).

Ochroconis constricta (Abbott) de Hoog & von Arx (syn.

Scolecobasidium constrictum, *Dactylaria constricta*)
1541 soil Bradford Marsh Ont. L.V. Busch May 1960 /G.L. Barron 8805.
5414 (T *Scolecobasidium constrictum*) soil USA E.V. Abbott /I. Salkin DMD 407 [=CBS 202.27 =GenBank AB161063 ITS]. Pigment: wine-red // mesophilic: NG @ 37C // cycloheximide: resistant (Dixon & Salkin, J. Clin. Microbiol. 24:12-15, 1986) // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990).
5416 (T *Heterosporium terrestre*) soil Ancaster, Ont., Canada R.G. Atkinson 1952 /I. Salkin DMD 410 [=ATCC 11419 =GenBank FR832485 RPB2 =GenBank FR832478 ITS =CBS 211.53 =DAOM 28282 =IMI 051380 =MUCL 9896]. Pigment: wine-red // mesophilic: NG @ 37C // cycloheximide: resistant (Dixon & Salkin, J. Clin. Microbiol. 24:12-15, 1986) // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990).
7618 ex skin rash, male 16 yr Vermilion, Alta. Vermilion Health Care Complex 12 Mar 1994 /R. Rennie MY 1162. Pigment: red-brown // mesophilic: NG @ 37C // cycloheximide: resistant.
8241 New Zealand /A. Woodgyer 95-383. Mesophilic: NG @ 37C.
8327 tinea-like lesion on face, female 38 yr Prince Edward Island Queen Elizabeth Hospital (69329) Nov 1995 /R. Rennie MY 4026. Mesophilic: NG @ 37C // cycloheximide: resistant.
8436 skin scraping, left foot, female 54 yr Alberta Provincial Lab for Southern Alberta Mar 1996 /R. Rennie MY 1504. Mesophilic: restricted growth @ 35C, not thermotolerant.
8760 nail, male 57 yr Alberta Prov Lab for Southern Alberta (120353) 29 Oct 1996 /R. Rennie MY 5523. Mesophilic: NG @ 37C.
10124 feces, coffee berry borer (*Hypothenemus hampei*) on artificial diet El Colegio de la Frontera Sur (ECOSUR), Chiapas, Mexico J. Perez 28 Jun 2001 /F. Vega DI-HE R1-3.

Ochroconis gallopavum (Cooke) de Hoog (syn. *Dactylaria gallopava*, *Dactylaria constricta* v. *gallopava*)

5408 human skin lesion Japan S.I. Udagawa /S.-I. Udagawa NHL 2916. Human/animal pathogen: phaeocephomycosis (Fukushiro & al, J. Med. Vet. Mycol. 24:175-182, 1986) // pigment: brown // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990).
5413 bronchial washing Albany, NY I. Salkin (M1864-81) 1981 /I. Salkin DMD 381 [=GenBank AB161047 (LSU)]. Human/animal pathogen // pigment: wine-red // thermotolerant // cycloheximide: sensitive (Dixon & Salkin, J. Clin. Microbiol. 24:12-15, 1986) // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990).
5415 pleural lesion ex domestic cat USA R. Roberts /I. Salkin DMD 409 [=ATCC 48579 =GenBank AB161048 (LSU)]. Human/animal pathogen // pigment: wine-red // thermotolerant // cycloheximide: sensitive (Dixon & Salkin, J. Clin. Microbiol. 24:12-15, 1986) // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990).
5417 (T *Diplorhynchium gallopavum*) brain abscess ex turkey poult USA B.W. Bierer /I. Salkin DMD 411 [=ATCC 16027 =CDC B-579 =GenBank AB569127 RPB2 =GenBank AB569126 18S =GenBank AB125285 LSU]. Human/animal pathogen // pigment: wine-red // cycloheximide: sensitive (Dixon & Salkin, J. Clin. Microbiol. 24:12-15, 1986) // thermotolerant // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990).
5418 self heated coal mine waste M.R. Tansey (119-1) /I. Salkin DMD 412 [=ATCC 26841 =GenBank AB161050 (LSU)]. Pigment: wine-red // thermotolerant // cycloheximide: sensitive (Dixon & Salkin, J. Clin. Microbiol. 24:12-15, 1986) // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990).

- 6550 sputum ex patient with angina, left ventricular dysfunction Salisbury, MD /CDC B-4682 [=GenBank AB161053 (LSU)]. Human/animal pathogen // thermotolerant: grows @ 42C // pigment: brown // serology: exoantigen (Sekhon et al, J. Med. Vet. Mycol. 28:59-66, 1990). =GenBank FR832483 RPB2 =GenBank FR832476 ITS =GenBank HQ877647 betatub-like =GenBank HQ916997 actin =GenBank AB161066 ITS].
- 6551 brain abscess immunocompromised patient Mobile, Alabama /CDC B-4767. Human/animal pathogen // thermotolerant: grows @ 42C // pigment: brown. 6560 soil Toronto, Ont. C. McGhee 2 Nov 1989 /G. Thorn McGhee 2.
- 6552 sputum, coal mine worker Johannesburg, S. Africa /CDC B-4872 [=GenBank AB161049 (LSU)]. Human/animal pathogen // thermotolerant: grows @ 42C // pigment: brown. 9978 nail, male 29 yr Alberta 29 Jan 2001 /R. Rennie MY 1143.
- 6553 sputum, coal mine worker Johannesburg, S. Africa /CDC B-4873 [=GenBank AB161054 (LSU)]. Human/animal pathogen // thermotolerant: grows @ 42C // pigment: brown.
- 7355 ex fatal infection in lungs & brain of heart transplant patient, male, 54 yr Charleston, SC Medical University of South Carolina /CDC B-5304 [=GenBank AB161055 (LSU)]. Pigment: reddish-brown // human/animal pathogen // thermotolerant: grows well @ 35C.
- 7356 lymph node of cat with fatal infection Florida /CDC B-5346. Pigment: reddish-brown // human/animal pathogen.
- 7486 ex lung Antipodean parakeet (*Cyanoramphus unicolor*), 10 yr Palmerston North, New Zealand 1993 /A. Woodgyer 93-379 [=GenBank AB161051 (LSU)]. Pigment: brown.
- 7523 rt bronchial washing, female 68 yr Toronto, Ont. Etobicoke General Hospital 14 Apr 1992 /R.C. Summerbell FR 816 [=GenBank AB161056 (LSU)]. Pigment: reddish-brown.
- 7573 ex pulp sample with pink slime Ontario L. D'Arsie 8 Apr 1994 /L. D'Arsie 36033(c) [=GenBank AB161052 (LSU)]. Pigment: black.
- 8240 blood-stained sputum, male 83 yr, DE- New Zealand 1995 /A. Woodgyer 95-257 [=GenBank AB161057 (LSU)]. Pigment: brown // thermotolerant.
- 8535 lung, immunocompromised patient with aggressive infection St. Louis, MO G.S. Kobayashi 1994 /R.C. Summerbell FR 193 [=GenBank AB161058 (LSU)]. Pigment: brown // thermotolerant: grows @ 37C.

Ochroconis humicola (Barron & Busch) de Hoog & von Arx
(syn. *Scolecobasidium humicola*)

- 3076 (T *Scolecobasidium humicola*) peat soil cedar bog Guelph Ont. G.L. Barron 1960 /IMI 110131.
- 3397 rainbow trout Tennessee /A.J. Ross.
- 3414 coho salmon (*Oncorhynchus kisutch*) /A.J. Ross.
- 3503 frog Elkan & Philpot /C. Philpot 4251.
- 3606 kidney ex rainbow trout State of Tenn. Hatchery Erwin N.C. J. Camper 27 Feb 1973 /M. McGinnis MM 181 [=CDC B1545].
- 4414 sputum N.C. /CDC 81-025939.
- 5086 carbonated beverage Puerto Rico /C. Betancourt 5. Pigment: brown on PYE.
- 8377 toenail, female 48 yr Saskatchewan H. Congly 1995 /H. Congly 3486M-95. Mesophilic: NG @ 37C.
- 8378 toenail, male 48 yr Saskatchewan H. Congly 1995 /H. Congly 3497M-95. Pigment: rose-brown.
- 9984 shed ventral mid-body skin ex boa constrictor (Boa constrictor), male Racine Zoological Gardens, Racine, WI UAMH (UW113B-A) 27 Mar 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Ochroconis tshawytschae (Doty & Slater) Kirilenko & Al-Achmed (syn. *Scolecobasidium tshawytschae*, *Scolecobasidium variabile*)

- 3075 (T *Scolecobasidium macrosporum*) grassland soil India /IMI 98296 [=IHEM 4506 =LCP 0.2124].
- 3077 soil Oakville Ont. G.L. Barron 1963 /IMI 102117.
- 3479 (T *Scolecobasidium tshawytschae*) kidney disease *Oncorhynchus tshawytscha* Coleman Fisheries Stn. Anderson Calif. D.W. Slater 1945 /ATCC 9915 [=CBS 100438

Ochroconis verruculosa (Roy et al.) de Hoog & von Arx
(syn. *Scolecobasidium verruculosum*)

- 3071 (T *Scolecobasidium verruculosum*) grassland soil India /IMI 98297.

Oedocephalum glomerulosum (Bull.) Sacc. (morph *Iodophanus testaceus*)

- 648 hairs, barber shop Edmonton, Alta. J.W. Carmichael Jun 1959 /J.W. Carmichael.
- 3080 chicken dung Guam, Marian Is. S. Stribling 1958 /IMI 74901.
- 5259 contaminant ex UAMH 5229 S. tomentosus L. Sigler 9 Dec 1985 /L. Sigler.
- 9576 lung tissue biopsy, lingula, male 30 yr with interstitial lung disease Edmonton, AB C. Sand 12 Jun 1999 /R. Rennie MY 159. Mesophilic: NG @ 37C.

Oedocephalum pallidum (Berk. & Br.) Cost. (morph *Peziza vesiculosa*)

- 6548 herbivore dung Coto Donana, Huelva, Spain J. Guarro 20 Mar 1989 /J. Guarro FMR 3069.

Ogataea methylvora (Kumam. & Seriu) Kurtzman & Robnett (syn. *Pichia methylvora*; morph *Candida cariosilignicola*)

- 8338 (T *Candida cariosilignicola*) decayed timber Japan J.D. Lee (KL 24) /N. Gunde-Cimerman K 138 [=IMI 12484 =CBS 8001 =IFO 1910 =ATCC 46048 =ATCC 58434]. Methanol assimilation (J. Gen. Appl. Microbiol. 26:133-158, 1980).

Ogataea minuta (Wick.) Y. Yamada, K. Maeda & Mikata
(syn. *Pichia minuta*)

- 5482 base of *Dendroctonus ponderosae* bark beetle gallery in *Picea engelmannii* Whitney Creek Area, Blairmore, Alta. L. Sigler (BSF2) Sep 1983 [=NRRL Y12862]. Biodiversity: mountain pine beetle galleries.
- 5483 base of *Dendroctonus ponderosae* gallery in *Pinus contorta* Whitney Creek Area, Blairmore, Alta. L. Sigler (BSF26) Sep 1983 /L. Sigler (BSF26) [=NRRL Y12865]. Biodiversity: mountain pine beetle galleries.
- 5484 base of *Dendroctonus ponderosae* gallery in *Pinus contorta* Whitney Creek Area, Blairmore, Alta. L. Sigler (BSF43) Sep 1983 /L. Sigler (BSF43) [=NRRL Y12863]. Biodiversity: mountain pine beetle galleries.
- 7440 *Populus tremuloides* Whitecourt, Alta. L. Hutchison (W3-3) 27 Jul 1993 /L. Hutchison NOF 2117. Culture conditions: physiological reactions (Hutchison & Hiratsuka, Mycologia 86:386-391, 1994).

Ogataea nonfermentans (Wick.) Kurtzman & Robnett (syn. *Pichia minuta* var. *nonfermentans*)

- 7441 *Populus tremuloides* Fort Nelson, B.C. L. Hutchison (CCMC-1-13a) 1 Nov 1991 /L. Hutchison NOF 1942. Culture conditions: physiological reactions (Hutchison & Hiratsuka, Mycologia 86:386-391, 1994).

Ogataea pini (Holst) Y. Yamada, M. Matsuda, K. Maeda & Mikata (syn. *Pichia pini*)

- 5320 (T *Pichia pini*) ex *Dendroctonus brevicomis* C.A. Richards /CBS 744 [=IFO 1342].

Oidiodendron an. Myxotrichum arcticum see

Myxotrichum arcticum*Oidiiodendron an. Myxotrichum cancellatum* see***Myxotrichum cancellatum****Oidiiodendron an. Myxotrichum setosum* see***Myxotrichum setosum****Oidiiodendron an. Myxotrichum striatosporum* see***Myxotrichum striatosporum******Oidiiodendron cerealis*** (Thumen) Barron (syn.*Stephanosporium cereale*)

- 504 hair from beard Edmonton, Alta. J.W. Carmichael Jun 1956 /J.W. Carmichael.
- 1011 lung Richardson's ground squirrel Westlock, Alta. J.W. Carmichael Jul 1960 /J.W. Carmichael.
- 1409 (T Haplographium fuligineum) Ulmus sp. van Beyma /DAOM 34870 [=IMI 96738 =CBS 198.32 (+LSU)].
- 1429 pulp sample C.J. Wang Oct 1959 /DAOM 70386.
- 1453 ex spleen Richardson's ground squirrel Alta. J.W. Carmichael 3 Oct 1962 /J.W. Carmichael.
- 1522 peat soil Bradford Marsh, Ont. G.L. Barron 1960 /G.L. Barron OAC 9215 [=IMI 96253 =GenBank AF062788]. Mycorrhizae: not mycorrhizal with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001).
- 4815 thigh skin female child, 2 yr Quebec (MM2-588) 1983 /A.S. Sekhon [=PL3979 (PLM 999)].
- 7387 palm scrapings, male, 46 yr Alberta /R. Rennie MY 1952a. Pigment: brown.
- 7744 ex toenail, female 71 yr Alberta 15 Sep 1994 /R. Rennie MY 4016.
- 8506 (T *Stephanosporium atrum*) damp alpine pasture soil Italy G. Dal Vesco /CBS 349.62.
- 8991 soil, kangaroo rat burrow Portal, Arizona D.T. Wicklow (DTW 133) 16 Sep 1987 /NRRL A-27578. Benomyl: sensitive (NG 2 ppm) // pigment: brown.
- 10700 ex caterpillar (Lepidoptera) (UASM 90918) caught in a trap baited with brown rotted-wood site adjacent to Elk Island National Park, Alta. M. Greif 12-Jun-2002 /R.S. Currah B 37.

Oidiiodendron chlamyosporicum Morrall (syn.*Oidiiodendron scytaloides*)

- 6520 (T *Oidiiodendron chlamyosporicum*) ex boreal forest soil under *Pinus banksiana*, *Picea mariana*, *Larix laricina* Candle Lake, Sask. R. Morrall (642) /ATCC 18448 [=IMI 131498 =CBS 403.69 =DAOM 197507 =GenBank AF062789 (ITS) =GenBank AF081430]. Mycorrhizae: not mycorrhizal with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001).
- 6521 (T *Oidiiodendron scytaloides*) ex humus (Ao2) hoizon of soil in 60 yr *Picea abies* forest planted on a former beech forest Sweden B. Soderstrom & E. Baath 1973 /ATCC 38210 [=CBS 922.73 =DAOM 197503 =GenBank AF081429 =GenBank AF062804 (ITS)]. Mycorrhizae: not mycorrhizal with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., Can. J.

- Bot. 77:1580-1594, 1999); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001).
- 6527 ex illuvial (B) layers of soil in 60 yr *Picea abies* forest planted on a former beech forest Kongalund, Sweden B. Soderstrom & E. Baath 1973 /CBS 924.73. Culture conditions: degenerate, not sporulating when received.
- 8509 humus layer of forest soil Meerdink Forest, Netherlands B.E. Soderstrom 1970 /CBS 132.72.
- 8510 roots of dying *Abies alba* Germany G. Schuler 1981 /CBS 443.81.
- 9514 ex roots of *Vaccinium membranaceum* Priest Lake, Idaho B. McCracken (PL1DdiG) /B. McCracken 6. Mycorrhizae: ericoid endophyte (fide B. McCracken) // molecular systematics: BLAST match 99% ITS similarity with *Oidiiodendron chlamyosporicum* (C. Gibas unpublished).
- 9751 two-year decomposing moss (*Sphagnum fuscum*) in bog dominated by black spruce (*Picea mariana*), moss (*Sphagnum fuscum*) & heather (*Ericaceae*) nr Perryvale, AB (54D28'N, 113D16'W) M.N. Thormann (MNT 13) Sep 1999 /R.S. Currah MNT 13 [=ALTA 10699]. Biodeteriogen/biodegradation: enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001).

Oidiiodendron citrinum see ***Oidiiodendron maius******Oidiiodendron echinulatum*** Barron

- 8467 peat soil in cedar bog Ontario G.L. Barron (10264) 1964 /IMI 110132 [=IMI 110132 =GenBank AF062791 (ITS)]. Molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // pigment: purple-brown // systematics/taxonomy: identification of *Oidiiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 9246 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 1-20C) T. Lumley (EI-02-S1H 20 Jan 1997 /R.S. Currah TCL 055 (EI-02-S1H, 1-20C). Pigment: purple-brown // systematics/taxonomy: identification of *Oidiiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).

Oidiiodendron fimicola Rice & Currah

- 10459 (T *Oidiiodendron fimicolum*) ex mushroom compost St. Louis, Missouri D. Bayer (DC 60) 1976 /R.S. Currah [=DC 60 Penn State Univ Mushroom Spawn Laboratory J. Molecular systematics: ITS sequence (fide UAMH 2011); Blasts among *Oidiiodendron* species // application: use of Biolog profiles to distinguish *Oidiiodendron* species (Rice A, Currah RS, Stud Mycol 53:75-82, 2005).
- 10523 ex mushroom compost California D. M. Bayer (DC 61) 1976 /R.S. Currah [=DC 61 Penn State Univ Mushroom Spawn Laboratory J. Application: use of Biolog profiles to distinguish *Oidiiodendron* species (Rice A, Currah RS, Stud Mycol 53:75-82, 2005).

Oidiiodendron flavum Szilvinyi

- 1524 soil ex cedar bog Aberfoyle, Ont. G.L. Barron Nov 1960 /G.L. Barron 9206 [=DAOM 195970 =GenBank AF081425 =GenBank AF307763 =MUCL 15080 =CCFC 005907 =GenBank AF062792 (ITS) =CBS 524.69]. Mycorrhizae: with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) //

application: antibacterial activity (Hosoe et al., Chem. Pharm. Bull. 47:1591-1597, 1999) // systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).

Ooidiodendron fuscum Robak

- 8511 (T *Ooidiodendron fuscum*) wood pulp Norway H. Robak /CBS 238.31 [=MUCL 1057 =CBS 238.31 =GenBank AF062807 (ITS) =GenBank AB015787 =GenBank AF0407076 =GenBank AF307773]. Pigment: brown // molecular systematics: phylogenetic relationships in *Ooidiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001); phylogenetic relationships in *Ooidiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // systematics/taxonomy: identification of *Ooidiodendron* species (Rice & Currah, Stud. Mycol. 53:83-120, 2005; Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).

Ooidiodendron griseum Robak

- 992 lung ex cottontail Smokey Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 1403 wood pulp E. Melin 1960 /DAOM 75835 [=BDUN 186 =CBS 249.33 =IMI 149010 =GenBank AF062793 (ITS) =DAOM 75835 =CCFC 009564]. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); phylogenetic relationships in *Ooidiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); phylogenetic relationships in *Ooidiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 1693 Douglas fir timber Fort Langely, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael [=GenBank AF062794 (ITS)]. Molecular systematics: phylogenetic relationships in *Ooidiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); phylogenetic relationships in *Ooidiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 4080 wood chips & bark ex logging truck Westlock, Alta. L. Sigler 23 Jan 1978 /L. Sigler [=GenBank AF062795 (ITS) =GenBank AF081418]. Molecular systematics: phylogenetic relationships in *Ooidiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); phylogenetic relationships in *Ooidiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 5847 contaminant ex UAMH 5794 UAMH A. Flis 23 Jul 1987 /A. Flis. Pigment: yellow.
- 5971 roots *Cypripedium acaule* Montreal, Quebec M. St. Arnaud /M. St. Arnaud 3.2WS [=DAOM 198922 =CCFC 006823 =GenBank AY624310 ITS]. Pigment: brown // systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 5973 galleries *Dendroctonus ponderosae* in *Pinus contorta* Alberta Y. Yamaoka 1987 /Y. Yamaoka C1225. Systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 6734 thigh female 13 yr /D. Dixon M692-90.
- 7719 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 336) 22 Mar 1994 /S.P. Abbott (OHS 336). Pigment: brown //

- systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8364 plate contaminant @ 5 C UAMH, Alta S.P. Abbott (SA-M4) 20-Sep-1993 /S.P. Abbott (SA-M4). Systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8528 *Pinus contorta* Sundance Canyon, Alta. V.S. Nordin (VJN 4500-A-11) /R.S. Currah DAOM 51071 [=DAOM 51071 =GenBank AF062796 (ITS)]. Molecular systematics: phylogenetic relationships in *Ooidiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); phylogenetic relationships in *Ooidiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8925 roots *Vaccinium myrtilloides* (blueberry) growing in open Jack Pine forest on stable sand dune, 1 km east of townsite Slave Lake, Alta. S. Hambleton (S-31b) 15 Jul 1994 /R.S. Currah S-31b [=GenBank AF062797 (ITS)]. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); phylogenetic relationships in *Ooidiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); phylogenetic relationships in *Ooidiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // pigment: brown.
- 8926 roots *Vaccinium vitis-idaea* (bog cranberry) growing in open Jack Pine forest on stable sand dune, 1 km east of townsite Slave Lake, Alta. S. Hambleton (S-266b) 17 Jul 1995 /R.S. Currah S-266b. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // pigment: brown.
- 9006 bronchial lavage, male 73 yr 1997 /CDC B 5761. Pigment: brown.
- 9007 sternal fluid, female 65 yr 1997 /CDC B 5762 [=GenBank AY624312]. Pigment: brown // systematics/taxonomy: identification of *Ooidiodendron* species (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 9750 living moss (*Sphagnum fuscum*) in bog dominated by black spruce (*Picea mariana*), moss (*Sphagnum fuscum*) & heather (*Ericaceae*) nr Perryvale, AB (54D28'N, 113D16'W) M.N. Thormann (MNT 61) Jul 1997 /R.S. Currah MNT 61 [=ALTA 10699]. Biodeteriogen/biodegradation: in vitro decomposition, degrades cellulose weakly, utilizes starch, tannic acid (Thormann, Currah & Bayley, Can. J. Microbiol. 48:204-211, 2002); enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001).
- 9766 toenail, male 81 yr, DE+ New Zealand 2000 /K. Rogers MR 9186.
- 10609 From cultures set up for TB /A. Woodgyer 2006-1421. Pigment: yellow/brown // molecular systematics: BLAST match 99-100% ITS similarity with *Ooidiodendron griseum* (fide UAMH) // cycloheximide: sensitive (MYC); sensitive (growth strongly inhibited).

Ooidiodendron kalrae see *Arthrographis kalrae*

Ooidiodendron maius Barron (syn. *Ooidiodendron citrinum*)

- 1525 (T *Ooidiodendron citrinum*) soil ex cedar bog Guelph, Ont. G.L. Barron 1960 /G.L. Barron 9245 [=DAOM 195972 =GenBank AF062790 (ITS) =GenBank AF081419]. Mycorrhizae: not mycorrhizal with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // molecular systematics: phylogenetic relationships in *Ooidiodendron* and *Myxotrichaceae* (Hambleton et al., Mycologia 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); phylogenetic relationships in *Ooidiodendron* (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // systematics/taxonomy: identification of the ericoid mycobiont *Ooidiodendron maius* (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005); identification of *Ooidiodendron* species (Rice

- & Currah, *Stud. Mycol.* 53:83-120, 2005).
- 1540 (T *Oidiodendron maius*) peat soil ex cedar bog Guelph, Ont. G.L. Barron Oct 1960 /G.L. Barron 9232 [=DAOM 195971 =GenBank AF081422 =GenBank AF062798 (ITS)]. Mycorrhizae: ericoid with salal (Xiao & Berch, *Mycologia* 87:467-470, 1995) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997); phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., *Can. J. Bot.* 77:1580-1594, 1999); phylogenetic relationships in *Oidiodendron* (Lacourt, Girlanda, Perotto et al, *New Phytol.* 149:565-576, 2001) // culture conditions: physiological reactions (Rice, A. & R.S. Currah, *Mycotaxon* 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005); identification of *Oidiodendron* species (Rice & Currah, *Stud. Mycol.* 53:83-120, 2005).
- 6514 ex roots *Loiseleuria procumbens* (Ericaceae) Arrowhead Lake, Jasper National Park, Alta. R. Currah (LPS3) 25 Aug 1989 /R. Currah (LPS3). Pigment: grey // mycorrhizae: endophyte (Stokye & Currah, *Can. J. Bot.* 69:347-352, 1991) // molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998) // culture conditions: physiological reactions (Rice, A. & R.S. Currah, *Mycotaxon* 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 7022 ex roots *Gaultheria shallon* (salal) in *Tsuga heterophylla* (western hemlock) reforestation site Port McNeill, Vancouver Island, BC G. Xiao 1991 /G. Xiao S4. Mycorrhizae: ericoid (Xiao & Berch, *Can. J. Bot.* 74:337-346, 1996; Xiao & Berch, *Mycologia* 84:470-471, 1992; Xiao & Berch, *Mycologia* 87:476-479, 1995) // molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998) // culture conditions: physiological reactions (Rice, A. & R.S. Currah, *Mycotaxon* 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 7023 ex roots *Gaultheria shallon* (salal) in *Tsuga heterophylla* (western hemlock) reforestation site Port McNeill, Vancouver Island, BC G. Xiao 1991 /G. Xiao S18. Mycorrhizae: ericoid (Xiao & Berch, *Can. J. Bot.* 74:337-346, 1996; Xiao & Berch, *Mycologia* 84:470-471, 1992; Xiao & Berch, *Mycologia* 87:467-470, 1995) // pigment: brown // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 7024 ex roots *Gaultheria shallon* (salal) in *Tsuga heterophylla* (western hemlock) reforestation site Port McNeill, Vancouver Island, BC G. Xiao 1991 /G. Xiao S61. Mycorrhizae: ericoid (Xiao & Berch, *Can. J. Bot.* 74:337-346, 1996; Xiao & Berch, *Mycologia* 84:470-471, 1992) // pigment: brown // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 7025 ex roots *Gaultheria shallon* (salal) in *Tsuga heterophylla* (western hemlock) reforestation site Port McNeill, Vancouver Island, BC G. Xiao 1991 /G. Xiao S91. Mycorrhizae: ericoid (Xiao & Berch, *Can. J. Bot.* 74:337-346, 1996; Xiao & Berch, *Mycologia* 84:470-471, 1992) // pigment: tan // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 7026 ex roots *Gaultheria shallon* (salal) in *Tsuga heterophylla* (western hemlock) reforestation site Port McNeill, Vancouver Island, BC G. Xiao 1991 /G. Xiao S92. Mycorrhizae: ericoid (Xiao & Berch, *Can. J. Bot.* 74:337-346, 1996; Xiao & Berch, *Mycologia* 84:470-471, 1992) // pigment: black // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 7089 ex black sclerotia in stream drift 6 Mile Lake, Muskoka District, Ont. D. Malloch Mar 1991 /D. Malloch Ceno K.
- 8442 roots of *Rhododendron* sp. cultivar Pink Pearl Ireland M.C. Heslin (4) /ATCC 66504 [=ATCC 66504]. Mycorrhizae: ericoid with *Rhododendron* (Douglas, Heslin & Reid, *Can. J. Bot.* 67:2206-2212, 1989) // pigment: brown // molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998) // culture conditions: physiological reactions (Rice, A. & R.S. Currah, *Mycotaxon* 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 8507 ex root of Ericaceae Sweden H. Burgeff /CBS 334.52 [=CBS 334.52]. Molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998) // culture conditions: non sporulating on deposit; no conidia obtained // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 8529 roots of *Vaccinium corymbosum* Frelighsburg, Missisquoi, Quebec M. Couture (40) 12 Aug 1981 /R.S. Currah DAOM 184107 [=DAOM 184107 =GenBank AF062799 (ITS)]. Molecular systematics: phylogenetic relationships of *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); phylogenetic relationships in *Oidiodendron* (Lacourt, Girlanda, Perotto et al, *New Phytol.* 149:565-576, 2001) // culture conditions: physiological reactions (Rice, A. & R.S. Currah, *Mycotaxon* 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 8919 roots *Chamaedaphne calyculata* (leather-leaf) growing in acidic peatland (bog) southwest of townsite Athabasca, Alta. S. Hambleton (S-9Da) 16 Oct 1993 /R.S. Currah S-9Da. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997) // pigment: dark brown // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005) // mycorrhizae: colonized roots of *Rhododendron groenlandicum* in resynthesis experiments (Piercey M, Thormann MN, Currah RS, *Mycorrhiza* 12:175-180, 2002).
- 8920 roots *Oxycoccus quadripetalus* (bog cranberry) growing in acidic peatland (bog) southwest of townsite Athabasca, Alta. S. Hambleton (S-10Aa) 16 Oct 1993 /R.S. Currah S-10Aa. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997) // pigment: dark brown // culture conditions: physiological reactions (Rice, A. & R.S. Currah, *Mycotaxon* 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont *Oidiodendron maius* (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005) // mycorrhizae: failed to colonize roots of *Rhododendron groenlandicum* or *Picea mariana* in resynthesis experiments (Piercey M, Thormann MN, Currah RS, *Mycorrhiza* 12:175-180, 2002).
- 8921 roots *Vaccinium myrtilloides* (blueberry) growing in open Jack Pine forest on stable sand dune, 1 km east of townsite Slave Lake, Alta. S. Hambleton (S-27b) 15 Jul 1994 /R.S. Currah S-27b [=GenBank AF062800 (ITS)]. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997); phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); phylogenetic relationships in

- Oidiiodendron (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // pigment: dark brown // culture conditions: physiological reactions (Rice, A. & R.S. Currah, Mycotaxon 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8922 roots *Vaccinium vitis-idaea* (bog cranberry) growing in open Jack Pine forest on stable sand dune, 1 km east of townsite Slave Lake, Alta. S. Hambleton (S-357Ca) 3 Oct 1995 /R.S. Currah S-357Ca [=GenBank AF062801 (ITS) =DAOM 228570]. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); phylogenetic relationships in Oidiiodendron and Myxotrichaceae (Hambleton et al., Mycologia 90:854-869, 1998); phylogenetic relationships in Oidiiodendron (Lacourt, Girlanda, Perotto et al, New Phytol. 149:565-576, 2001) // pigment: dark brown // culture conditions: physiological reactions (Rice, A. & R.S. Currah, Mycotaxon 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8923 roots *Phyllodoce glanduliflora* growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-74Aa) 27 Aug 1994 /R.S. Currah S-74Aa. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // pigment: brown // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8924 roots *Vaccinium scoparium* growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-81Bc) 27 Aug 1994 /R.S. Currah S-81Bc. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // pigment: dark brown // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8932 roots *Ledum groenlandicum* growing in acidic peatland (bog) southwest of townsite Athabasca, Alta. S. Hambleton (S-38a) 29 Jul 1994 /R.S. Currah S-38a. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // pigment: brown // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 8933 roots *Phyllodoce empetriformis* (red heather) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-77Aa) 27 Aug 1994 /R.S. Currah S-77Aa [=DAOM 228568]. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // pigment: brown // culture conditions: physiological reactions (Rice, A. & R.S. Currah, Mycotaxon 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 9263 roots of *Vaccinium angustifolium* Little Flat mountain, Rothrock State Forest, Centre County, Pennsylvania C. Stevens 20 Jul 1994 /B. Goulart LFB. Mycorrhizae: Effects of mycorrhizal inoculation on highbush blueberry (*Vaccinium corymbosum*); ericoid endophyte (Stevens CM, Goulart BL, Demchak K, Dalpé Y, Yang WQ, Hancock JF, Acta Hort. 46:411-420, 1996); extracellular proteases (Yang WQ, Tien M, Goulart BL, ISHS Acta Horticulturae 715: VIII International Symposium on *Vaccinium* Culture) // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 9275 ex black ectomycorrhizal root tip (*Cenococcum* sp.) of *Arctostaphylos uva-ursi* in open Jack pine forest on stable sand dune Slave Lake, Alberta S. Hambleton 15-Jul-1998 /R.S. Currah S-28a.
- 9446 ex roots of *Vaccinium membranaceum* Priest Lake, Idaho B. McCracken (PL3B) /B. McCracken 5 [=GenBank AY624308]. Mycorrhizae: ericoid (fide B. McCracken) // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 9749 eight-month decomposing moss (*Sphagnum fuscum*) in bog dominated by black spruce (*Picea mariana*), moss (*Sphagnum fuscum*) & heather (*Ericaceae*) nr Perryvale, AB (54D28'N, 113D16'W) M.N. Thormann (MNT 1) May 1998 /R.S. Currah MNT 1 [=ALTA 10700]. Biodeteriogen/biodegradation: cell walls of *Sphagnum fuscum* (Tsuneda, Thormann & Currah, Can. J. Bot. 79:93-100, 2001); in vitro decomposition, degrades cellulose weakly, utilizes starch, tannic acid (Thormann, Currah & Bayley, Can. J. Microbiol. 48:204-211, 2002); enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001) // culture conditions: physiological reactions (Rice, A. & R.S. Currah, Mycotaxon 79:383-396, 2001) // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 10116 roots of poplar (*Populus tremuloides*) seedling (#38) from dry, boreal oak-pine forest Kragero, Telemark, Norway T. Vralstad 1998 /T. Vralstad ARON 2904.S [=ARON 2904.S =GenBank AY624314]. Molecular systematics: Did not amplify with *Hymenoscyphus* specific primer (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000; Vralstad pers. comm.) // mycorrhizae: status unclear, may be endophyte, mantle associate or contaminant (Vralstad pers. comm.) // pigment: brown on CER // culture conditions: Initially sterile, later developed Oidiiodendron conidiophores (fide L. Sigler) // systematics/taxonomy: identification of the ericoid mycobiont Oidiiodendron maius (Sigler L, Gibas C, Stud. Mycol. 53:63-74, 2005).
- 10421 culture ex root (6) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCTra 133. Mycorrhizae: experimental (fide T.R. Allen 2003).
- 10422 culture ex root (7) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCTra 142. Mycorrhizae: experimental (fide T.R. Allen 2003).
- 10460 ex *Vaccinium myrtilloides* roots, disturbed hilltop Fort McKay, Alta. G. Hill-Rackette (S4-P3-P4) /R.S. Currah S4-P3-P4. Culture conditions: physiological reactions (Rice A, Currah RS, Mycotaxon 79:383-396, 2001); produced sterile gymnothecia in crosses on sterilized *Cladonia* (Rice A, Currah RS, Mycol. Res. 106:1463-1467, 2002).
- 10461 ex *Vaccinium myrtilloides* roots, birch-dominated fjell Kevo Research Station, Finland R. S. Currah 14-7-98 /R.S. Currah F-02. Culture conditions: physiological reactions (Rice A, Currah RS, Mycotaxon 79:383-396, 2001).
- 10508 ex *Vaccinium myrtilloides* roots, jack pine-aspens forest Fort McMurray, Alta. G. Hill-Rackette (S1-P6-C-1) /R.S. Currah S1-P6-C-1. Culture conditions: produced sterile gymnothecia in crosses on sterilized *Cladonia* (Rice, A. & R.S. Currah, Mycol. Res. 106:1463-1467, 2002); physiological reactions (Rice, A. & R.S. Currah, Mycotaxon 79:383-396, 2001).
- 11195 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 18-Sep-2007 /G. Kernaghan ARSL 180907.15. Molecular systematics: Blast match 98-99% similarity to *O. maius* (including *O. citrinum*) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip.
- 11196 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 23-May-2007 /G. Kernaghan ARSL 230507.14 [=GenBank HQ157846 ITS]. Mycorrhizae: boreal root

endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).

Oidiiodendron myxotrichoides M. Calduch, Gené & Guarro

- 11241 swab ex fur of a long ear bat (*Myotis septentrionalis*) Kitts Cave, Hammondvale, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 33 C.2. Pigment: violet-brown CER; violet PDA // molecular systematics: Blast match 97% ITS sequence similarity with *O. myxotrichoides* AJ635314 (fide UAMH 2010).

Oidiiodendron periconioides Morrall

- 4056 oil soaked soil Norman Wells, NWT 1972 /D. Westlake NWF 124. Pigment: brown on CER.
- 6084 endophyte ex roots fairy slipper orchid *Calypso bulbosa* Nichol Springs, Cypress Hills, Alta. S. Hambleton (RC 201Aa) 7 May 1987 /S. Hambleton (RC 201Aa). Pigment: dark brown.
- 7288 mycobiont of *Rhododendron brachycarpum* seedlings, in pot culture with horticultural peat moss Tottori City, Japan R. Currah 1992 /R.S. Currah [=ATCC 96296]. Mycorrhizae: ericoid with *Rhododendron brachycarpum* (Currah et al., *Can. J. Bot.* 71:1481-1485, 1993).
- 7289 humus Japan /R.S. Currah ISO 31963. Pigment: brown.
- 7524 R.C. Summerbell FR 3424. Pigment: brown.
- 8424 conifer Alberta C. Zelman /R.S. Currah CZ 139. Pigment: brown.
- 8527 (*Oidiiodendron periconioides*) soil under *Pinus banksiana*, *Picea mariana* & *Larix laricina* Candle Lake, Sask. R. Morrall /R.S. Currah DAOM 197506 [=DAOM 197506 =GenBank AF062802 (ITS) =GenBank AF081428]. Pigment: brown // molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., *Can. J. Bot.* 77:1580-1594, 1999); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, *New Phytol.* 149:565-576, 2001).
- 9050 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 9-28A) T. Lumley (EI-01-S2C 28 Sep 1996 /R.S. Currah EI-01-S2C, 9-28A. Pigment: brown.
- 9051 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 12-15C) T. Lumley (EI-01-S2C 15 Dec 1996 /R.S. Currah EI-01-S2C, 12-15C. Pigment: brown.
- 10463 ex brown-rotted wood bait block, Sphagnum bog Perryvale, Alta. A. Rice (3AMC4-10A) 08-02 /R.S. Currah 3AMC4-10A.
- 10522 ex brown-rotted wood bait block, Sphagnum fuscum and *Picea mariana* bog Perryvale, Alta. A. Rice (1JyMC5-7A) Jul-2002 /R.S. Currah 1JyMC5-7A. Culture conditions: degrades tannic acid (fide A. Rice).
- 11470 swab ex fur of living male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 99 C.5. Pigment: yellow-brown // biodiversity: mycobiota of bat caves // molecular systematics: Blast match 99% ITS similarity with *Oidiiodendron periconioides* AF062802 UAMH UAMH 8527 Type (fide UAMH 2012).

Oidiiodendron pilicola Kobayasi

- 7526 forest soil Sweden J.E. Nylund /CBS 141.72 [=ATCC 38209 =GenBank AF062787 ITS]. Molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, *New Phytol.* 149:565-576, 2001).

Oidiiodendron rhodogenum Robak

- 1405 sludge in pulp strainers Kistefoss Mills, Norway H. Robak Oct

- 1929 /DAOM 75838 [=CBS 237.31 =MUCL1058 =GenBank AF062803 (ITS) =GenBank AF081427]. Pigment: red // mycorrhizae: not mycorrhizal with salal (Xiao & Berch, *Mycologia* 87:467-470, 1995) // molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); diversity of ericoid mycorrhizae (Monreal et al., *Can. J. Bot.* 77:1580-1594, 1999); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, *New Phytol.* 149:565-576, 2001).
- 8508 forest soil Ontario, Canada G.C. Bhatt /CBS 401.69 [=OAC 10121 =MUCL 14540 =ATCC 24404]. Pigment: red.
- 10462 ex brown-rotted wood bait block, Sphagnum bog Perryvale, Alta. A. Rice (4SMC1-5) 09-02 /R.S. Currah 4SMC1-5. Pigment: red.
- 10521 ex brown-rotted wood bait block, Sphagnum fuscum and *Picea mariana* bog Perryvale, Alta. A. Rice (5AMC4-9) Aug-02 /R.S. Currah 5AMC4-9. Cellulolytic: weak // pigment: red.

Oidiiodendron scytaloides see ***Oidiiodendron chlamydosporicum***

Oidiiodendron setiferum Udagawa & Toyazaki

- 5715 (*Oidiiodendron setiferum*) house dust Kobe, Japan 16 Jan 1986 /S.-I. Udagawa NHL 2967 [=ATCC 62961 =DAOM 197295 =GenBank AF062805 (ITS)]. Cycloheximide: resistant // molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, *New Phytol.* 149:565-576, 2001).

Oidiiodendron sp. M. Calduch, Gené & Guarro

- 1370 paper sample in toilet tissue and towel mill C.J. Wang (251?) Jun 1959 /DAOM 70385 [=GenBank AF307765 =MUCL 4146]. Molecular systematics: phylogenetic relationships in *Oidiiodendron* (Lacourt, Girlanda, Perotto et al, *New Phytol.* 149:565-576, 2001) // systematics/taxonomy: identification of *Oidiiodendron* species (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 11238 swab ex fur of a female long ear bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 78 C.4. Molecular systematics: Blast match 96% similarity to *Oidiiodendron truncatum* AJ062809 (fide UAMH 2010) // biodiversity: mycobiota of bat caves.
- 11240 swab ex skin of a male long ear bat (*Myotis septentrionalis*) Markhamville Mine, New Brunswick K.J. Vanderwolf 09-Feb-2010 /K.J. Vanderwolf Bat 49 C.4. Molecular systematics: Blast match highest similarity (96%) to *Myxotrichum setosum* but lacking teleomorph and colonies gray (fide UAMH 2010) // biodiversity: mycobiota of bat caves.

Oidiiodendron tenuissimum (Peck) Hughes

- 1523 soil ex mixed deciduous wood Guelph, Ont. G.L. Barron Nov 1960 /G.L. Barron 9201 [=GenBank AY624309]. Pigment: brown // systematics/taxonomy: identification of *Oidiiodendron* species (Rice & Currah, *Stud. Mycol.* 53:83-120, 2005; Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 8513 leaf litter La Goner, Canary Islands, Spain R.F. Castaneda 5 Jan 1995 /CBS 315.95 [=INIFAT C95/58 =GenBank AF062806 (ITS)]. Molecular systematics: phylogenetic relationships in *Oidiiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998) // systematics/taxonomy: identification of *Oidiiodendron* species (Rice & Currah, *Stud. Mycol.* 53:83-120, 2005).

Oidiodendron truncatum Barron

- 1399 (T *Oidiodendron truncatum*) soil ex mixed wood Guelph, Ont. G.L. Barron (9203) 1960 /DAOM 75754 [=GenBank AF062809 (ITS)]. Molecular systematics: phylogenetic relationships in *Oidiodendron* and *Myxotrichaceae* (Hambleton et al., *Mycologia* 90:854-869, 1998); phylogenetic relationships in *Oidiodendron* (Lacourt, Girlanda, Perotto et al., *New Phytol.* 149:565-576, 2001) // application: antibacterial activity (Hosoe et al., *Chem. Pharm. Bull.* 47:1591-1597, 1999) // systematics/taxonomy: identification of *Oidiodendron* species (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 8443 soil of snow valley Italy A.M. Mosca 1958 /ATCC 36256 [=IMI 89334 =LSHB BB392].
- 8514 soil ex wheat field Keil, Kitzberg, Schleswig-Holstein, Germany W. Gams (C1049) 13 Oct 1964 /CBS 115.65 [=ATCC 16286 =MUCL 8272]. Molecular systematics: 99-100% ITS similarity with *Oidiodendron truncatum* (AF062809 UAMH 1399 T and others) (fide UAMH 2010).
- 9064 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 3-3A) T. Lumley (EI-01-S5E 3 Mar 1996 /R.S. Currah EI-01-S5E, 3-3A [=GenBank AY624313]. Systematics/taxonomy: identification of *Oidiodendron* species (Sigler L, Gibas C, *Stud. Mycol.* 53:63-74, 2005).
- 9065 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 11-19B) T. Lumley (EI-02-S1J 19 Nov 1996 /R.S. Currah EI-02-S1J, 11-19B).
- 9245 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 1-18A) T. Lumley (EI-01-S1F 18 Jan 1996 /R.S. Currah TCL 028. Pigment: red-brown.
- 9473 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 1-26D) T. Lumley (EI-01-S5G 26 Jan 1996 /R.S. Currah EI-01-S5G, 1-26D). Tetranorditerpenoids, iodiodendrolides A, B and C, oidioidendronic acid, acrostalidic acid, and anthraquinone derivatives (Hosoe et al., *Chem. Pharm. Bull.* 47:1591-1597, 1999). Application: antifungal activity of tetranorditerpene lactones against *Candida albicans* (Hosoe et al., *Chem. Pharm. Bull.* 47:1591-1597, 1999).
- 10464 decomposing spruce (*Picea* sp.) (stage 5 decay) 15 K north of Slave Lake, Alta. T. Lumley (H682) /R.S. Currah H682. Culture conditions: physiological reactions (Rice A, Currah RS, *Mycotaxon* 79:383-396, 2001).
- 11239 swab ex skin of a male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 97 C.3. Pigment: red-brown // molecular systematics: Blast match 98% similarity to *Oidiodendron truncatum* AJ062809 (fide UAMH 2010).

Oligoporus sericeomollis (Rom.) Pouz.

- 8267 Pine (*Pinus* sp.) Alberta R. Robinson July 1960 /S. Davies FC-149 [=NOF 525]. Biodeteriogen/biodegradation: brown rot.

Olpitrichum macrosporum (Farlow) Sumstine

- 1361 plant material in moist chamber W. Virginia, USA H.L. Barnett (1377) /DAOM 64721 [=IMI 96725].

Olpitrichum patulum (Sacc. & Berl.) Holubova-Jechova

- 6115 ex branch *Rhus typhina* Ottawa, Ont. 28 Aug 1986 /K. Seifert FRT 677A [=ATCC 62928].
- 8311 toenail, left hallux, male 50 yr Alberta Provincial Laboratory for Southern Alberta Oct 1995 /R. Rennie MY 3676. Pigment: brown.

Olpitrichum sphaerosporum Matsush.

- 11865 ex foliage of *Juniperus chinensis* L. Windsor, CT, USA De-Wei Li 24-Feb-2014 /De-Wei Li DWL2014-6.

Olpitrichum tenellum (Berk & Curt.) Holubova-Jechova

- 3179 *Zea mays* Iowa, USA G.L. Barron 1957 /IMI 89327 [=IMI 89327].

Oncocladium flavum Wallroth (morph *Malbranchea flava*)

- 1589 (T *Malbranchea flava*) soil S. California D.A. Plunkett 1962 /G.F. Orr OAP-19-317 [=ATCC 34528 =CBS 132.77 =IMI 211200]. Culture conditions: *Oncocladium* hyphae poorly developed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 1879 soil S. Calif. O. Plunkett (OAP 19-317(6)) 1962 /G.F. Orr OAP 19-317(6) [=Orr O-5281]. Culture conditions: *Oncocladium* hyphae poorly developed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 2859 Tunis DeVroye (RV 19535a) /G.F. Orr O-3496. Culture conditions: *Oncocladium* hyphae expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 2860 sector b ex RV 19535 (UAMH 2859) Orr 1967 /G.F. Orr RV 19535b. Culture conditions: *Oncocladium* hyphae expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 2864 soil baited with fabric Hungary Szathmary 1967 /G.F. Orr O-3512. Culture conditions: *Oncocladium* hyphae poorly developed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 2865 soil isolate from cellophane #1 Hungary Szathmary 1967 /G.F. Orr O-3514.
- 4064 contaminant ex UAMH 1850 *Arthroderma quadrifium* UAMH L. Sigler Nov 1977 /L. Sigler.
- 4459 soil Spain /J. Guarro FFBA 232.
- 4564 soil Spain /J. Guarro FFBA 281. Culture conditions: *Oncocladium* hyphae poorly developed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4565 mass conidial isolate ex soil, initially producing verticillate hyphae Spain /J. Guarro FFBA 329 did not mate with 4788, 4793-4795, 4797; 4805,4807. Culture conditions: *Oncocladium* hyphae expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4805 single conidium ex UAMH 4804 (ex coyote dung in damp chamber) L. Sigler Jul 1983 /L. Sigler did not mate with 4788, 4793-4795, 4797; 4806, 4807, 4565. Culture conditions: *Oncocladium* hyphae expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4806 single conidium ex UAMH 4804 (ex coyote dung in damp chamber) L. Sigler Jul 1983 did not mate with 4788, 4793-4795, 4797; 4805,4807, 4565. Culture conditions: *Oncocladium* hyphae expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4807 single conidium ex UAMH 4804 (ex coyote dung in damp chamber) L. Sigler Jul 1983 /L. Sigler did not mate with 4788, 4793-4795, 4797; 4805,4806, 4565. Culture conditions: *Oncocladium* hyphae expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).

Oncocladium flavum* var. *robustum Sigler & Guarro

- 1956 soil Argentina Varsavsky (EV 5V) 1961 /G.F. Orr O-3596. Culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987) // pigment: reddish brown.
- 2544 soil Australia Warcup 1964 /G.F. Orr A282/5.
- 4473 mass conidial isolate ex soil Spain /J. Guarro FFBA 277 did not mate with 4793-4797; 4805-4807, 4565. Pigment: reddish

- brown // culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4474 soil Spain /J. Guarro FFBA 278. Culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4793 single conidium ex UAMH 4788 L. Sigler (H1) Jun 1983 /L. Sigler (H1) did not mate with 4788, 4794-4797; 4805-4807, 4565. Pigment: reddish brown // culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4794 single conidium ex UAMH 4788 L. Sigler (H2) Jun 1983 /L. Sigler (H2) did not mate with 4788, 4793, 4795-4797; 4805-4807, 4565. Culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4795 single conidium ex UAMH 4788 L. Sigler (D5) Jun 1983 /L. Sigler (D5) did not mate with 4788, 4793 4794, 4796-4797; 4805-4807, 4565. Culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4796 single conidium ex UAMH 4788 L. Sigler (E5) Jun 1983 /L. Sigler (E5) did not mate with 4788, 4793-4795, 4797; 4805-4807, 4565. Pigment: reddish brown // culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- 4797 single conidium ex UAMH 4788 L. Sigler (A8) Jun 1983 /L. Sigler (A8) did not mate with 4788, 4793-4796; 4805-4807, 4565. Pigment: reddish brown // culture conditions: *Oncocladium* hyphae not expressed on soil with wool (Sigler, Guarro, Currah & Punsola, *Mycotaxon* 28:119-130, 1987).
- Onnia tomentosa* see *Inonotus tomentosus*
- Onychocola canadensis*** Sigler (morph *Arachnomyces nodosetosus*)
- 4596 onychomycosis right great toenail, female 53 yr, DE+ Yorkton, Sask. H. Congly 1982 /H. Congly - Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994. Human/animal pathogen: onychomycosis (Sigler & Congly, *J. Med. Vet. Mycol.* 28:405-417, 1990) // systematics/taxonomy: mating studies (Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 5344 (T *Onychocola canadensis*) ex hallux, female 67 yr with onychomycosis Saskatchewan H. Congly /H. Congly 209M [=ATCC 76169 =CBS 313.90 =DAOM 211964 =MUCL 31209 =UTMB 3238 =UTMB 3250 =GenBank AB053452 =GenBank AY123784] + Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994. Human/animal pathogen: onychomycosis (Sigler & Congly, *J. Med. Vet. Mycol.* 28:405-417, 1990) // molecular systematics: phylogeny of onygenalean fungi (Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001) // systematics/taxonomy: mating studies (Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994) // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. *J. Dermatol.* 149:296-305, 2003).
- 5893 left hallux female 46 yr, DE+ Saskatchewan H. Congly 1987 /H. Congly 1897M [=ATCC 76170] - Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994. Human/animal pathogen: onychomycosis (Sigler & Congly, *J. Med. Vet. Mycol.* 28:405-417, 1990) // systematics/taxonomy: mating studies (Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 6043 (T mating type strain *A. nodosetosus*) ex Lt great toenail, male Toronto 30 Nov 1987 /R.C. Summerbell FR 2252.87 + mating type 6106 mating type strain. Human/animal pathogen: onychomycosis? (Sigler & Congly, *J. Med. Vet. Mycol.* 28:405-417, 1990) // systematics/taxonomy: mating studies (Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994) // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. *J. Dermatol.* 149:296-305, 2003).
- 6106 (T mating type strain *A. nodosetosus*) right palm, male Toronto, Ont. /J. Kane FR 385 [=GenBank AF525309 (SSU)] + mating type 6043 mating type strain. Human/animal pathogen: agent of cutaneous infection? (Sigler & Congly, *J. Med. Vet. Mycol.* 28:405-417, 1990) // systematics/taxonomy: mating studies (Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994) // molecular systematics: phylogeny of *Arachnomyces* using SSU rDNA sequences (Gibas, Sigler, Summerbell & Currah, *Stud. Mycol.* 47:131-139, 2002) // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. *J. Dermatol.* 149:296-305, 2003).
- 6637 arm lesion, male 29 yrs Saskatchewan H. Congly /H. Congly 439M - Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994. Human/animal pathogen: cutaneous mycosis? // systematics/taxonomy: mating studies (Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 6794 ex great toenail, female 71 yr, DE + New Zealand /A. Woodgyer 91.011. Pigment: brown // human/animal pathogen: onychomycosis (Sigler et al., *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 6795 R hallux, male 90 yr, DE + (filaments & arthroconidia) Toronto, Ont. 19 Apr 1990 /R.C. Summerbell F 3963. Pigment: brown // human/animal pathogen: onychomycosis (Sigler et al., *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 7046 toenail, female 76 yr, DE + Ottawa, Ont. 25 Feb 1991 /R.C. Summerbell FR 685. Pigment: brown // human/animal pathogen: onychomycosis (Sigler et al., *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 7116 left hallux, male 68 y, DE + Saskatchewan H. Congly 1991 /H. Congly 1925 M-91. Pigment: brown // human/animal pathogen: onychomycosis (Sigler et al., *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 7117 hallux, male 76 yr, DE + Saskatchewan H. Congly 1991 /H. Congly 2425M.91. Pigment: brown // human/animal pathogen: onychomycosis (Sigler et al., *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 7139 ex both palms, female 51 yr, DE + New Zealand 1992 /A. Woodgyer MY92.026 + Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994. Human/animal pathogen: cutaneous mycosis (Sigler et al., *J. Med. Vet. Mycol.* 32:275-285, 1994) // systematics/taxonomy: mating studies (Sigler, Abbott & Woodgyer, *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 7429 L & R hallux (pooled), male 83 yr, DE + Christchurch, New Zealand A. Woodgyer 1993 /A. Woodgyer MY 93-341. Pigment: dark brown // human/animal pathogen: onychomycosis (Sigler et al., *J. Med. Vet. Mycol.* 32:275-285, 1994).
- 7851 ex toe nails, male 48 yr Sherwood Park, Alta. Kasper & Associates Laboratory 30 Dec 1994 /R. Rennie MY 5447. Pigment: brown // human/animal pathogen: onychomycosis.
- 7853 ex nail, female about 75 yr, DE+ Strasbourg, France C. de Bievre 1992 /C. de Bievre 2023.92. Cellulolytic // human/animal pathogen: onychomycosis (Koenig et al., Reunion Ste francaise Mycol med, Institut Pasteur, 25-26 Nov. 1994) // pigment: dark brown // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. *J. Dermatol.* 149:296-305, 2003).
- 7854 ex nail, female about 75 yr, DE+ Strasbourg, France C. de Bievre 1994 /C. de Bievre 2291.94. Human/animal pathogen: onychomycosis (Koenig et al., Reunion Ste francaise Mycol med, Institut Pasteur, 25-26 Nov. 1994).
- 7855 ex nail, female about 75 yr, DE+ Strasbourg, France C. de Bievre 1994 /C. de Bievre 2292.94. Cellulolytic //

- human/animal pathogen: onychomycosis (Koenig et al., Reunion Ste francaise Mycol med, Institut Pasteur, 25-26 Nov. 1994).
- 7889 L great toenail, male 50 yr, DE+ Dunedin, NZ/A. Woodgyer 94.455. Pigment: brown // human/animal pathogen: onychomycosis.
- 7891 toenail, male 80 yr Dunedin, NZ Dec 1994 /A. Woodgyer 94.621. Pigment: brown // human/animal pathogen: onychomycosis.
- 7901 ex Lt great toenail, female 74 yr, DE+ Auckland, NZ /D. Parr 178. Human/animal pathogen: onychomycosis.
- 8376 toenail, male 86 yr Saskatchewan H. Congly 1995 /H. Congly 2538M-95. Pigment: brown // human/animal pathogen: onychomycosis.
- 8536 skin Sarnia, Ont. Sarnia General Hospital 13 Apr 1996 /R.C. Summerbell FR 1240. Pigment: brown // human/animal pathogen: cutaneous mycosis?.
- 8537 toe nail, female 44 yr London, Ont. Victoria Hospital 1995 /R.C. Summerbell FR 2891. Pigment: brown // human/animal pathogen: onychomycosis.
- 8602 toenail, male 46 yr, following trauma while visiting in Mali Quebec G. St-Germain /G. St-Germain LSPQ 0412. Pigment: brown // human/animal pathogen: onychomycosis.
- 8649 toenail, DE+ Australia M. Little 1995 /A. Woodgyer 9530482. Pigment: brown // human/animal pathogen: onychomycosis, first Australian isolate.
- 8650 toenail, DE+ Australia M. Little 1996 /A. Woodgyer 9601824. Pigment: brown // human/animal pathogen: onychomycosis, 2nd Australian isolate // application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
- 8663 toenail, male 39 yrs, DE+ Suffolk, England /C.K. Campbell NCPF 7169. Pigment: brown // human/animal pathogen: onychomycosis (Campbell et al., J. Med. Vet. Mycol. 35:423-425, 1997).
- 8664 toenails, adult male, DE+ Leeds, England /C.K. Campbell NCPF 7170. Pigment: brown // human/animal pathogen: onychomycosis (Campbell et al., J. Med. Vet. Mycol. 35:423-425, 1997).
- 8665 nails, adult male, DE+ Cardiff, Wales /C.K. Campbell NCPF 7181. Pigment: brown // human/animal pathogen: onychomycosis (Campbell et al., J. Med. Vet. Mycol. 35:423-425, 1997).
- 8669 toe nail, female 66 yr, DE+ Edmonton, Alta. J. Fielding 30 Jul 1996 /J. Fielding L5156. Pigment: brown // human/animal pathogen: onychomycosis.
- 8930 toenail, female 57 yr Alberta Prov. Lab. for Southern Alberta Feb 1997 /R. Rennie MY 2047. Pigment: brown // human/animal pathogen: onychomycosis.
- 9010 toenail, DE+ New Zealand D. Parr /D. Parr MB 7259. Human/animal pathogen: onychomycosis.
- 9224 finger & nail lesions, male dish washer, DE+ USA A. Padhye 1998 /CDC 98-000912. Pigment: brown.
- 9376 bronchial wash, male 71 yr Alberta Provincial Lab for Southern Alberta 14 Jul 1998 /R. Rennie My 4188.
- 9409 toenail, female 82 yr Quebec G. St-Germain 1998 /G. St-Germain MY 51908. Pigment: brown.
- 9668 toenail, male 78 yr Edmonton, Alta 24 Sep 1999 /R. Rennie MY 5971. Pigment: brown // molecular systematics: unique rDNA of *Sphaeronaemella fimicola* (Hausner et al., Current Genetics 23:357-359, 1993).
- 9709 toenail, male 52 yr Edmonton, AB 10 Aug 1999 /R. Rennie MY 4957. Pigment: brown.
- 9710 lt. inner ankle, female 84 yr, DE- Alberta 1999 /R. Rennie MY 6515.
- 9712 nail, female 67 yr, DE+ hyphae Wainwright, Alta 5 Nov 1999 /R. Rennie MY 6846.
- 9793 distal & lateral subungual onychomycosis of L hallux, female 80 yr; DE + for irregular hyphae & conidia Santiago, Spain J. Llovo Taboada 2000 /J. Llovo Taboada 70759. Pigment: brown // human/animal pathogen: onychomycosis (Llovo, Prieto, Vazquez & Munoz, Med. Mycol. 40:209-212, 2002).
- 9823 skin scraping, male 53 yr Bonnyville, AB Apr 2000 /R. Rennie MY 2596. Pigment: brown.
- 10017 great toenail, female 73 yr, DE- Hamilton, New Zealand 2001 /K. Rogers MR 1015.
- 10090 dystrophic toenails L1 (hallux), L2, L3, R1; female 76 yr, DE clumps of hyphae & arthroconidial chains Norfolk, England Oct 1997 /R.J. Barnard Case 1. Culture conditions: urease + (fide R.J. Barnard) // human/animal pathogen: no antifungal therapy, symptoms 20 yr (fide R.J. Barnard); no antifungal therapy.
- 10091 dystrophic toenails R1 (hallux) thickened, white patches, L1, male 74 yr, DE+ large clumps branching tangled hyphae, chains of arthroconidia Norfolk, England Jan 1998 /R.J. Barnard Case 2. Human/animal pathogen: antifungal therapy terbinafine & itraconazole after diagnosis (fide R.J. Barnard) // culture conditions: urease + (fide R.J. Barnard).
- 10092 dystrophic toe nail R1 (hallux) since nail injury in WWII, male 77 yr, diabetic Type 2, DE+ large clumps of tangled hyphae Norfolk, England Feb 1998 /R.J. Barnard Case 3. Culture conditions: urease + // human/animal pathogen: antifungal therapy terbinafine after diagnosis (fide R.J. Barnard).
- 10093 toe nails L1, R1 (hallux), female 70 yr diabetic, DE+ large hyphae & arthroconidia Norfolk, England Apr 1998 /R.J. Barnard Case 4. Culture conditions: urease + (fide R.J. Barnard) // human/animal pathogen: antifungal therapy amorolfine paint, terbinafine after diagnosis (fide R.J. Barnard).
- 10094 toe nail L1 (hallux), onychogryphosis, male 82 yr, DE+ fungal elements Norfolk, England May 1998 /R.J. Barnard Case 5. Culture conditions: urease + (fide R.J. Barnard) // human/animal pathogen: antifungal therapy itraconazole after diagnosis (fide R.J. Barnard).
- 10095 toenail L1 (hallux), male 54 yr, DE + tight tangles of hyphae Norfolk, England Nov 1998 /R.J. Barnard Case 6. Culture conditions: urease + (fide R.J. Barnard) // human/animal pathogen: antifungal therapy griseofulvin 1996, itraconazole June 2000 (fide R.J. Barnard).
- 10096 toenails L1, R1 (hallux), paronychia, female 76 yr, DE+ fungal elements Norfolk, England Dec 1998 /R.J. Barnard Case 7. Human/animal pathogen: no antifungal therapy wanted (fide R.J. Barnard).
- 10097 toenail thickened, discolored, painful, female 90 yr, DE+ fungal elements in 2nd sample, 1st DE- Norfolk, England Feb 2001 /R.J. Barnard Case 8. Culture conditions: urease + (fide R.J. Barnard).
- 10098 toe nail, hallux, male 83 yr, DE+ fungal elements Norfolk, England Apr 2001 /R.J. Barnard Case 9. Culture conditions: urease + (fide R.J. Barnard) // human/animal pathogen: antifungal therapy topical amorolfine after diagnosis (fide R.J. Barnard).
- 10099 toenails L1, R1 (hallux), thickened, discolored, flaking, male 80 yr, diabetic Type 2, DE+ fungal elements Norfolk, England Aug 2001 /R.J. Barnard Case 10. Culture conditions: urease + (fide R.J. Barnard) // human/animal pathogen: antifungal therapy terbinafine after diagnosis (fide R.J. Barnard).
- 10924 skin scraping, female 85 yr Barrhead, Alta. 8-Oct-2002 /R. Rennie MY 7462. Culture conditions: slow growing.
- 10925 nail, female 57 yr Calgary, Alta. 13-May-2003 /R. Rennie MY 3841.
- 10926 right great toenail (hallux), female 79 yr St. Paul, Alta. 6-May-2005 /R. Rennie MY 3020.
- 10927 right great toenail (hallux), female 80 yr Westlock, Alta.-4-Aug-2005 /R. Rennie MY 5309. Cycloheximide: resistant (MYC).
- 10928 nail, male 59 yr Lethbridge Regional Hospital, Lethbridge, Alta. 2-May-2006 /R. Rennie MY 2942.
- 10929 nail, female 57 yr Redwater, Alta. 18-Apr-2007 /R. Rennie MY 2744.

10930 toenail, male 72 yr Glendon, Alta. 7-Sep-2007 /R. Rennie MY 6479.

Onychocola glareosa Gibas, Sigler & Currah (morph *Arachnomyces glareosus*)

10000 shed dorsal skin ex Honduran milksnake (*Lampropeltis triangulum hondurensis*), female Pueblo Zoo, Pueblo, CO UAMH (UW086B-C) 27 Mar 2001 [=GenBank AY624315] did not mate. Molecular systematics: mating & ITS sequence analysis (Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Onychocola glareosa see *Arachnomyces glareosus*

Onychocola gracilis see *Arachnomyces gracilis*

Onychocola kanei see *Arachnomyces kanei*

Onychocola sclerotica (Guarro, Gene & De Vroey) Gibas, Sigler & Currah (syn. *Malbranchea sclerotica*)

7183 (T *Malbranchea sclerotica*) poultry farm soil; isolated in Antwerp, Belgium using Orr's spray technique Sulawesi, Asia J. Guarro 9 Aug 1968 /J. Guarro FMR 3853 [=CBS 201.92 =RV 24857 =GenBank AF525310 (SSU) =IMI 356293 =GenBank AY123785 J]. Cycloheximide: resistant // thermotolerant: grows @ 37C // pigment: brown // molecular systematics: phylogeny of *Arachnomyces* using SSU rDNA sequences (Gibas, Sigler, Summerbell & Currah, Stud. Mycol. 47:131-139, 2002; Gibas CFC, Sigler L, Currah RC, Stud. Mycol. 50:525-531, 2004).

Onychophora coprophila Gams, Fisher & Webster

5968 (T *Onychophora coprophila*) rabbit dung Dawlish Warren, Devon, UK J. Webster 15 Dec 1981 /CBS 247.82 [=IMI 275663]. Pigment: red.
6020 ex chipmunk dung Lanark Co., Clyde River, Ont. K. Seifert 3 Apr 1986 /K. Seifert FRT650A [=CBS 424.88].

Onygena corvina Albertini & Schweinitz ex Fries

3795 ex bird remains Landgoed Pijnenburg, Baarn, The Netherlands H.A. van der Aa (H.A. 3257) 19-Aug-1972 /CBS 152.73. Mesophilic: NG @ 35C; scant growth @ 30C.
3852 wool J.C. Morel /CBS 281.48.

Onygena equina (Willdenow) Persoon ex Fries (morph *Sporendonema an. Onygena equina*)

3829 cow hoof Gerolstein, Eifel, Germany H.A. van der Aa (2296) Sep 1970 /CBS 947.70 [=ATCC 22731 =Orr O-1148 =UAMH 3887 =GenBank AY176717 =IFO 31785]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002) // mesophilic: scant growth @ 30C; NG @ 35C.
3887 cow hoof /G.F. Orr 0-1148 [=CBS 947.70 =ATCC 22731 =UAMH 3829 =GenBank AY176717].
5358 feather stuffing in old sleeping bag Kongsvold, Norway L. Sigler Apr 1986 /L. Sigler. Culture conditions: fruited on horse hoof in damp chamber after 1.5 yr; did not fruit on agar.
7096 ex moose hoof Bat Lake, Algonquin Provincial Park, Ont. D. Malloch 6 Oct 1991 /D. Malloch. Cycloheximide: resistant // culture conditions: fruited on moose hoof but not in agar culture.

***Onygenaceae* sp.**

3124 lizard dung Moctezuma, Chihuahua, Mexico R.K. Benjamin (D1287/8-C) 4 Jul 1964 /R.K. Benjamin RSA 1441 [=GenBank KF477240 ITS]. Culture conditions: ascomata

produced on OAT after 2 mos (fide UAMH 2011) // molecular systematics: excluded from *Nannizziopsis* clade (Sigler et al 2013); phylogeny of *Nannizziopsis* and related onygenalean fungi (Sigler L, Hambleton S, Pare JA, J Clin Microbiol Aug 7 (Epub ahead of print), 2013).

4036 soil /L.A. Yarzabal C2 [=GenBank KF477242 ITS]. Culture conditions: ascomata not produced (fide UAMH 2011) // molecular systematics: excluded from *Nannizziopsis* clade (Sigler et al 2013); phylogeny of *Nannizziopsis* and related onygenalean fungi (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).

Oospora sulphurea (Preuss) Sacc. & Vogl.

3072 K. Domsch LSHB (BB381) 1958 /IMI 89333.

Oosporidium margaritifera Stautz

220 (T *Oosporidium margaritifera*) slime flux of lime tree Germany Stautz 1930 /CBS 2531 [=ATCC 10676 =NRRL Y-1519 =CCRC 21536 =DSM 70351 =IFO 1208 =VKM Y-816 =GenBank U40090 26S]. Culture conditions: yeasty.

Ophidiomyces ophiodiicola (Guarro, Deanna A. Sutton, Wickes & Rajeev) Sigler, Hambleton & Paré (syn.

Chrysosporium ophiodiicola)

- 6218 biopsy subcutaneous nodule ex tail, mature female corn snake (*Elaphe guttata guttata*); DE + hyphae & arthroconidia NY State College Veterinary Medicine, Ithaca W. (S87-660) Hornbuckle Feb 1986 /M. Kemna M863-87 [=GenBank KF477227 ITS =GenBank KP691506 IGS]. Human/animal pathogen: subcutaneous nodule in corn snake // mesophilic: NG @ 37C // cycloheximide: resistant // odor: pungent // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 6642 skin lesion, captive brown tree snake (*Boiga irregularis*) (BTS 4) originally from Guam; DE + hyphae & arthroconidia colony at NIH, Bethesda, MD R. Weyant 1990 /R. Weyant RP 550 [=GenBank KP691507 IGS =GenBank KC884267 ITS =GenBank KF466869 SSU]. Human/animal pathogen: cutaneous lesions in brown tree snakes *Boiga irregularis* (Nichols DK, Weyant RS, Lamirandel EW, Sigler L, Mason RT, J Zoo Wildlife Med 30:111-118, 1999) // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 6688 superficial/subcutaneous lesions on back & underside of ball (Royal) python (*Python reguis*); DE + hyphae U.K. C. Philpot 1985 /C.C. Campbell NCPF 841 [=GenBank KP691508 IGS =GenBank KF477228 ITS =GenBank KF466870 SSU]. Odor: pungent // molecular systematics: phylogeny of *Nannizziopsis* and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease) // human/animal pathogen: cutaneous & subcutaneous infection in ball python snake.
- 9832 skin lesions from 3 yr old male garter snake (*Thamnophis* sp.) with disseminated infection; histopathology + for hyphae & arthroconidia Germany Th. Vissiennon 1999 /Th. Vissiennon M 39 [=CBS M253 =CBS 102663 =GenBank KF477229 ITS].

- Human/animal pathogen: systemic mycosis in a garter snake (*Thamnophis* sp.) (Vissienon T, Schuppel KF, Ullrich E, Kuijpers AF, *Mycoses* 42:107-110, 1999) // mesophilic: NG @ 37C, good growth @ 30C // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013).
- 9985 shed mid dorsal skin ex African rock python (*Python sebae*), 1 yr old Albuquerque Biological Park, Albuquerque, NM UAMH (UW101B-B) 27 Mar 2001 [=GenBank KP691509 IGS =GenBank KF477230 ITS]. Biodiversity: reptile cutaneous mycobiota survey (Pare JA, Sigler L, Rypien KL, Gibas CF, *J. Herpetol. Med. Surg.* 13:10-15, 2003) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, *BMC Vet Res* 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 10079 biopsy ex skin lesions on milksnake (*Lampropeltis* sp.) Milwaukee County Zoological Gardens, Milwaukee, WI 2001 /J. Pare [=GenBank KF477231 ITS]. Human/animal pathogen: dermatomycosis in milk snake *Lampropeltis* species // mesophilic: NG @ 35C // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013).
- 10296 skin lesions on mouth & head of file snake displayed in crocodile farm Townsville, Queensland, Australia A. Thomas 2003 /A. Thomas 3-40361 [=GenBank KP691510 IGS =GenBank KF477232 ITS]. Culture conditions: DTM slight positive // odor: mercaptan // human/animal pathogen: dermatomycosis in file snake // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, *BMC Vet Res* 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 10716 skin biopsy ex wild-caught water snake (#9) (*Nerodia clarkii*) in captivity University of Florida, Gainesville, FL C. Schuman July 2006 /D. Heard 137204. Human/animal pathogen: dermatomycosis in water snake *Nerodia clarkii* // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013).
- 10717 skin biopsy ex wild-caught water snake (#5) (*Nerodia clarkii*) in captivity University of Florida, Gainesville, FL C. Schuman July 2006 /D. Heard 137205 [=GenBank KF477233 ITS =GenBank KF466871 SSU]. Cycloheximide: tolerant // thermotolerant: grows @ 30 C but scarcely @ 35 C // odor: mercaptan // human/animal pathogen: dermatomycosis in water snake *Nerodia clarkii* // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013).
- 10768 biopsy skin Eastern Diamondback rattlesnake (*Crotalus adamanteus*) (S29465) held at the Central Florida zoo; mixed with *Pseudomonas aeruginosa* Veterinary Medical Center, University of Florida, Gainesville, FL D. Schuman 2006 /D. Heard 140513 [=GenBank KP691511 IGS =GenBank KF477234 ITS]. Odor: mercaptan faint // human/animal pathogen: dermatomycosis in eastern diamondback rattlesnake // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, *BMC Vet Res* 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 10769 ex skin biopsy water snake (*Nerodia clarkii*) (#21) Veterinary Medical Center, University of Florida, Gainesville, FL C. Schuman Oct. 2006 /D. Heard 139042 [=GenBank KP691512 IGS =GenBank KF477235 ITS]. Odor: mercaptan faint // human/animal pathogen: dermatomycosis in water snake *Nerodia clarkii* // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, *BMC Vet Res* 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 10770 ex skin biopsy water snake (*Nerodia clarkii*) (#19) Veterinary Medical Center, University of Florida, Gainesville, FL C. Schuman Oct-2006 /D. Heard 139043. Human/animal pathogen: dermatomycosis in water snake *Nerodia clarkii* // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013).
- 10949 skin biopsy ex green anaconda snake (*Eunectes murinus*) with lesions in stratum corneum and outer epidermal generational layers; histopathology + for hyphae & arthroconidia San Diego Zoo L. Sigler 17-Sep-2008 /L. Keener 908070 [=GenBank KP691513 IGS =GenBank KF477236 ITS]. Odor: mercaptan faint // human/animal pathogen: fatal dermatomycosis among juvenile green anaconda (*Eunectes murinus*) snakes (Bicknese E, *Proc Assoc Rept Amphib Vet* p157-158, 2009) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, *BMC Vet Res* 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 11295 ex superficial biopsy (retained shed/crust) from a lesion adjacent to the cloaca on a broad headed snake (*Hoplocephalus bungaroides*) with moist dermatitis; sample taken several mo before death; histopathology + for hyphae & arthroconidia Adelaide Zoo, Adelaide, Australia Sep-2010 /D. McLelland 90022837 [=GenBank KP691514 IGS =GenBank KF477237 ITS]. Culture conditions: produces arthroconidia and aleurioconidia; grows better @ 30C than @ 35C (fide UAMH 2011) // human/animal pathogen: dermatomycosis in a broad headed snake *Hoplocephalus bungaroides* (McLelland DJ, Johnson L, Reuter R, *Proc Wildl Dis Assoc Austral, Tasmania, Australia* p 55, 2010) // molecular systematics: ITS1 has 1bp difference with UAMH 6642, 9832, 10079 (fide UAMH 2012); phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, *J Clin Microbiol* 51:3338-3357, 2013); TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Blehert DS, *BMC Vet Res* 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8).
- 11863 ex skin lesion in eastern fox snake *Pantherophis gloydi* (2015 001) with suspected snake fungal disease Point Pelee National Park, Leamington, ON IDEXX Reference Laboratory 16-Apr-2015 /D. Campbell M17600-15. Human/animal pathogen: Eastern fox snake with snake fungal disease // molecular systematics: Blast match 100% ITS similarity with *Ophidiomyces ophiodiicola* strains UAMH 6642, 9832, 10079; Blast match 99% ITS similarity with *Ophidiomyces ophiodiicola* EU715819 Type strain.

Ophiostoma abiocarpum see *Grosmannia abiocarpa*

Ophiostoma aureum see *Grosmannia aurea*

Ophiostoma bicolor Davids. & Wells (syn. *Ceratocystis bicolor*; morph *Hyalorhinochlaediella an. Ophiostoma bicolor*)

- 4242 ex canker *Abies lasiocarpa* D. Collis (C) 30 Jun 1959 /A. Funk 102.
- 10653 ex *Ips perturbatus* (northern spruce engraver) Prince George, B.C. S. Alamouti /C. Breuil 2PG6P-Ob [=GenBank DQ268605 SSU =GenBank DQ268636 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).
- 10654 ex *Ips perturbatus* (northern spruce engraver) Haines Road, Yukon S. Alamouti /C. Breuil 3YT4P-Ob [=GenBank DQ268606 SSU =GenBank DQ268637 B-tubulin]. Biodiversity: ophiostomatoid fungi associated with spruce-infesting bark beetle (*Ips perturbatus*) in Western Canada (Alamouti SM, Kim J-J, Humble LM, Uzunovic A, Breuil C, Antonie van Leeuwenhoek 91:19-34, 2007).

Ophiostoma brevicolle (R.W. Davidson) de Hoog & Scheffer (syn. *Ceratocystis brevicollis*)

- 4524 poplar wood ex centre of log Hondo, Lesser Slave Lake, Alta. L. Sigler Feb 1982 /L. Kennedy.

Ophiostoma cainii see ***Grosmannia cainii******Ophiostoma canum*** (Munch) H. & P. Sydow (syn.

Ceratomella cana, *Ceratocystis cana*; morph *Pesotum canum*)

- 9547 blue stained wood of Scots pine (*Pinus sylvestris*) infested with bark beetles (*Blastophagus minor*) Nannestad, Akershus, Norway 1958 /J. Reid UM 30 [=NFRI 1652/2]. Cycloheximide: resistant // molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993).
- 9548 Norway /J. Reid UM 31 [=NFRI 60-165]. Benomyl: resistant // cycloheximide: resistant // molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993).
- 9803 Scots pine (*Pinus sylvestris*) Hwy 120, Hurdal, Akershus, Norway J. Reid (74-31-1) Sep 1973 /J. Reid UM 321.

Ophiostoma carpenteri J. Reid & Hausner

- 9694 washing from head of trapped beetle (*Trypodendron lineatum*) Andrews Experimental Forest, Oregon S. Carpenter (SC 0048III) 30 Jun 1986 /J. Reid UM 852. Systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot. 81:40-48, 2003).
- 9695 (*Ophiostoma carpenteri*) washing from trapped beetle (*Trypodendron lineatum*) Andrews Experimental Forest, Oregon S. Carpenter (SC 0048V) 24 Feb 1986 /J. Reid UM 853. Systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot. 81:40-48, 2003) // culture conditions: produces perithecia on OAT cello @ 22C.
- 9696 washing from pronotum of trapped beetle (*Trypodendron lineatum*) Andrews Experimental Forest, Oregon S. Carpenter (SC 0045) /J. Reid UM 854. Systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot. 81:40-48, 2003).
- 9697 washing from pronotum of trapped beetle (*Trypodendron lineatum*) Andrews Experimental Forest, Oregon S. Carpenter (SC 0047I) 24 Jun 1986 /J. Reid UM 856. Systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot. 81:40-48, 2003).
- 9698 washing from pronotum of trapped beetle (*Trypodendron lineatum*) Andrews Experimental Forest, Oregon S. Carpenter

(SC 0048IV) 1 Jul 1986 /J. Reid UM 857.

Systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot. 81:40-48, 2003).

- 9699 washing from pronotum of trapped beetle (*Trypodendron lineatum*) Andrews Experimental Forest, Oregon S. Carpenter (SC 0047IV) 24 Feb 1986 /J. Reid UM 858. Systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot. 81:40-48, 2003).
- 9700 pronotum of trapped beetle (*Trypodendron lineatum*) Andrews Experimental Forest, Oregon S. Carpenter 24 Jun 1986 /J. Reid UM 855. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993) // systematics/taxonomy: description (Hausner, Eyjolfssdottir & Reid, Can. J. Bot. 81:40-48, 2003).

Ophiostoma clavigerum see ***Grosmannia clavigera******Ophiostoma crassivaginatatum*** see ***Grosmannia crassivaginata******Ophiostoma cucullatum*** see ***Grosmannia cucullata******Ophiostoma flexuosum*** H. Solheim (morph *Sporothrix an. Ophiostoma flexuosum*)

- 9687 atypically developed gallery of bark beetle (*Ips typographus*) on Norway spruce (*Picea abies*) As, Akerakus, Norway H. Solheim /J. Reid UM 445 [=NFRI 81-79/10]. Molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993) // systematics/taxonomy: descriptions & relationships of some *Ophiostomataceae* from Norway spruce (Solheim, Nord. J. Bot. 6:199-207, 1986).

Ophiostoma huntii see ***Grosmannia huntii******Ophiostoma introcitrinum*** (Olchow. & J. Reid) Hausner, J. Reid & Klassen (syn. *Ceratocystis introcitrina*; morph *Pesotum introcitrinum*)

- 9549 (*Ophiostoma introcitrinum*) paper birch (*Betula papyrifera*) Sandilands Forest Reserve, Manitoba A. Olchoweki (69-47) 9 Jun 1969 /J. Reid UM 40 [=WIN (M) 69-36]. Molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993).

Ophiostoma ips (Rumb.) Nannf. (syn. *Ceratocystis ips*; morph *Pesotum an. Ophiostoma ips*)

- 9689 Monterey pine (*Pinus radiata*) Woodhill State Forest, Auckland, NZ J. & B. Reid (88-105) 09 Feb 1988 /J. Reid UM 219.
- 9718 Monterey pine (*Pinus radiata*) Woodhill State Forest, Auckland, NZ J. & B. Reid (88-135) 9 Feb 1988 /J. Reid UM 220.
- 9719 Monterey pine (*Pinus radiata*) Woodhill State Forest, Auckland, NZ J. & B. Reid (88-141) 9 Feb 1988 /J. Reid UM 221 [=GenBank AY789146]. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystiopsis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); relationships between the genera *Ceratocystis* & *Ophiostoma* (Hausner, Reid & Klassen, Can. J. Bot. 71:52-63, 1993) // cycloheximide: resistant (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993).
- 9804 Austrian pine (*Pinus nigra*) Compartment 1082, Kaingaroa State Forest, Taupo, NZ J. & B. Reid (88-423) 29 Feb 1988 /J. Reid UM 223.
- 9962 blue-black stained red pine wood (*Pinus resinosa*) below bark

- beetle galleries (*Ips* sp. & *Tomicus piniperda*) Valens Conservation Authority, Cambridge, ON C. Davis (TOM 2.3) 26 Jun 2000 /J. Reid UM 1107 [=GenBank AY194951 (Btubulin) =GenBank AY194938 (ITS)].
- Ophiostoma microsporum*** (Davidson) von Arx
6176 *Endothia parasitica* cankers on live oaks Virginia R. Davidson /ATCC 22392.
- Ophiostoma minimum*** see ***Ceratocystiopsis minima***
- Ophiostoma minus*** (Hedgecock) H. & P. Sydow (syn. *Ceratocystis minor*; morph *Hyalorhinocladiella an. Ophiostoma minus*)
4444 dung Lesser Slave Lake, Alta. R. Currah (81-15-1) 27 Jun 1981 /R. Currah (81-15-1).
4820 sapwood between beetle galleries Waterton, Alta. A. Tsuneda Jul 1983 /A. Tsuneda C-839. Ceratenolone, chelates with ferric ions (Ayer & al., Can. J. Chem. 65:765, 1987); 6,8-dihydroxy-3-methylisocoumarin & related methylisocoumarins (Ibid.). Plant pathogen: blue stain fungus (Yamaoka et al, Can. J. For. Res. 20:31-36, 1990).
4916 pupal chambers & stained sapwood ex pine beetle galleries Rocky Mountain House, Alta. /P. Muruyama C-844.
4917 mountain pine beetle galleries ex Limber pine Waterton, Alta. /P. Muruyama C-845. Ceratenolone, chelates with ferric ions (Ayer & al., Can. J. Chem. 65:765, 1987); 6,8-dihydroxy-3-methylisocoumarin & related methylisocoumarins (Ibid.).
5035 *Pinus contorta* Alberta D.E. Wells May 1954 /L. Browne [=WIN(M)494 =NFRC C248 =GenBank HQ202076 intron]. Molecular systematics: presence of introns in mitochondrial small-subunit ribosomal RNA (rns) gene (Hafez M, Hausner G, Fungal Biology 115:1122-1137, 2011).
9594 red pine stem cankers (*Pinus resinosa*) Sandilands Forest Reserve, Manitoba J. Skuba (2Rp3-36TA) 1990 /J. Reid UM 871 [=WIN(M)871 =GenBank HQ634821 SSU =DAOM 29251]. Molecular systematics: presence of introns in mitochondrial small-subunit ribosomal RNA (rns) gene (Hafez M, Hausner G, Fungal Biology 115:1122-1137, 2011); identification of group I introns within the SSU rDNA gene (Hafez M, Iranpour M, Mullineux S-T, Sethuraman J, Wosnitzer KM, et al, Fungal Biology 116:98-111, 2012).
9775 beetle galleries on standing, living lodgepole pine (*Pinus contorta*) Taylor Lake Hiking Trail, Banff National Park, AB J. & B. Reid (87-7) 23-9-87 /J. Reid UM 472 [=WIN(M)472 =GenBank HQ292077 intron =GenBank HQ292083 intron]. Molecular systematics: presence of introns in mitochondrial small-subunit ribosomal RNA (rns) gene (Hafez M, Hausner G, Fungal Biology 115:1122-1137, 2011).
9805 standing, recently dead sapling (near base) jack pine (*Pinus banksiana*) Sandilands Provincial Forest, Manitoba J. Gilbert (81-10) 07-81 /J. Reid UM 371 [=GenBank HQ292082 intron]. Molecular systematics: presence of introns in mitochondrial small-subunit ribosomal RNA (rns) gene (Hafez M, Hausner G, Fungal Biology 115:1122-1137, 2011).
10159 fruiting in galleries of *Tomicus* in standing *Pinus sylvestris* nr Bracebridge, Ont. C. Davis 2001 /J. Reid UM 1213 [=SSM TOM 54.25]. Molecular systematics: presence of introns in mitochondrial small-subunit ribosomal RNA (rns) gene (Hafez M, Hausner G, Fungal Biology 115:1122-1137, 2011).
- Ophiostoma minuta-bicolor*** see ***Ceratocystiopsis minuta-bicolor***
- Ophiostoma minutum*** see ***Ceratocystiopsis minuta***
- Ophiostoma montium*** (Rumbold) Arx
1363 *Pinus contorta* British Columbia 2) R.C. Robinson (1242 Jun 1959 /DAOM 66363 [=GenBank JX402993]. Molecular systematics: mating-type loci in *Grosmania clavigera* and relatives (Tsui CKM, diGuistini S, Wang Y, Feau N, Dhillon B, Bohlmann J, Hamelin RC, G3 (Bethesda) 3:465-480, 2013); Idiomorph MAT1-1 (Tsui et al 2013).
4838 blue stained sapwood between beetle galleries (*Dendroctonus ponderosae*) ex *Pinus contorta* Westcastle, Alta. A. Tsuneda Jul 1983 /P. Muruyama C-852 [=ATCC 64697]. Isocoumarins + various other metabolites (Ayer & al., Can. J. Chem. 64:904-909, 1986). Molecular systematics: mating-type loci in *Grosmania clavigera* and relatives (Tsui CKM, diGuistini S, Wang Y, Feau N, Dhillon B, Bohlmann J, Hamelin RC, G3 (Bethesda) 3:465-480, 2013); Idiomorph MAT1-2 (Tsui et al 2013).
4874 base, beetle gallery (*Dendroctonus ponderosae*) ex Englemann spruce Crowsnest Forest, Blairmore, Alta. L. Sigler Oct 1983.
4875 base, beetle gallery (*Dendroctonus ponderosae*) ex *Pinus contorta* Blairmore, Alta. L. Sigler Oct 1983 [=GenBank JX402995]. Molecular systematics: mating-type loci in *Grosmania clavigera* and relatives (Tsui CKM, diGuistini S, Wang Y, Feau N, Dhillon B, Bohlmann J, Hamelin RC, G3 (Bethesda) 3:465-480, 2013); Idiomorph MAT1-1 (Tsui et al 2013).
4878 base, beetle gallery (*Dendroctonus ponderosae*) ex *Pinus contorta* Crowsnest Forest, Blairmore, Alta. L. Sigler Oct 1983.
4881 middle, beetle gallery (*Dendroctonus ponderosae*) ex *Pinus contorta* Crowsnest Forest, Blairmore, Alta. L. Sigler Oct 1983.
4883 beetle gallery (*Dendroctonus ponderosae*) ex *Pinus contorta* Crowsnest Forest, Blairmore, Alta. L. Sigler Oct 1983.
4884 beetle gallery (*Dendroctonus ponderosae*) ex *Pinus contorta* Crowsnest Forest, Blairmore, Alta. L. Sigler Oct 1983.
4910 bark and sapwood of *Pinus contorta* var. *latifolia* Canada R.C. Jeffrey /L. Browne [=ATCC 64698 =PFRC C-450]. Isocoumarins + various other metabolites (Ayer & al., Can. J. Chem. 64:904-909, 1986). Plant pathogen: blue stain fungus (Yamaoka et al, Can. J. For. Res. 20:31-36, 1990).
11035 ex wood near gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*; little blue stain present Resources Road, Grande Prairie, Alta. A. Rice 14-Mar-2007 /A. Rice M001-01-01-03-UM07G16 [=GenBank HQ413427 Btub =GenBank HQ413503 EF1a =GenBank HQ413351 actin =GenBank HQ413579 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011) // culture conditions: non sporulating on deposit.
11036 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*; some bluestain South West-Wapiti, Grande Prairie, Alta. A. Rice 22-Mar-2007 /A. Rice M001-01-03-02-UM05DL10 [=GenBank HQ413433 Btub =GenBank HQ413357 actin =GenBank HQ413585 ITS2 =GenBank HQ413509 EF1a]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI5 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, Microb Ecol 62:347-360, 2011).
11037 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; lots of bluestain and larvae Willmore-Kakwa, Wilmore, Alta. A. Rice 07-May-2007 /A. Rice M001-02-01-01-UM02DL02 [=GenBank HQ413435 Btub =GenBank HQ413511 EF1a =GenBank HQ413359 actin

- =GenBank HQ413587 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI3 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11038 ex wood in gallery of mountain pine beetle (*Dendroctonus ponderosae*) *Pinus contorta*; lots of bluestain and larvae Willmore-Kakwa, Wilmore, Alta. A. Rice 11-May-2007 /A. Rice M001-02-01-07-UM34G38 [=GenBank HQ413432 Btub =GenBank HQ413508 EF1a =GenBank HQ413356 actin =GenBank HQ413584 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11039 larvae in gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; moderate bluestain Willmore-Kakwa, Wilmore, Alta. A. Rice 09-May-2007 /A. Rice M001-02-02-08-UM29DL40 [=GenBank HQ413452 Btub =GenBank HQ413528 EF1a =GenBank HQ413376 actin =GenBank HQ413604 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI5 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11040 ex wood in gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; moderate bluestain Willmore-Kakwa, Wilmore, Alta. A. Rice 09-May-2007 /A. Rice M001-02-02-10-UM32G44 [=GenBank HQ413429 Btub =GenBank HQ413505 EF1a =GenBank HQ413353 actin =GenBank HQ413581 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11041 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; lots of bluestain & larvae Willmore-Kakwa, Wilmore, Alta. A. Rice 10-May-2007 /A. Rice M001-02-03-02-UM11DL13 [=GenBank HQ413431 Btub =GenBank HQ413507 EF1a =GenBank HQ413355 actin =GenBank HQ413583 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI5 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11042 ex larvae of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; lots of bluestain & larvae Willmore-Kakwa, Wilmore, Alta. A. Rice 10-May-2007 /A. Rice M001-02-03-07-UM31DL35 [=GenBank HQ413434 Btub =GenBank HQ413510 EF1a =GenBank HQ413358 actin =GenBank HQ413586 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011);
- spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11043 ex wood in gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*; moderate bluestain Fairview, Alta. A. Rice 03-May-2007 /A. Rice M001-13-03-03-UM04G04 [=GenBank HQ413456 Btub =GenBank HQ413532 EF1a =GenBank HQ413380 actin =GenBank HQ413608 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11044 ex adult mountain pine beetle (*Dendroctonus ponderosae*) in gallery in *Pinus contorta* Hasler FSR, Tumbler Ridge, Alta. A. Rice. 06-Nov-2007 /A. Rice M002-09-01-04-UM42DA15G59 [=GenBank HQ413474 Btub =GenBank HQ413550 EF1a =GenBank HQ413398 actin =GenBank HQ413626 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); multilocus species identification and DNA barcoding (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11055 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, strong bluestain Willmore-Kakwa, Wilmore, Alta. A. Rice 10-May-2007 /A. Rice M001-02-03-09-UM37G44 [=GenBank HQ413491 Btub =GenBank HQ413567 EF1a =GenBank HQ413415 actin =GenBank HQ413643 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI5 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11056 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, bluestain variable Fox Creek, Alta. A. Rice 18-Apr-2007 /A. Rice M001-03-01-01-UM01G01 [=GenBank HQ413442 Btub =GenBank HQ413518 EF1a =GenBank HQ413366 actin =GenBank HQ413594 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI5 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11057 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana* with strong bluestain Fox Creek, Alta. A. Rice 18-Apr-2007 /A. Rice M001-03-01-04-UM11G13 [=GenBank HQ413437 Btub =GenBank HQ413514 EF1a =GenBank HQ413362 actin =GenBank HQ413590 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11058 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana*; strong bluestain Fox Creek, Alta. A. Rice 18-Apr-2007 /A. Rice M001-03-01-04-UM13DL15 [=GenBank HQ413449 Btub =GenBank HQ413525 EF1a =GenBank HQ413373 actin =GenBank HQ413601 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI3 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke

- JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11059 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, minimal bluestain Fox Creek, Alta. A. Rice 25-Apr-2007 /A. Rice M001-03-02-09-UM06G15 [=GenBank HQ413443 Btub =GenBank HQ413519 EF1a =GenBank HQ413367 actin =GenBank HQ413595 ITS2 =GenBank JX402994]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); mating-type loci in *Grosmannia clavigera* and relatives (Tsui CKM, diGuistini S, Wang Y, Feau N, Dhillon B, Bohlmann J, Hamelin RC, G3 (Bethesda) 3:465-480, 2013); Idiomorph MAT1-2 (Tsui et al 2013); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11060 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, minimal bluestain Fox Creek, Alta. A. Rice 23-Apr-2007 /A. Rice M001-03-03-02-UM01G01 [=GenBank HQ413461 Btub =GenBank HQ413537 EF1a =GenBank HQ413385 actin =GenBank HQ413613 ITS2 =GenBank JX402996]. Biodiversity: mountain pine beetle genomics project; comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011) // molecular systematics: ITS genotype haplotype MI3 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11061 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana* Spray Lakes, Canmore, Alta. A. Rice 02-Feb-2007 /A. Rice M001-06-01-02-UM09DL15 [=GenBank HQ413440 Btub =GenBank HQ413516 EF1a =GenBank HQ413364 actin =GenBank HQ413592 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI7 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11062 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana* Harvey Heights, Canmore, Alta. A. Rice 15-Feb-2007 /A. Rice M001-06-02-04-UM08G19 [=GenBank HQ413457 Btub =GenBank HQ413533 EF1a =GenBank HQ413381 actin =GenBank HQ413609 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11063 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana* Harvie Heights, Canmore, Alta. A. Rice 15-Feb-2007 /A. Rice M001-06-02-06-UM22DL27 [=GenBank HQ413488 Btub =GenBank HQ413564 EF1a =GenBank HQ413412 actin =GenBank HQ413640 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11064 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana* Canmore, Alta. A. Rice 15-Feb-2007 /A. Rice M001-06-02-08-UM25G40 [=GenBank HQ413493 Btub =GenBank HQ413569 EF1a =GenBank HQ413417 actin =GenBank HQ413645 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MII (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11065 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, little bluestain Coleman-Blairmore, Crowsnest Past, Alta. A. Rice 01-Mar-2007 /A. Rice M001-07-01-09-UM17G25 [=GenBank HQ413439 Btub =GenBank HQ413515 EF1a =GenBank HQ413363 actin =GenBank HQ413591 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI3 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11066 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana* with bluestain Fairview, Alta. A. Rice 03-Apr-2007 /A. Rice M001-13-01-01-UM02DL02 [=GenBank HQ413430 Btub =GenBank HQ413506 EF1a =GenBank HQ413354 actin =GenBank HQ413582 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11067 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana* with minimal bluestain present Werslay, Fairview, Alta. A. Rice 01-May-2007 /A. Rice M001-13-02-05-UM06DL09 [=GenBank HQ413454 Btub =GenBank HQ413530 EF1a =GenBank HQ413378 actin =GenBank HQ413606 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI3 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11068 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, moderate bluestain Werslay, Fairview, Alta. A. Rice 02-May-2007 /A. Rice M001-13-02-09-UM14G20 [=GenBank HQ413460 Btub =GenBank HQ413536 EF1a =GenBank HQ413384 actin =GenBank HQ413612 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11069 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, minimal bluestain Fairview, Alta. A. Rice 03-May-2007 /A. Rice M001-13-03-08-UM11G11 [=GenBank HQ413478 Btub =GenBank HQ413554 EF1a =GenBank HQ413402 actin =GenBank HQ413630 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI5 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11070 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, minimal bluestain Spray Lakes West, Canmore, Alta. A. Rice 25-Sep-2007 /A. Rice M002-06-01-03-UM01G12 [=GenBank HQ413497 Btub =GenBank HQ413563 EF1a =GenBank HQ413411 actin =GenBank HQ413639 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11071 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* x *banksiana*, strong bluestain Spray Lakes West, Canmore, Alta. A. Rice 26-Sep-2007 /A. Rice M002-06-01-07-UM04G34 [=GenBank HQ413445 Btub =GenBank HQ413521 EF1a =GenBank HQ413369 actin =GenBank HQ413597 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11072 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in

- galleries in *Pinus contorta* x *banksiana*; strong bluestain present Murray FSR, Tumbler Ridge, Alta. A. Rice 07-Nov-2007 /A. Rice M002-09-02-06-UM40DL34 [=GenBank HQ413472 Btub =GenBank HQ413548 EF1a =GenBank HQ413396 actin =GenBank HQ413624 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI3 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11073 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana*; Ips also present Ladner, Sparwood, Alta. A. Rice 20-Nov-2007 /A. Rice M002-12-01-04-UM12DL18 [=GenBank HQ413495 Btub =GenBank HQ413571 EF1a =GenBank HQ413419 actin =GenBank HQ413647 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11074 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* x *banksiana*; Cleridae and Staphylinidae present Brule Creek, Sparwood, Alta. A. Rice 12-Apr-2007 /A. Rice M002-12-03-05-UM05DL28 [=GenBank HQ413484 Btub =GenBank HQ413560 EF1a =GenBank HQ413408 actin =GenBank HQ413636 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11075 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; strong bluestain present Spray Lakes West, Canmore, Alta. A. Rice 26-Sep-2007 /A. Rice M002-06-01-07-UM04G34 [=GenBank HQ413492 Btub =GenBank HQ413568 EF1a =GenBank HQ413416 actin =GenBank HQ413644 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11076 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta*; strong bluestain present Spray Lakes West, Canmore, Alta. A. Rice 26-Sep-2007 /A. Rice M002-06-01-07-UM23DL33 [=GenBank HQ413425 Btub =GenBank HQ413501 EF1a =GenBank HQ413349 actin =GenBank HQ413577 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11077 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Spray Lakes West, Canmore, Alta. A. Rice 26-Sep-2007 /A. Rice M002-06-01-09-UM31G45 [=GenBank HQ413490 Btub =GenBank HQ413566 EF1a =GenBank HQ413414 actin =GenBank HQ413642 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MII (fide A. Roe); comparative phylogeography.
- 11078 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Nakiska, Canmore, Alta. A. Rice 27-Sep-2007 /A. Rice M002-06-02-05-UM08G24 [=GenBank HQ413453 Btub =GenBank HQ413529 EF1a =GenBank HQ413377 actin =GenBank HQ413605 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11079 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; strong bluestain present Nakiska, Canmore, Alta. A. Rice 27-Sep-2007 /A. Rice M002-06-02-02-UM24G15 [=GenBank HQ413464 Btub =GenBank HQ413540 EF1a =GenBank HQ413388 actin =GenBank HQ413616 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI8 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11080 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Nakiska, Canmore, Alta. A. Rice 27-Sep-2007 /A. Rice M002-06-02-09-UM33DL38 [=GenBank HQ413441 Btub =GenBank HQ413593 ITS2 =GenBank HQ413517 EF1a =GenBank HQ413365 actin]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11081 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Wind Valley, Canmore, Alta. A. Rice 11-Dec-2007 /A. Rice M002-06-03-03-UM10G17 [=GenBank HQ413413 actin =GenBank HQ413641 ITS2 =GenBank HQ413489 Btub =GenBank HQ413565 EF1a]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI8 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11082 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Buller Creek, Canmore, Alta. A. Rice 12-Dec-2007 /A. Rice M002-06-04-01-UM01DL04 [=GenBank HQ413468 Btub =GenBank HQ413544 EF1a =GenBank HQ413392 actin =GenBank HQ413620 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MII (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11083 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Buller Creek, Canmore, Alta. A. Rice 13-Dec-2007 /A. Rice M002-06-04-08-UM24DL39 [=GenBank HQ413450 Btub =GenBank HQ413526 EF1a =GenBank HQ413374 actin =GenBank HQ413602 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI6 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11084 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Buller Creek, Canmore, Alta. A. Rice 13-Dec-2007 /A. Rice M002-06-04-10-UM35G49 [=GenBank HQ413462 Btub =GenBank HQ413538 EF1a =GenBank HQ413386 actin =GenBank HQ413614 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).
- 11105 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Oldman, Crossneset, Alta. A. Rice 7-Feb-2008 /A. Rice M002-07-02-02-UM01DL13 [=GenBank HQ413494 Btub =GenBank HQ413570 EF1a =GenBank HQ413418 actin =GenBank HQ413646 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, Molecular Ecology 20: 584-600, 2011).

- 11106 ex adult mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Oldman, Crowsnest, Alta. A. Rice 7-Feb-2008 /A. Rice M002-07-02-02-UM02DA03G52 [=GenBank HQ413473 Btub =GenBank HQ413549 EF1a =GenBank HQ413397 actin =GenBank HQ413625 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11107 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Oldman, Crowsnest, Alta. A. Rice 6-Feb-2008 /A. Rice M002-07-02-01-UM04DL04 [=GenBank HQ413479 Btub =GenBank HQ413555 EF1a =GenBank HQ413403 actin =GenBank HQ413631 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11108 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Oldman, Crowsnest, Alta. A. Rice 7-Feb-2008 /A. Rice M002-07-02-02-UM05G51 [=GenBank HQ413480 Btub =GenBank HQ413556 EF1a =GenBank HQ413404 actin =GenBank HQ413632 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI6 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11109 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Cypress Hills, Alta. A. Rice 11-Oct-2007 /A. Rice M002-08-01-40-UM06G18 [=GenBank HQ413448 Btub =GenBank HQ413524 EF1a =GenBank HQ413372 actin =GenBank HQ413600 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI3 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11110 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Cypress Hills, Alta. A. Rice 10-Oct-2007 /A. Rice M002-08-01-01-UM08G04 [=GenBank HQ413451 Btub =GenBank HQ413527 EF1a =GenBank HQ413375 actin =GenBank HQ413603 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11111 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Cypress Hills, Alta. A. Rice 10-Oct-2007 /A. Rice M002-08-01-01-UM09G02 [=GenBank HQ413463 Btub =GenBank HQ413539 EF1a =GenBank HQ413387 actin =GenBank HQ413615 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe; Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); comparative phylogeography.
- 11112 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta*; strong bluestain present Murray FSR, Tumbler Ridge, B.C. A. Rice 7-Nov-2007 /A. Rice M002-09-02-02-UM08DL16 [=GenBank HQ413383 actin =GenBank HQ413611 ITS2 =GenBank HQ413459 Btub =GenBank HQ413535 EF1a]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI5 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011).
- 11113 ex adult mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta*; strong bluestain present Gwillim Lake, Tumbler Ridge, B.C. A. Rice 8-Nov-2007 /A. Rice M002-09-03-08-UM54DA31G68 [=GenBank HQ413447 Btub =GenBank HQ413523 EF1a =GenBank HQ413371 actin =GenBank HQ413599 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11114 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta*; strong bluestain present Valemount 1, Valemount, B.C. A. Rice 16-Oct-2007 /A. Rice M002-10-01-08-UM12DL40 [=GenBank HQ413476 Btub =GenBank HQ413552 EF1a =GenBank HQ413400 actin =GenBank HQ413628 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11115 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; strong bluestain present Valemount 2, Valemount, B.C. A. Rice 17-Oct-2007 /A. Rice M002-10-02-04-UM05G18 [=GenBank HQ413497 Btub =GenBank HQ413573 EF1a =GenBank HQ413421 actin =GenBank HQ413649 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11116 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; strong bluestain present Beaverfoot, Golden, B.C. A. Rice 03-Oct-2007 /A. Rice M002-11-01-04-UC08G17 [=GenBank HQ413475 Btub =GenBank HQ413551 EF1a =GenBank HQ413399 actin =GenBank HQ413627 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MII (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11117 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Beaverfoot, Golden, B.C. A. Rice 3-Oct-2007 /A. Rice M002-11-01-08-UM36DL39 [=GenBank HQ413498 Btub =GenBank HQ413574 EF1a =GenBank HQ413422 actin =GenBank HQ413650 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11118 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta*; strong bluestain present Blaeberry, Golden, B.C. A. Rice 24-Oct-2007 /A. Rice M002-11-03-02-UM36DL09 [=GenBank HQ413486 Btub =GenBank HQ413562 EF1a =GenBank HQ413410 actin =GenBank HQ413638 ITS2]. Biodiversity: mountain pine

- beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11119 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta*; moderate bluestain present Blaeberry, Golden, B.C. A. Rice 24-Oct-2007 /A. Rice M002-11-03-04-UM38G17 [=GenBank HQ413485 Btub =GenBank HQ413561 EF1a =GenBank HQ413409 actin =GenBank HQ413637 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: ITS genotype haplotype MI4 (fide A. Roe); comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11134 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Ladner, Sparwood, Alta. A. Rice 20-Nov-2007 /A. Rice M002-12-01-01-UM02DL04 [=GenBank HQ413496 Btub =GenBank HQ413572 EF1a =GenBank HQ413420 actin =GenBank HQ413648 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11135 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Mount Wardle, Kootenay-Yoho, B.C. A. Rice 05-Dec-2007 /A. Rice M002-16-01-03-UM20DL24 [=GenBank HQ413483 Btub =GenBank HQ413559 EF1a =GenBank HQ413407 actin =GenBank HQ413635 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11136 ex larvae mountain pine beetle (*Dendroctonus ponderosae*) in galleries in *Pinus contorta* Ottertail, Kootenay-Yoho, B.C. A. Rice 07-Dec-2007 /A. Rice M002-16-02-02-UM11DL16 [=GenBank HQ413482 Btub =GenBank HQ413558 EF1a =GenBank HQ413406 actin =GenBank HQ413634 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- 11137 ex wood from gallery of mountain pine beetle (*Dendroctonus ponderosae*) in *Pinus contorta* Ottertail, Kootenay-Yoho, B.C. A. Rice 08-Apr-2008 /A. Rice M002-16-02-07-UM53G81 [=GenBank HQ413481 Btub =GenBank HQ413557 EF1a =GenBank HQ413405 actin =GenBank HQ413633 ITS2]. Biodiversity: mountain pine beetle genomics project // molecular systematics: comparative phylogeography (Roe AD, Rice AV, Coltman DW, Cooke JEK, Sperling FAH, *Molecular Ecology* 20: 584-600, 2011); spatial community structure of mountain pine beetle fungal symbionts (Roe AD, James PMA, Rice AV, Cooke JEK, Sperling FAH, *Microb Ecol* 62:347-360, 2011).
- Ophiostoma multiannulatum*** (Hedgcock & Davidson)
Hendr. (syn. *Ceratocystis multiannulata*; morph *Sporothrix an. Ophiostoma multiannulatum*)
6567 ex C.T. Andrus, 1936 /CBS 139.36.
- Ophiostoma nigrocarpum*** (Davidson) de Hoog (syn. *Ceratocystis nigrocarpa*; morph *Sporothrix an. Ophiostoma nigrocarpum*)
4590 bark ex *Pinus contorta* attacked by *Dendroctonus ponderosae* & *Ips* sp. Lynn Creek Rd., B.C. L. Sigler Jun 1982 /H.S. Whitney. Molecular systematics: confirmed as *O. nigrocarpum* (fide J.J. Kim, Wood Science, UBC, Vancouver).
- Ophiostoma novae-zelandiae*** (Hutchison & Reid) Rulamort (syn. *Ceratocystis novae-zelandiae*; morph *Pesotum an. Ophiostoma novae-zelandiae*, *Sporothrix an. Ophiostoma novae-zelandiae*)
9556 Matai (*Podocarpus spicatus*), inner bark & outer sapwood showing bark beetle activity Minginui, Urewera National Park, Taupo, NZ J. & S. Reid (82-147d) 11 Jun 1982 /J. Reid UM 863. Pigment: dark brown // benomyl: sensitive // cycloheximide: resistant // molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, *Can. J. Bot.* 71:1249-1265, 1993) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988) // systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988).
- 9557 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Compartment 1108, Kaingaroa State Forest, Taupo, NZ J. & S. Reid (82-163b) 10 Jun 1982 /J. Reid UM 864. Benomyl: sensitive // cycloheximide: resistant // molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, *Can. J. Bot.* 71:1249-1265, 1993) // systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988).
- 9558 Douglas fir (*Pseudotsuga menziesii*), inner bark & outer sapwood showing bark beetle activity Compartment 1097, Kaingaroa State Forest, Taupo, NZ J. & S. Reid (82-15d) 6 May 1982 /J. Reid UM 865. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988).
- 9559 (*T. Ceratocystis novae-zelandiae*) alpine totara (*Podocarpus* sp.) with bark beetle galleries Minginui, Urewera National Park, Taupo, NZ J. & S. Reid (82-137a) 11 Jun 1982 /J. Reid UM 869. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988) // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, *NZ J. Bot.* 26:63-81, 1988) // culture conditions: perithecia abundant on OAT.
- Ophiostoma novo-ulmi*** Brasier
10442 *Ulmus minor* Tehran Park area, Iran Mojdehi & K. Rahnama Rahju 1999 /K. Rahnama Ir-Onu T-1. Plant pathogen: Eurasian race (EAN) (Rahnama & Taheri, *Can. J. Plant Pathol.* 26:124, 2004) // mesophilic: grows better @ 22-25C than at 18

- or 30C; NG @ 35C.
- 10443 *Ulmus minor* Tehran Park area, Iran Mojdehi & K. Rahnama Rahju 1999 /K. Rahnama Ir-Onu T-2. Plant pathogen: Eurasian race (EAN) (Rahnama & Taheri, Can. J. Plant Pathol. 26:124, 2004) // pigment: yellow.
- 10444 *Ulmus minor* Tehran Park area, Iran Mojdehi & K. Rahnama Rahju 1999 /K. Rahnama Ir-Onu T-3. Plant pathogen: Eurasian race (EAN) (Rahnama & Taheri, Can. J. Plant Pathol. 26:124, 2004).
- 10445 *Ulmus minor* Tehran Park area, Iran Mojdehi & K. Rahnama Rahju 1999 /K. Rahnama Ir-Onu T-4. Plant pathogen: Eurasian race (EAN) (Rahnama & Taheri, Can. J. Plant Pathol. 26:124, 2004).
- 10446 *Ulmus minor* Tehran Park area, Iran Mojdehi & K. Rahnama Rahju 1999 /K. Rahnama Ir-Onu T-5. Plant pathogen: Eurasian race (EAN) (Rahnama & Taheri, Can. J. Plant Pathol. 26:124, 2004).
- Ophiostoma olivaceum* see *Grosmannia olivacea*
- Ophiostoma parvum* see *Ceratocystiopsis parva*
- Ophiostoma penicillatum* see *Grosmannia penicillata*
- Ophiostoma piceae*** (Munch) H. & P. Sydow (syn. *Ceratocystis piceae*; morph *Pesotum piceae*)
- 1350 ex *Picea glauca* B.C. E.F. Hawkins (R2691) /DAOM 54745.
- 1391 ex *Quercus* sp. W. Virginia. A.L. Shigo 1957 /DAOM 62015.
- 1795 H.L. Barnett.
- 4081 wood chips & bark ex logging truck Westlock, Alta. J.W. Carmichael 23 Jan 1978 /J.W. Carmichael.
- 4507 bark *Abies lasiocarpa* infested with *Dryocoetes confusus* Smithers B.C. L. Sigler 25 Jan 1982 /H.S. Whitney. Culture conditions: produces ascomata and synnemata on OAT // molecular systematics: rDNA and the B-tubulin genes confirmed identification as *O. piceae* (fide C. Breuil).
- 4578 bark beetle galleries in alpine-fir Hinton, Alta. L. Sigler 10 May 1982 /Y. Hiratsuka. Molecular systematics: rDNA and the B-tubulin genes confirmed identification as *O. piceae* (fide C. Breuil).
- 5173 ex healthy Norway maple trees Delaware, OH L. Schreiber /G. Kuter. Pigment: blue-grey.
- 6977 *Pinus banksiana* sapwood lumber Kirkland Lake, Ont. B. Grylls & K. Seifert 29 Jul 1990 /K. Seifert B23 [=DAOM 212730 =CCFC 7418]. Cycloheximide: resistant @ 100 ppm // pigment: brown.
- 6978 *Pinus strobus* sapwood lumber Bridgewater, NS B. Grylls & K. Seifert 10 Aug 1990 /K. Seifert B21 [=DAOM 212737]. Cycloheximide: resistant @ 100 ppm.
- 6979 *Pseudotsuga menziesii* sapwood lumber Vancouver Island, BC B. Grylls & K. Seifert 20 Jun 1990 /K. Seifert B13 [=DAOM 212738].
- 9692 Rimu pine (*Dacrydium cupressinum*), inner bark & outer sapwood showing bark beetle activity nr Minginui, Urewara National Park, Taupo, NZ J. & S. Reid (82-133b) 11 Jun 1982 /J. Reid UM 833. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // biodeteriogen/biodegradation: does not cause staining of any wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988).
- 9693 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Compartment 1108, Kaingaroa State Forest, Taupo, NZ J. & S. Reid (82-163c) 10 Jun 1982 /J. Reid UM 834. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // biodeteriogen/biodegradation: does not cause staining of any wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988).
- 9777 Norway spruce (*Picea abies*) Hwy. 115, between Skjonhaug & Hemnes, Akershus, Norway J. Reid (73-46) Oct 1973 /J. Reid UM 324. Molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993) // culture conditions: produced anamorph only.
- 9807 Norway spruce (*Picea abies*) Hwy 115, between Skjonhaug and Hemnes, Akershus, Norway J. Reid (73-48) /J. Reid UM 338.
- 9808 western hemlock (*Tsuga heterophylla*) Hwy 11, Sooke, Vancouver Island, BC J. & B. Reid (87-8A) 17 Sep 1987 /J. Reid UM 716.
- 11346 ex sawn timber of *Pinus contorta* Prince George, B.C. A. Uzunovic (AU 148-1) 1997 /C. Breuil AU 148-1 [=GenBank AQHS00000000.1 =GenBank KE148146 to KE148190] mates with UAMH 11672. Molecular systematics: genome and transcriptome of the pine saprophyte *Ophiostoma piceae* and comparison with the pathogen *Grosmannia clavigera* (Haridas S, Wang Y, Lim L, Massoumi Alamouti S, Jackman S, Docking R, Robertson G, Birol I, Bohlmann J, Breuil C, BMC Genomics 2013, 14:373.); *Ophiostoma piceae* UAMH 11346 whole genome shotgun sequencing project (Haridas et al 2013); softwood ophiostomatoid fungus; idiomorph MAT 1-2 (OPP_06680) (Haridas et al 2013) // biodiversity: ophiostomatoid blue stain fungus of softwood.
- 11672 ex sawn timber of *Pinus contorta* Prince George, B.C. A. Uzunovic 1997 /C. Breuil AU 131-2 mates with UAMH 11346. Molecular systematics: genome and transcriptome of the pine saprophyte *Ophiostoma piceae* and comparison with the pathogen *Grosmannia clavigera* (Haridas S, Wang Y, Lim L, Massoumi Alamouti S, Jackman S, Docking R, Robertson G, Birol I, Bohlmann J, Breuil C, BMC Genomics 2013, 14:373.); softwood ophiostomatoid fungus; Idiomorph MAT1-1 locus fully sequenced (Haridas et al 2013).
- Ophiostoma piceaperdum* see *Grosmannia piceaperda*
- Ophiostoma piliferum*** (Fr.) H. & P. Sydow (syn. *Ceratocystis pilifera*; morph *Sporothrix an. Ophiostoma piliferum*)
- 7233 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. P. Crane (6-25-BS1-8a) Jul 1989 /L. Hutchison NOF 1772. Culture conditions: produced perithecia on OAT cello after 23d (fide UAMH 2012).
- 7459 ex *Populus tremuloides* (aspen poplar) Fort Nelson, B.C. L. Hutchison (CCMC-1-6c) 1 Nov 1991 /L. Hutchison NOF 1929 [=GenBank AF135588 =WIN(M) 959]. Biocontrol: antagonism by *Sporormiella similis* (UAMH 7460) (Chakravarty et al., Can. J. For. Res. 24:2235-2239, 1994) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on LSU rDNA (Hausner & Reid, Can. J. Bot. 81:865-876, 2003).
- 9561 Monterey pine (*Pinus radiata*) with bark beetle galleries Compartment 99, Woodhill State Forest, Auckland, NZ J. & S. Reid (82-129d) 29 May 1982 /J. Reid UM 932 [=GenBank AF136960 =GenBank AF136961 =GenBank AF136951]. Systematics/taxonomy: descriptions of some potential wood-staining Ophiostomataceae from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // benomyl: sensitive // cycloheximide: resistant // biodeteriogen/biodegradation: caused brownish to black staining in all wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000); relationships among *Ceratocystis* & *Ophiostoma* species based on LSU rDNA (Hausner & Reid, Can. J. Bot. 81:865-876, 2003).
- 9965 Monterey pine (*Pinus radiata*) Compartment 37, Woodhill State Forest, Auckland, New Zealand J. Reid & S. Reid

(82-46) 14 May 1982 /J. Reid UM 1052.
10308 ex *Pinus contorta* Compartment 209, Kaingaroa State Forest, Taupo, NZ J. & B. Reid (88-052) /J. Reid UM 1377. Culture conditions: produces perithecia on OAT cello.

Ophiostoma polonicum see *Ceratocystis polonica*

Ophiostoma populinum (Hinds & Davidson) de Hoog & Scheffer (syn. *Ceratocystis populina*)
784 skin Edmonton, Alta. J.W. Carmichael 15 Mar 1960 /J.W. Carmichael.
4976 A.S. Sekhon.

Ophiostoma pseudominus (Olchow. & Reid) Hausner, J. Reid & Klassen (syn. *Ceratocystis pseudominor*; morph *Hyalorhinocladiella an. Ophiostoma pseudominus*)
9721 Oregon Douglas fir (*Pseudotsuga menziesii*) near Lake Cowichan, Vancouver Island, BC J. & B. Reid (87-1d) 18 Sep 1987 /J. Reid UM 460. Molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993).
9966 Oregon Douglas fir (*Pseudotsuga menziesii*) Lake Cowichan, Vancouver Island, BC J. Reid & B. Reid (87-1a) 18 Sep 1987 /J. Reid UM 461.

Ophiostoma rostrocoronatum (Davidson & Eslyn) de Hoog & Scheffer (morph *Sporothrix an. of Ceratocystis rostrocoronata*)
9726 fallen log by *Eucalyptus* sp. (host ?*Eucalyptus*?) Compartment 13, Riverhead State Forest, Auckland, NZ J. & S. Reid (82-197c) 11 Jul 1982 /J. Reid UM 1044.
9727 fallen log by *Eucalyptus* sp. (host *Eucalyptus*?) Compartment 12, Riverhead State Forest, Auckland, NZ J. & S. Reid (82-197e) 11 Jul 1982 /J. Reid UM 1045. Systematics/taxonomy: descriptions of some potential wood-staining *Ophiostomataceae* from New Zealand (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988) // biodeteriogen/biodegradation: does not cause staining of any wood tested (Hutchison & Reid, NZ J. Bot. 26:63-81, 1988).

Ophiostoma sagmatosporum see *Grosmannia sagmatospora*

Ophiostoma setosum Uzunovic, Seifert, S.H. Kim & C. Breuil (morph *Pesotum cupulatum*)
9811 Oregon Douglas fir (*Pseudotsuga menziesii*) Hwy 18, Lake Cowichan, Vancouver Island, B.C. J. Reid (87-1C) 18 Sep 1987 /J. Reid UM 463. Culture conditions: produced anamorph only.
9812 Oregon Douglas fir (*Pseudotsuga menziesii*) Hwy 18, Lake Cowichan, Vancouver Island, BC J. Reid & B. Reid 18 Sep 1987 /J. Reid UM 465. Culture conditions: produced anamorph only.
10310 anamorph on *Pinus radiata* Woodhill State Forest, Auckland, NZ J. & B. Reid (88-148a) 9-2-03 /J. Reid UM 1379. Culture conditions: produced anamorph only.

Ophiostoma sp.
4295 stained Douglas fir (*Pseudotsuga menziesii*) (black stained root) Oregon, USA Y. Hiratsuka 12-1-79 /A. Tsuneda C-712.
4586 bark ex lodgepole pine attacked by *Dendroctonus ponderosae* & *Ips* Lynn Creek, B.C. L. Sigler Jun 1982 /H.S. Whitney.
9374 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 2-18B) T. Lumley (ML-01-S1B 18 Feb 1997 /R.S. Currah ML-01-S1B, 2-18B.
9531 decayed wood (stage 3 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-06-S1G) 29 Jan

1999 /R.S. Currah EI-06-S1G. Cycloheximide: resistant (MYC) // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Ophiostoma stenoceras (Robak) Melin & Nannf. (syn. *Ceratocystis stenoceras*; morph *Sporothrix an. Ophiostoma stenoceras*)
2047 skin ex hand Los Angeles, Calif. Waldeck /G.F. Orr O-3039.
2223 soil Mogave Desert, Calif. P. Martin /P. Martin 1403.
4999 container medium composed of peat & composted hardwood bark Ohio G. Kuter 1980 /G. Kuter 16.
5000 container media composed of peat & composted hardwood bark Ohio G. Kuter 1980 /G. Kuter 75.
5043 wooden pot label in potting mix of Canadian peat and perlite Wooster, Ohio G. Kuter 15 Nov 1984 /G. Kuter 1.
5044 wooden pot label in potting mix of Canadian peat & perlite Wooster, Ohio G. Kuter 15 Nov 1984 /G. Kuter 2.
5045 wooden pot label in potting mix of Canadian peat & perlite Wooster, Ohio G. Kuter /G. Kuter 3.
5046 wooden pot label in potting mix of Canadian peat & perlite Wooster, Ohio G. Kuter /G. Kuter 4.
5130 (T *Ceratostomella stenoceras*) ex wood pulp H. Robak /CBS 237.32 [=GenBank AB122053 ITS =GenBank AF484462 ITS =GenBank AF135583 28S =GenBank AY280471 BetaTub =GenBank AY194508 ITS].
5131 ex man /CBS 360.71.
5171 wooden pot label in mix Canadian peat-perlite Wooster, Ohio G. Kuter 1985 /G. Kuter 5. Culture conditions: abundant perithecia on OAT.
5172 wooden pot label in mix Canadian peat-perlite Wooster, Ohio G. Kuter 1985 /G. Kuter 6. Culture conditions: perithecia abundant on OAT.
6359 peat northern Sask. H. Congly 1988 /H. Congly 30M.
6676 ex foot scrapings female 74 yr Shawinigan, P.Q. 1990 /G. St-Germain MY-2045. Mesophilic: NG @ 37C.
6786 recurrent infection (over 45 yr) in nails of both thumbs & Rt middle finger, female 65 yr, filaments present in DE Ottawa /R.C. Summerbell FR 2443. Human/animal pathogen: onychomycosis (Summerbell et al., p 190 in *Ceratocystis* & *Ophiostoma*, taxonomy, ecology & pathogenicity, Wingfield et al, eds. 1993).
7947 ex hand, male 42 yr, DE- 1994 /A. Woodgyer 94.448. Pigment: brown.
7953 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 87) 12 Dec 1993 /S.P. Abbott (OHS 87).
9530 slightly decayed wood (stage 1 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-07-S4C) 29 Jan 1999 /R.S. Currah EI-07-S4C. Cycloheximide: resistant (MYC) // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
9753 two-year decomposing moss (*Sphagnum fuscum*) in bog dominated by black spruce (*Picea mariana*), moss (*Sphagnum fuscum*) & heather (*Ericaceae*) nr Perryvale, AB (54D28N, 113D16W) M.N. Thormann (MNT 63) Sep 1999 /R.S. Currah MNT 63 [=ALTA 11311]. Biodeteriogen/biodegradation: enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001).
9765 toenail, male 57 yr, DE - New Zealand 2000 /K. Rogers MR 9236.
9958 shed ventral mid-body skin ex twin-spotted rattlesnake (*Crotalus pricei*), female 7yr Audubon Park & Zoological Garden, New Orleans, LA UAMH (UW079B-D) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Ophiostoma tetropii Math.-Käärik (syn. *Ceratocystis tetropii*;
morph *Sporothrix an. Ophiostoma tetropii*)

- 9651 bark beetle galleries (*Tetropium* sp.) in Norway spruce (*Picea abies*) Hofors, Gastrikland, Sweden A. Mathiesen-Kaarik (AM-K B-107) 1949 /J. Reid UM 111. Cycloheximide: resistant // benomyl: sensitive // culture conditions: produced ascomata and conidia.
- 9652 Norway spruce (*Picea abies*) infested with bark beetles (*Ips typographus*) As, Akershus, Norway H. Solheim 15 Oct 1980 /J. Reid UM 451 [=NFRI 80-113/9 =CBS 231.83 =GenBank AF155684]. Cycloheximide: resistant // benomyl: sensitive // molecular systematics: molecular genetic variation among members of the genera *Ophiostoma*, *Ceratocystis* & *Microascus* (Hausner & Reid, Can. J. Bot. 71:1249-1265, 1993); relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000) // systematics/taxonomy: descriptions & relationships of some *Ophiostomataceae* from Norway spruce (Solheim, Nord. J. Bot. 6:199-207, 1986) // culture conditions: produced ascomata and conidia.
- 9716 Norway spruce (*Picea abies*) logs with beetle (*Ips* spp.) galleries Fjellsteen, Ostfold, Norway J. Reid (UM 74-86) Oct 1974 /J. Reid UM 216. Culture conditions: produced ascomata and conidia.
- 9717 Beetle galleries (no adults) in Norway spruce (*Picea abies*) Nannestad, Norway J. Reid (UM 74-87) Sep 1973 /J. Reid UM 217. Culture conditions: produced ascomata and conidia.

Ophiostoma ulmi (Buism.) Nannf. (morph *Pesotum ulmi*)

- 5030 *Ulmus americana* /W.A. Ayer [=NRF C679]. Mesophilic: NG @ 35C; grows better at 25-30C than at 18 or 22C // pigment: yellow.

Orromyces spiralis see ***Uncinocarpus queenslandicum******Ovadendron sulphureo-ochraceum*** (van Beyma) Sigler & Carm.

- 181 (*T. Oospora sulphureo-ochracea*) sputum? Holland? F.H. van Beyma /CBS 233.32 [=NCMH 358 =MUCL 9843]. Culture conditions: grows better @ 25C than at 22C and 30C (fide UAMH 2012).
- 7136 mycotic keratitis, isolated 5 times India 1991 /CDC 91-019631.
- 8684 endophthalmitis of right eye following lens implant, female 82 yr, histopathology + Atlanta, GA /CDC B-5398. Pigment: brown // human/animal pathogen: delayed-onset endophthalmitis after cataract extraction (Lee et al., Am. J. Ophthalmol. 119:307-312, 1995).
- 9219 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 8-8A) T. Lumley (ML-01-S6I 8 Aug 1997 /R.S. Currah TCL 020. Pigment: brown.
- 9220 slightly decayed wood (stage 1 decay), burned white spruce log (*Picea glauca*) in 2 yr post-fire site Mariana Lake, Alta. 8-4A) T. Lumley (F953-01-S1B 4 Aug 1997 /R.S. Currah TCL 027.
- 9993 shed mid ventral skin ex corn snake (*Elaphe guttata*), male 10yr Albuquerque Biological Park, Albuquerque, NM UAMH (UW102B-C) 27 Mar 2001. Cycloheximide: resistant // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).

Oxyporus corticola (Fr.) Ryvarden

- 10739 ex bone, German shepherd dog with disseminated infection Iowa State Univ., Ames, Iowa C. Brockus 24 Apr 2003 /D.A. Sutton UTHSC 03-768. Thermotolerant: grows @ 35 C // human/animal pathogen: disseminated infection in canine (Brockus CW, Myers RK, Crandell JM, Sutton DA, Wickes BL, Nakasone KK, Med Mycol 47:862 - 868, 2009).

- 11535 aspirate of subcutaneous mass in right caudal mammary gland of spayed beagle, female 3 yr; cytology positive for hyphae Leesburg Veterinary Internal Medicine, LifeCentre, Leesburg, Virginia D.A. Bemis; S. Miller 5-Jul-2010 /D.A. Bemis MI 10-2471 [=GenBank JF894098 ITS]. Human/animal pathogen: disseminated infection in a canine with generalized lymphadenopathy (Miller SA, Roth-Johnson L, Kania SA, Bemis DA, Journal of Veterinary Diagnostic Investigation 2011 Epub Dec 6) // culture conditions: no growth on brain heart infusion agar (fide Miller et al.).

Pachnocybe ferruginea (Sow. ex Fr.) Berkeley

- 4829 single spore isolate /B. Kropp P31-SS#5.
- 4830 single spore isolate /B. Kropp P31-SS#6.
- 6030 ex lumber of *Thuja occidentalis* in house Aylmer, Que. M. Shih 1 Dec 1970 /K. Seifert FRT624A [=ATCC 62929].
- 7513 Western red cedar utility pole (in service) Thomas Pond, Avalon Peninsula, NF G. Warren 10 Jul 1985 /G. Warren NFRC-53.
- 7514 Southern pine utility pole (in service) Thomas Pond, Avalon Peninsula, NF G. Warren 28 Jun 1985 /G. Warren NFRC-55.
- 7515 new Western red cedar utility pole in storage yard Botwood, NF G. Warren 20 Nov 1991 /G. Warren NH1-3.
- 7516 new Western red cedar utility pole in storage yard Botwood, NF G. Warren 21 Nov 1991 /G. Warren NH3-2.

Paecilomyces ampullaris Matsushima

- 5300 forest soil Bulolo Papua-New Guinea T. Matsushima 26 Jan 1970 /T. Matsushima MFC-2716.

Paecilomyces carneus (Duche & Heim) Brown & Smith

- 257 rotting stump Boston, MA J.W. Carmichael 1953 /J.W. Carmichael.
- 263 contaminant ex UAMH 230 Edmonton, Alta J.W. Carmichael 8 Dec 1954 /J.W. Carmichael.
- 1293 soil Alberta Game Farm, Edmonton, Alta J.W. Carmichael 1962 /J.W. Carmichael.
- 2875 humus layer Aspen soil Petawawa, Ont. G. Bhatt May 1967 /G.C. Bhatt UW396.
- 8300 contaminant ex tissue explant of *Boletus edulis* Poplar Creek Natural Area near Breton, Alta S.P. Abbott (SA-M12) 12-Jul-1993 /S.P. Abbott (SA-M12). Pigment: green.

Paecilomyces cinnabarinus see ***Chromocleista cinnabarina******Paecilomyces cossus*** see ***Paecilomyces fumosoroseus******Paecilomyces crustaceus*** see ***Thermoascus crustaceus******Paecilomyces farinosus*** (Holm ex S.F. Gray) Brown & Smith (morph *Cordyceps memorabilis*)

- 1360 laboratory contaminant Ottawa M. Elliott Jan 1960 /DAOM 64370-a.
- 1840 contaminant J.W. Carmichael 28 Nov 1963 /J.W. Carmichael.
- 2876 soil *Pinus resinosa* St. Williams Ont. G. Bhatt 1967 /G.C. Bhatt UW425.
- 6456 balsam fir litter, single conidial isolate P.Q. P. Widden /P. Widden PF 1.
- 6457 balsam fir litter, single conidial isolate P.Q. P. Widden /P. Widden PF 4.
- 6458 balsam fir litter, single conidial isolate P.Q. P. Widden /P. Widden PF 17.
- 6459 balsam fir litter, single conidial isolate P.Q. P. Widden /P. Widden PF 21.
- 6460 dead field-infected spruce budworm larva, single conidial isolate P.Q. P. Widden /P. Widden PF 30.
- 6461 dead field-infected spruce budworm larva, single conidial isolate P.Q. P. Widden /P. Widden PF 34.

- 6462 dead field-infected spruce budworm larva, single conidial isolate P.Q. P. Widden /P. Widden PF 40.
 6463 dead field-infected spruce budworm larva, single conidial isolate P.Q. P. Widden /P. Widden PF 49.
 11425 swab ex skin of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 13 C.1. Biodiversity: mycobiota of bat caves.

Paecilomyces flavescens see *Paecilomyces inflatus**Paecilomyces fulvus* see *Byssoschlamys fulva*

- Paecilomyces fumosoroseus*** (Wize) Brown & Smith (syn. *Paecilomyces cossus*)
 1355 insect larvae Central America R.P. Korf 1959 /DAOM 61808.
 2218 contaminant Edmonton, Alta. J.W. Carmichael 17 Nov 1964 /J.W. Carmichael.
 2877 soil maple Milton Ont. Bhatt 1967 /G.C. Bhatt UW758.

Paecilomyces humicola see *Sagenomella humicola****Paecilomyces inflatus*** (Burnside) Carmichael (syn.

- Paecilomyces flavescens*)
 799 toes Edmonton, Alta. J.W. Carmichael 13 Jun 1960 /J.W. Carmichael. Pigment: yellow.
 804 (*T. Myceliophthora inflata*) mycelium ex abdomen adult worker bee (*Apis mellifera*) U of Michigan C.E. Burnside 1927 /CBS 259.39 [=ATCC 10843 =IMI 113168 =ATCC 6491 =ATCC 7880 =CBS 259.39 =LCP 53.84 =NRRL 6324 =OAC 10379 =USDA 1881 =AY526479 SSU]. Benomyl: sensitive (NG 2 ppm) // cycloheximide: sensitive (growth strongly inhibited) // mesophilic: NG @ 37C.
 4227 horse northern Japan K. Takatori /K. Takatori 420-21. Pigment: yellow.
 5955 soil *Ficus elastica* in hospital Toronto R.C. Summerbell 15 Sep 1986 /R.C. Summerbell W 1836. Pigment: yellow.
 6037 soil of *Dieffenbachia amoena* in hospital Toronto R.C. Summerbell 15 Sep 1986 /R.C. Summerbell W 2027. Biodiversity: potted plants (Summerbell et al, *Mycopathologia* 106:13-22, 1989).
 8807 BAL, female 55 yr Alberta Provincial Lab for Southern Alberta 27 Jan 1997 /R. Rennie MY 369.
 9267 indoor air of school library ex Andersen sampler Squamish, BC S.P. Abbott (SA-M236) 12 Feb 1998 /S.P. Abbott (SA-M236). Pigment: yellow.
 9606 ex finger nail Calgary, Alberta 3 Jun 1999 /R. Rennie MY 4130. Pigment: yellow.
 10333 BAL ex human /M.G. Rinaldi UTHSC 01-1627.
 10334 bronchial washing ex patient with lung mass /M.G. Rinaldi UTHSC 03-1351.
 10900 ex nail, female 28 yr Vancouver, BC /R. Rennie MY 9002 [=BC CDC W43076]. Mesophilic: NG @ 37C (fide submitting laboratory).

Paecilomyces lilacinus (Thom) Samson

- 396 sputum Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 893 mouth swab Edmonton, Alta. J.W. Carmichael 6 Mar 1961 /J.W. Carmichael.
 1199 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
 2660 D. Westlake [=PRL 1752].
 2744 soil India /H.C. Gugnani AG 18.
 3396 contaminant ex human swab Lethbridge 1970 /J. Sorrie.
 5003 pulmonary lesions ex armadillo (*Dasypus novemcinctus*) Buffalo, NY M.L. Renner /A.S. Sekhon PLM 898 [=Gordon M961 =NRRL 6594 =GenBank HQ842837 ITS =GenBank JF896010 TEF =DTO 039B5]. Human/animal pathogen:

- pulmonary, armadillo (Gordon, *Sabouraudia* 22:109-116, 1984) // molecular systematics: phylogeny of *Paecilomyces lilacinus* (Luangsa-Ard J, Houbraken J, van Doorn T, Hong SB, Borman AM, et al, *FEMS FEMS Microbiol Letters* 321:141-149, 2011).
 7793 repeated isolation from papular lesions on leg, DE + (biopsy) Mt. Sinai Hospital, NY 1994 /D. Larone 5201. Human/animal pathogen: subcutaneous hyalohyphomycosis.
 7870 indoor air ex RCS strips, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 436) 11 Mar 1994 /S.P. Abbott (OHS 436). Mesophilic: restricted growth @ 37C, good growth @ 30C.
 8603 eye, female 73 yr with endophthalmitis Quebec G. St-Germain /G. St-Germain LSPQ 0416.
 8705 atmosphere Innisfail, Queensland, Australia R. Bird 1965 /L. Montelli AMRL 464.
 8942 atypical isolate ex spleen of fish (*Tilapia mossambica*), histopathology + St. Teresa Lagoon, Humcao, Puerto Rico /T. Rand.
 9284 fluid from elbow, male 75 yr Edmonton, Alta. Dynacare Kasper Med. Lab. 17 Apr 1998 /J. Fielding 03062.
 9914 shed skin ex green iguana (*Iguana iguana*), male Wildlife Care Center, Fort Lauderdale, FL UAMH (UW001B-D) 21 Nov 2000. Cycloheximide: resistant // mesophilic: restricted growth @ 37C, good growth @ 30C // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. *Herpetol. Med. Surg.* 13:10-15, 2003).
 10143 atypical isolate ex BAL, female 39 yr following lung transplant; typical isolate (UAMH 10145) isolated same day from bronch wash Edmonton, AB 5 Nov 2001 /R. Rennie MY 7624 A [=UAMH 10145 typical =GenBank HQ842824 ITS =CBS 110398]. Molecular systematics: phylogeny of *Paecilomyces lilacinus* (Luangsa-Ard J, Houbraken J, van Doorn T, Hong SB, Borman AM, et al, *FEMS FEMS Microbiol Letters* 321:141-149, 2011).
 10145 ex bronchial wash, female 39 yr following lung transplant; atypical isolate (UAMH 10143) isolated same day from BAL Edmonton, AB 5 Nov 2001 /R. Rennie MY 7626 B [=UAMH 10143 atypical].
 10247 nails ex female 54 yr; DE + for nondermatophytic hyphae Medlab, Hamilton, N.Z. K. Rogers 11-02 /K. Rogers MR2425. Human/animal pathogen: onychomycosis, nails cloudy discolored and thickened, isolated twice.
 11287 ex great hammerhead shark (*Sphyrna mokarr*) USA /D.A. Sutton UTHSC 08-2498.
 11437 skin biopsy ex female snake Gaboon viper (*Bitis gabonica*) with extensive dermatitis on ventral skin; histopathology + for hyphae Toronto Zoo, Scarborough, Ont. (I) L. Sigler; (C) C. Dutton 21-Mar-2011 /T. Long 44032. Human/animal pathogen: dermatomycosis of Gaboon viper.

Paecilomyces marquandii (Masse) Hughes

- 445 rodent Alberta J.W. Carmichael 1955 /J.W. Carmichael.
 840 soil chicken yard Edmonton, Alta. J.W. Carmichael 1960 /J.W. Carmichael.
 2874 pasture soil Milton Ont. Bhatt Sep 1966 /G.C. Bhatt UW242. Pigment: yellow.
 6319 soil Edmonton, Alta. C. Starret Oct 1988 /C. Starret. Pigment: yellow.
 8775 soil Edmonton, Alta. M. Rosario 26 Sep 1996 /M. Rosario. Pigment: yellow.

Paecilomyces niveus see *Byssoschlamys nivea**Paecilomyces ochraceus* see *Acremonium ochraceum**Paecilomyces parvus* see *Scopulariopsis parva*

Paecilomyces pascuus Pitt & A.D. Hocking

- 5316 (T *Paecilomyces pascuus*) pasture grass Otara, NZ G. Latch 1979 /A. Hocking FRR 1925 [=ATCC 56973 =IMI 288717 =CBS 253.87 =GenBank AB033528 18S =GenBank AB047229 28S].

Paecilomyces persicinus see ***Acremonium persicinum******Paecilomyces puntonii*** (Vuill.) Nannizzi

- 1024 hair ex red squirrel Alberta J.W. Carmichael Aug 1960 /J.W. Carmichael.
2502 Recife Brazil strain Batista /G.F. Orr [=IMUR 658].

***Paecilomyces* sp.**

- 6962 Pin oak (*Quercus palustris*) twigs Northern Mexico /B. Katz 6.

Paecilomyces striatisporus see ***Sagenomella striatispora****Paecilomyces taitungiacus* see ***Thermoascus taitungiacus****Paecilomyces terricola* see ***Acremonium terricola****Paecilomyces variabilis* see ***Sagenomella diversispora******Paecilomyces variotii*** Bainier

- 184 rodent lung Alta. E.S. Keeping 1954 /E.S. Keeping.
243 skin ex chest Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
295 ex collection Fritz Blank, McGill Univ. /Dr. Munroe.
462 pus ex breast abscess Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
1198 air contaminant Edmonton, Alta. J.W. Carmichael 15 Jan 1962 /J.W. Carmichael.
2037 swab ex ears, female 71 yr; ++ colonies isolated Edmonton, Alta. J.W. Carmichael 22 Jun 1964.
2734 contaminant Mozambique /C. Magalhaes 924.
2881 lab contaminant (?ex soil) Calgary, Alta. P. Widden 1968 /G.C. Bhatt Alpha 89.
2999 A. Padhye HACC 168.
3256 contaminant ex tissue culture Edmonton, Alta. J.W. Carmichael 1969 /R.L.S. Whitehouse.
5598 draining chest lesion ex boy 13 yr UAH, Edmonton Dec 1986 /P. Kibsey MU 2991. Thermotolerant.
6352 *Dendroctonus ponderosae* larva in *Pinus contorta* v. *latifolia* galleries Invermere, BC 25 Sep 1986 /Y. Yamaoka C1231.
6353 *Pinus contorta* var. *latifolia*, infested with *Dendroctonus ponderosae* Invermere, BC 25 Sep 1986 /Y. Yamaoka C1232. Semi-viridotoxin, semi-viridotoxic acid (Ayer et al., Can. J. Chem. 69:189-191, 1991).
6722 contaminated peritoneal catheter causing peritonitis in male on continuous ambulatory peritoneal dialysis; catheter tip DE+ Thunder Bay, Ont. C.H. Crompton Nov 1990 /R.C. Summerbell FR 2649. Human/animal pathogen: growing on catheter tip (Crompton et al, The Pediatric Infectious Disease Journal 10:869-871, 1991).
6752 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls.
7245 indoor air of office bldg. ex RCS strip Regina, Sask. S.P. Abbott (SA-M245) 18 Nov 1992 /S.P. Abbott (SA-M245).
7255 ex peat passed through drier (45C) Seba Beach, Alta. A. Jones Nov 1992 /T. Cable Ea. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
7838 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 42) 2 Dec 1993 /S.P. Abbott (OHS 42). Pigment: brown // thermotolerant: grows @ 42C.
8517 atypical isolate ex peritonitis in patient on CAPD Aristotle Univeristy of Thessaloniki School of Medicine, Greece E.

Roilides/E. Bibashi /M.G. Rinaldi UTHSC R-2910.

Thermophilic: optimum > 37 C // human/animal pathogen: peritonitis in patient on CAPD (Bibashi, E., E. Kololina, L. Sigler et al. Peritoneal Dialysis International (submitted); Bibashi, E et al., ISHAM Abstr. P142, 1997; Bibashi, E., D. Memmos, E. Kokolina et al., Hellen Nephrol. 13:281-288, 2001).

- 8704 atmosphere, cleared site Innisfail, Queensland, Australia J. Upsher 1985 /L. Montelli AMRL 1564.
10596 right mastoid cavity, female 43 yr; DE - Ontario /R. Rennie MY 5254 [=OMH FR 742]. Thermotolerant: grows @ 35 C (fide submitting laboratory).
10674 brown alga *Padina sanctae-crucis* - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 5B.
11498 isolate ex fruit spread Parry Sound, Ont. 4-Apr-2011 /Crofters Foods Inc. 07017.

Paecilomyces viridis see ***Chamaeleomyces viridis******Paecilomyces zollerniae*** Stolk & Samson (morph*Byssochlamys zollerniae*)

- 10619 ex staple line lung biopsy, male 57 yr; DE negative for filaments Surrey Memorial Hospital, Surrey, B.C. S. Mithani /R. Rennie MY 957 [=BC CDC A5MF4116]. Molecular systematics: Sequence similarity 100% with partial ITS sequence (AB02394) *Byssochlamys zollerniae*; ITS sequence similarity closest to *Byssochlamys* species (94% BLAST match) // culture conditions: Produces abundant warty pale brown chlamydospores and phialidic conidia in chains // thermophilic: grows @ 35 C, NG @ 42 C (fide UAH).

Panaeolus foeniseccii (Fr. ex Pers) Schroeter

- 8994 sporocarp in tanks, near slender wheat grass and peat R.M. Danielson (RMD 3097) 28 Jul 1981 /R.M. Danielson RMD 3097.

Panellus serotinus (Pers.:Fries) Kuhner

- 8033 dikaryon R. Kuhner /S. Davies FC-404 [=ATCC 36503 =CBS 498.50]. Edible: mushroom.

Papulaspora sepedonioides Preuss

- 4328 garden soil Edmonton, Alta. L. Linarez 8 Oct 1980 /L. Linarez.
10707 ex female cone of *Picea glauca* Moose Lake, Alta. M.L. Davey 03-Mar-2006 /R.S. Currah Pg1-A. Biodiversity: white spruce (*Picea glauca*) cones.

***Papulaspora* sp.**

- 3580 soil (mixed with *T. terrestre*) Chile /L. Zaror T114.

Papulaspora sporotrichoides Hotson

- 4821 poplar wood on rose bengal medium UAMH L. Sigler 1983 /L. Kennedy.

Paracoccidioides brasiliensis (Splendore) Almeida

- 8037 ex Lt lower lung biopsy, male 59 yr Calgary, Alta. /R. Rennie MY 1490 [=GenBank AF038360 (ITS)]. Human/animal pathogen: paracoccidioidomycosis with recurrent arterial emboli (Manns et al., Clin. Infect. Dis. 23:1026-1032, 1996) // molecular systematics: molecular genetic variation among members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // application: QC & teaching strain (Summerbell, Clinical Microbiology Procedures Handbook 2002) // thermotolerant: yeast form at 35C.

Paraconiothyrium cyclothyrioides Verkley

- 10585 ex joint fluid Portland, OR /M.G. Rinaldi UTHSC 05-891. Molecular systematics: BLAST match 99% ITS similarity with *Paraconiothyrium cyclothyrioides* (fide D.A. Sutton) //

- thermotolerant: grows better @ 30C than @ 35C (fide UAMH) // pigment: brown.
- 10675 alga *Digenea simplex* - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 14A. Molecular systematics: Blast match 99% ITS similarity to *Paraconiothyrium cyclothyrioides*.
- 11641 skin biopsy of left knee ex male 49 yr with end-stage renal disease and a cadveric renal transplant Center for Clinical Studies, Houston, TX 2011 /D.A. Sutton UTHSC 11-2294 [=UTHSC R-4779 =GenBank JQ681304 D1D2 =GenBank JQ681303 ITS]. Human/animal pathogen: cutaneous phaeohyphomycosis caused by *Paraconiothyrium cyclothyrioides* (Gordon RA, Sutton DA, Thompson EH, Shrikanth V, Verkley GJM et al, J Clin Microbiol 50:3795-3798, 2012) // culture conditions: non sporulating on deposit; no conidia obtained.
- Paranannizziopsis australasiensis* Sigler, Hambleton & Pare**
- 10439 aquatic file snake *Acrochordus* sp. (#1) with rapidly developing multifocal necrotising skin lesions; histopathology + for branching septate hyphae Melbourne Zoo, Melbourne, Australia 03-04 /A. Woodgyer 2004-03969 [=GenBank KP691520 IGS =GenBank KF477218 ITS =GenBank KF466866 SSU]. Keratinophilic: digests hairs with penetrating bodies // human/animal pathogen: dermatomycosis in file snake *Acrochordus* species // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); specificity of TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Bleher DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8) // mesophilic: NG @ 35C // cycloheximide: resistant (MYC) // culture conditions: produces ascematal initials but no ascemata.
- 10440 aquatic file snake *Acrochordus* sp. (#2) with rapidly developing multifocal necrotising skin lesions; histopathology + for branching septate hyphae Melbourne Zoo, Melbourne 03-04 /A. Woodgyer 2004-03970. Keratinophilic: digests hairs with penetrating bodies // human/animal pathogen: dermatomycosis in file snake *Acrochordus* species // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 11644 skin lesions ex Northern tuatara (*Sphenodon punctatus punctatus*) (#RS0047) female 22 yr, with papular fungal dermatitis Ulcerative dermatitis, mostly on ventrum (lesions around cloaca and abdomen); histopathology + for hyphae Auckland Zoological Park, Auckland, NZ (I) C. Harvey; (C) R. Jakob-Hoff 2012 /R. Clough AU-1200185 [=MAF W12-00348/1 =GenBank KF477219 ITS]. Molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // keratinophilic: digests hairs with penetrating bodies // human/animal pathogen: dermatomycosis in tuatara *Sphenodon* species // mesophilic: NG @ 35C // cycloheximide: resistant (MYC).
- 11645 (T *Paranannizziopsis australasiensis*) biopsy ex skin lesions on Northern tuatara (*Sphenodon punctatus punctatus*) (Toa #940089), female 18 yr, with ulcerative fungal dermatitis; histopathology + for intralesional hyphae Auckland Zoological Park, Auckland, NZ (I) C. Harvey; (C) R. Jakob-Hoff 2011 /R. Clough AU11-25424 [=MAF W12-00348/2 =GenBank KF477220 ITS =GenBank NR_111879.1 ITS]. Human/animal pathogen: dermatomycosis in tuatara *Sphenodon* species (Masters NJ, Proc Int Conf Dis Zoo Wild Anim p 86, 2012) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // mesophilic: NG @ 35C // cycloheximide: resistant (MYC) // culture conditions: produces ascematal initials but no ascemata.
- 11665 ex frozen skin lesion from deceased coastal bearded dragon (*Pogona barbata*) with papular dermatitis, female 3 yr, with systemic infection; histopathology + for hyphae; treated with betadine and itraconazole Auckland Zoological Park, Auckland, NZ (I) C. Harvey; (C) R. Jakob-Hoff Jun-2012 /R. Clough W12-00944 [=Animal ID# A90100 =GenBank KF477221 ITS]. Human/animal pathogen: disseminated mycosis involving multiple organs and originating in skin of *Pogona barbata* // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // mesophilic: NG @ 35C // cycloheximide: resistant (MYC) // keratinophilic: digests hairs with penetrating bodies.
- 11719 skin lesion caudal to L thigh of juvenile Northern tuatara (*Sphenodon punctatus punctatus*) animal B10192; histopathology + for hyphae Auckland Zoological Park, Auckland, NZ 2 Apr 2013 /R. Clough W13-00257 [=GenBank KF477222 ITS]. Mesophilic: NG @ 35C // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // human/animal pathogen: dermatomycosis in tuatara *Sphenodon* species.
- Paranannizziopsis californiensis* Sigler, Hambleton & Pare**
- 10692 ex skin of tentacled snake (*Erpeton tentaculatum*); histopathology + for hyphae & conidia San Diego Zoo (C) M. Sutherland-Smith; (I) L. Sigler 8-May-2006 /M. Sutherland-Smith 198270 [=GenBank KF477223 ITS]. Human/animal pathogen: dermatomycosis in file snake *Erpeton tentaculatum* // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013) // keratinophilic: digests hairs with penetrating bodies // mesophilic: grows @ 30 C but scarcely @ 35 C // cycloheximide: resistant (MYC).
- 10693 (T *Paranannizziopsis californiensis*) ex skin and scales of tentacled snake (*Erpeton tentaculatum*); histopathology + hyphae & conidia San Diego Zoo (C) M. Sutherland-Smith; (I) L. Sigler 5-May-2006 /M. Sutherland-Smith 900402 [=GenBank KP691521 IGS =GenBank KF466867 SSU =GenBank NR_111881.1 ITS =GenBank KF477224 ITS]. Crystals: fine crystals in slide culture // human/animal pathogen: dermatomycosis in file snake *Erpeton tentaculatum* // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013); specificity of TaqMan real-time PCR for detection of *Ophidiomyces ophiodiicola*, the agent of snake fungal disease (Bohuski E, Lorch JM, Griffin KM, Bleher DS, BMC Vet Res 11:95, 2015 Apr 15, doi: 10.1186/s12917-015-0407-8) // mesophilic: grows @ 30 C but scarcely @ 35 C // cycloheximide: resistant (MYC) // culture conditions: produces ascematal initials but no ascemata.
- Paranannizziopsis crustacea* Sigler, Hambleton & Pare**
- 10199 (T *Paranannizziopsis crustacea*) fatal disseminated pustular infection of the skin ex tentacled snake (*Erpeton tentaculatum*); histopathology + for hyphae & arthroconidia Toronto Zoo, Toronto, ON L. Sigler 11-6-02 /M. Bertelsen Z-216-01 [=GenBank KF477225 ITS =GenBank KF466868 SSU =GenBank NR_111881.1 ITS]. Human/animal pathogen: third of 4 snakes that died, multiple foci of skin infection; fatal fungal dermatitis in captive-bred tentacled snakes (*Erpeton tentaculatum*) (Bertelsen M.F, Crawshaw JG, Sigler L, Smith DA, J Zoo Wildlife Med 36:82-87, 2005) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens

- belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 10200 fatal disseminated pustular infection of the skin ex tentacled snake (Erpeton tentaculatum); histopathology + for hyphae & arthroconidia Toronto Zoo, Toronto, ON L. Sigler 11-6-02 /M. Bertelsen Z-218-01. Human/animal pathogen: fourth of 4 snakes that died, multiple foci of skin infection; fatal fungal dermatitis in captive-bred tentacled snakes (Erpeton tentaculatum) (Bertelsen M.F, Crawshaw JG, Sigler L, Smith DA, J Zoo Wildlife Med 36:82-87, 2005) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).
- 10201 fatal disseminated pustular infection of the skin ex tentacled snake (Erpeton tentaculatum); histopathology + for hyphae & arthroconidia Toronto Zoo, Toronto, ON L. Sigler 11-6-02 /M. Bertelsen Z-214-01 [=GenBank KF477226 ITS]. Human/animal pathogen: second of 4 snakes that died, multiple foci of skin infection; fatal fungal dermatitis in captive-bred tentacled snakes (Erpeton tentaculatum) (Bertelsen M.F, Crawshaw JG, Sigler L, Smith DA, J Zoo Wildlife Med 36:82-87, 2005) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).

Parascedosporium putredinis (Corda) Lackner & de Hoog
(syn. *Graphium cuneiferum*, *Rhinocladium lesnei*)

- 805 (T *Rhinocladium lesnei*) foot of man France strain Vuillemin 1910 /CBS 108.10 [=GenBank HQ185347 ITS =CBS 108.10 =MUCL 11709 =MUCL 15754]. Molecular systematics: close to *Graphium putredinus* sensu Hughes 1958, non *Doratomyces putredinis* sensu Morton & Smith 1963 (De Hoog et al, Atlas of Clinical Fungi p 306 & 1025, 2000; Lackner & de Hoog, IMA Fungus 2:39-48, 2011); ex-type culture of *Rhinocladium lesnei* Vuillemin; ITS 2 nt different from HQ185348 JCM 8082 *P. putredinis* Epitype // culture conditions: no ascospores produced.

Parascedosporium tectonae (C. Booth) Gilgado, Gene, Cano & Guarro (syn. *Graphium tectonae*)

- 9318 elm (*Ulmus*) wood Edmonton, Alta J.P. Tewari (97M-100) 1997 /J.P. Tewari EW 55 T1. Molecular systematics: Blast match 100% ITS similarity to *Parascedosporium tectonae* CBS 118694 but 5 bp different from type CBS 127.84 (UAMH 9401) (fide UAMH 2012).
- 9401 (T *Graphium tectonae*) seeds of teak (*Tectona grandis*) Jamaica C. Booth /CBS 127.84 [=IMI 95673d =JCM 9753 =GenBank U43907 SSU =GenBank AM749440 ITS]. Benomyl: resistant (2 ppm) // molecular systematics: phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); reclassification of *Graphium tectonae* (Gilgado, Gene, Cano & Guarro, Int J Syst Evol Microbiol 57:2171-2178, 2007; Lackner & de Hoog, IMA Fungus 2:39-48, 2011).

Parvacoccum pini Hunt & Funk

- 6324 (T *Parvacoccum pini*) blister rust killed branches of *Pinus monticola* Mesanchie Lake, BC 20 Jun 1986 /A. Funk DAVFP 23420.

Paxillus involutus (Batsh ex Fr.) Fr.

- 5817 scattered under *Picea rubens* St. Andrews, Charlotte Co., N.B. L.J. Hutchison 31 Aug 1986 /L. Hutchison LH-90-86 [=TRTC LH-90-86]. Pigment: brown // mycorrhizae // culture conditions: no clamps (fide UAMH 2011).
- 8235 *Picea glauca* roots in a plantation Grand Portage, Temiscouata, Quebec 1992 /P.D. Khasa 2.9. Pigment: brown // mycorrhizae: poorly salt tolerant (Kernaghan, Hambling, Funk & Khasa,

Restoration Ecology 10:43-51, 2002).

Peckiella completa see *Sepedonium brunneum*

Pectinotrichum llanense Varsavsky & Orr (morph *Chrysosporium an. Pectinotrichum llanense*)

- 3400 (T *Pectinotrichum llanense*) soil Venezuela, S.A. /G.F. Orr O-3160 [=ATCC 18921 =CBS 882.71 =GenBank AB015783 =GenBank AB040698]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001).
- 3401 soil Venezuela, S.A. Wright (JGW 44) /G.F. Orr O-779 [=ATCC 22224].
- 3447 human clinical material CBS, Holland de Vries (DV 71-21) /G.F. Orr O-3501 [=ATCC 22632]. Pigment: yellow on OAT.

Penicillium adametzioides Abe ex G. Smith

- 6015 ex air hospital post-construction OMH Toronto R.C. Summerbell 27 Sep 1987 /R.C. Summerbell L2A2. Pigment: black.

Penicillium aethiopicum Frisvad

- 7528 ex pearl millet Zimbabwe /J. Frisvad IBT 5749. Viridicatumtoxin, griseofulvin.

Penicillium arenicola Chalab.

- 2878 mineral soil under *Pinus resinosa* (red pine) Petawawa, Ont. P. Widden Jun 1967 /G.C. Bhatt alpha 58 [=NRRL 31507 =GenBank GU092803 calmodulin =GenBank GU092769 RNA polymerase =GenBank GU092933 RNA polymerase =GenBank GU092769 beta tubulin =GenBank AF454078 18S =GenBank AF454071 18S]. Molecular systematics: close to *Hamigera* species (fide S. Peterson USDA-ARS, Peoria IL); phylogeny of *Hamigera* species and exclusion of *P. arenicola* (Peterson SW, Jurjevic Z, Bills GF, Stchigel AM, Guarro J, Vega FE, Mycologia 102(4):847-864, 2010).
- 3960 mushroom compost P.J. Wuest /P.J. Wuest 5315. Hyperparasite: agent of Vern Astley disease?.
- 4054 oil soaked soil Norman Wells, NWT 1972 /D. Westlake NWF 16 [=NRRL 31509 =GenBank GU092800 calmodulin =GenBank GU092770 beta tubulin =GenBank GU092934 RNA polymerase =GenBank AF454079 18S =GenBank AF454070 18S]. Molecular systematics: close to *Hamigera* species (fide S. Peterson USDA-ARS, Peoria IL); phylogeny of *Hamigera* species and exclusion of *P. arenicola* (Peterson SW, Jurjevic Z, Bills GF, Stchigel AM, Guarro J, Vega FE, Mycologia 102(4):847-864, 2010).

Penicillium atramentosum Thom

- 7529 ex hay Iceland /J. Frisvad IBT 6760. Rugulovasine A, oxaline.

Penicillium aurantiogriseum Dierckx

- 6526 indoor air ex RCS strip Edmonton, Alta. L. Sigler (12d) 23 Oct 1989 /S. Poznanski 12.
- 7434 ex pecan kernels (*Carya illinoensis*) Georgia J.M. Wells /J. Vederas [=ATCC 60762 =NRRL 6233 =UAMH 7558]. Cyclophenin, cyclophenol (Plant Cell Physiol. 25:257-263, 1984); compactin (Fide H.G. Cutler, USDA ARC, Athens, GA).
- 7530 chemotype II, ex wheat Great Britain /J. Frisvad IBT 3699. 3-methoxyviridicatin, cyclophenin, viomellein, xanthomegnin, aurantiamin, cyclophenol, viridicatinol.
- 7531 chemotype I, ex barley USA /J. Frisvad IBT 3471. Aurantiamin, penicillic acid, terrestric acid, verrucosidin.
- 7558 pecan kernels (*Carya illinoensis*) Georgia J.M. Wells /J. Vederas [=ATCC 60762 =NRRL 6233 =UAMH 7434]. Cyclophenin, cyclophenol (Plant Cell Physiol. 25:257-263, 1984).

- 7812 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 20) 13 Dec 1994 /S.P. Abbott (OHS 20). Pigment: yellow.
- 7813 indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Beaverlodge, Alta. S.P. Abbott (OHS 350) 4 May 1994 /S.P. Abbott (OHS 350).
- 9618 forearm tissue, male 40 yr Jacksonville, FL Mayo Clinic 1 Jun 1999 /S. Wohlfiel T42305. Mesophilic: NG @ 37C.

Penicillium aurantiogriseum v. *melanoconidium* see
Penicillium melanoconidium

Penicillium aurantiogriseum var. *polonicum* see
Penicillium polonicum

Penicillium baradicum see ***Penicillium citrinum***

Penicillium bilaiae Chalab.

- 7518 soil Lethbridge, Alta. deposited by C. Kuiack R. Kucey /PhilomBios Philom 9 [=ATCC 20851 =GenBank JN714934 ITS as ATCC 20851]. Pigment: brown // application: JumpStart inoculant for growth promotion of wheat, canola, pea, lentil, bean & Brassica crops (Biotechnology Focus 7:18, 2004; Gulden RH, Vessey JK, Can J Plant Sci 80: 801-804, 2000); solubilizes phosphorus (Kucey RM. US Patent 5,026,417 Jun 25 1991; Kucey RM. Can J Soil Sci 68:261-270, 1988; Asea PEA, Kucey RMN, Stewart JWB, Soil Biol Biochem 20:459-464, 1988) // molecular systematics: JGI *Penicillium bilaiae* ATCC 20851 Transcriptome (Project ID: 1016524).

Penicillium biourgeianum Zaleski

- 10789 ex liquid scintillator containing naphthalene, ethoxylated nonylphenol, mineral oil, diphenyloxazole and benzene University of British Columbia, Vancouver, B.C. A. Zakaryan (AZ 3) 25-Jan-06 /M.L. Berbee AZ 3 [=GenBank DQ981398]. Culture conditions: growing in liquid scintillator and interfering with detection of elementary particles (fide M. Berbee).

Penicillium boreae S.W. Peterson & Sigler

- 3896 (T *Penicillium boreae*) oil-spilled soil Norman Wells, NWT /D. Westlake NWF 144 [=NRRL 31002 =BPI 841395 (holotype specimen) =GenBank AF481119]. Molecular systematics: multi-locus DNA sequence analysis (Peterson & Sigler, Mycol. Res. (submitted Feb 02); Peterson & Sigler, Mycol. Res. 106:1109-1118, 2002).

Penicillium brevicompactum Dierckx

- 5145 J.I. Pitt FRR 66. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 7536 ex mouldy *Paxillus involutus* Sandbjerg, Denmark /J. Frisvad IBT 6603. Raistrick phenols, mycophenolic acid.
- 7814 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 3) 2 Dec 1993 /S.P. Abbott (OHS 3).
- 7815 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 150) 30 Jan 1994 /S.P. Abbott (OHS 150).
- 8100 mold growth in hypo clearing agent (photography) UAMH L. Abbott 6 Aug 1995 /L. Abbott.

Penicillium buchwaldii

- 7537 ex *Linum usitatissimum* Denmark 1986 /J. Frisvad IBT 6005. 5-Hydroxyasperentin.

Penicillium camembertii Thom

- 6855 Havarti cheese Fanny Bay, B.C. J.W. Carmichael 22 Apr 1991 /J.W. Carmichael.
- 7538 ex french brie cheese 1991 /J. Frisvad IBT 12183. Cyclopiazonic acid.

Penicillium canariense S.W. Peterson & Sigler

- 6403 (T *Penicillium canariense*) soil Canary Islands /A. Martinez IJFM A-543 [=NRRL 31003 =BPI 841396 (holotype specimen) =GenBank AF481121]. Molecular systematics: multi-locus DNA sequence analysis (Peterson & Sigler, Mycol. Res. 106:1109-1118, 2002).

Penicillium canescens Sopp

- 974 soil grassy field Edmonton, Alta. J.W. Carmichael 18 Apr 1961 /J.W. Carmichael.
- 5144 rice Sydney Australia J. Pitt 1970 /J.I. Pitt FRR 80.

Penicillium canis S.W. Peterson

- 11811 (T *Penicillium canis*) ex bone lesion of female spayed Rhodesian Ridgeback dog with osteomyelitis of the right ilium Michigan State University Diagnostic Laboratory, Lansing, MI D. Langlois 17-Apr-2013 /D.A. Sutton UTHSC D113-196 [=NRRL 63798 =BPI 892763 holotype =GenBank KJ511291 ITS =GenBank KF900167 Bt =GenBank KF900177 calm =GenBank KF900196 RPB2 =MB 807056]. Human/animal pathogen: osteomyelitis in a canine caused by the new species *Penicillium canis* (Langlois DK, Sutton DA, Swenson CL, Bailey CJ, Wiederhold NP, Nelson NC, Thompson EH, Wickes BL, et al, J Clin Microbiol Epub Apr 30, 2014).

Penicillium chrysogenum Thom (syn. *Penicillium notatum*)

- 485 Dept. Bacteriology strain 1956 as *Penicillium notatum*. Penicillin.
- 2551 ulcer ex finger Edmonton, Alta. J.W. Carmichael 8 Nov 1965 /J.W. Carmichael.
- 2671 D. Westlake [=PRL 619].
- 4212 knee fluid; DE negative for hyphal elements Edmonton, Alta. A. Sekhon 1979 /A.S. Sekhon PLM 762 [=IMI 235431].
- 4213 eye swab; DE negative for hyphal elements Edmonton, Alta. A. Sekhon 1979 /A.S. Sekhon PLM 764 [=IMI 235433]. Biodeteriogen/biodegradation: diagenic alteration of spar calcite (Jones & Pemberton, Can. J. Earth Sci. 24:903-914, 1987).
- 4214 nasal swab; negative for hyphal elements Edmonton, Alta. A. Sekhon 1979 /A.S. Sekhon PLM 759 [=IMI 235432].
- 4215 bronchial aspirate; negative for hyphal elements Edmonton, Alta. A. Sekhon 1979 /A.S. Sekhon PLM 763 [=IMI 235432].
- 5709 beef jerky Leduc, Alta. M. Hamilton /M. Hamilton KB002.
- 6525 indoor air ex RCS strip Edmonton, Alta. L. Sigler (3a) 23 Oct 1989 /S. Poznanski 3.
- 6742 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls [=DAOM 212031]. Pigment: yellow // molecular systematics: Blast match 99-100% ITS similarity with *Penicillium chrysogenum* AY373902 (FRR 807 T) and other strains (fide UAMH 2012) // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 6874 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 41) Aug 1990 /D. Inglis (MR 41). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7539 ex barley Addis Ababa, Ethiopia 1981 /J. Frisvad IBT 3359. Meleagrins, roquefortine C, secalonin acid D, xanthocillin X. Pigment: yellow.
- 7869 indoor air ex RCS strips, from *Apis mellifera* (honeybee) overwintering facility Camp Creek, Alta. S.P. Abbott (OHS 17) 10 Dec 1993 /S.P. Abbott (OHS 17). Pigment: yellow

- (PCYA).
- 9184 cantaloupe fruit (*Citrullus lenotus*) Peoria, Illinois K.B. Raper 1943 /ATCC 9480 [=GenBank GQ498978 ITS =NRRL 1951 =CBS 307.48 =QM 941 =IMI 040233 =EMBL X76120 =GenBank D13859 =EMBL X76119 =ATCC 9480 =GenBank GQ498978]. Application: Prototype of high-yielding penicillin strains in submerged culture. Infected with mycoviruses (J. Virol. 6: 813-819, 1970); transformation of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979); production of: antiviral agent consisting of double-stranded RNA (U.S. Pat. 3,597,318); production of ferrichrome (Mol. Cell. Biol. 1: 94-100, 1981); production of penicillin (J. Gen. Microbiol. 136:1713-1716, 1990); production of disulfide reductase (J. Bacteriol. 176: 973-984, 1994); Wisconsin strain, parent of most high yielding penicillin producing strains (Houbraken J, Frisvad JC, Samson RA, IMA Fungus 2:87-95, 2011) // molecular systematics: sequences of thioredoxin reductase genes *trxA* and *trxB*, EMBL X76120 and X76119 (J. Bacteriol. 176: 973-984, 1994); sequences of 3-phosphoglycerate kinase gene *pgkA* (Mol. Gen. Genet. 243: 270-276, 1994); sequences of large mitochondrial rRNA gene (GeneBank D13859) (Biochim. Biophys. Acta 1172: 353-356, 1993); "Wisconsin strain" parent of penicillin producing strain is reidentified as *Penicillium rubens* (Houbraken J, Frisvad JC, Samson RA, IMA Fungus 2:87-95, 2011).
- 11419 swab ex fur of living female little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 52 C.4 . Molecular systematics: determined as *Penicillium chrysogenum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

***Penicillium citreonigrum* Dierckx. (syn. *Penicillium citreoviride*)**

- 9208 air ex RCS strip inside cab of CAT working on wood chip pile Kamloops, BC S.P. Abbott (SA-M204) 26 Jan 1998 /S.P. Abbott (SA-M204). Pigment: yellow // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 11421 swab ex skin of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 24 C.1. Molecular systematics: determined as *Penicillium citreonigrum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.
- 11453 swab ex skin of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 21 C.2 CC1. Molecular systematics: confirmed as *Penicillium citreonigrum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

Penicillium citreoviride* see *Penicillium citreonigrum

***Penicillium citrinum* Thom (syn. *Penicillium baradicum*)**

- 4749 J. Vederas [=A. Endo SANK 18767 =ATCC 38065 =NRRL 8082 =BCRC 32826 =CCRC 32826 =FERM P-2609 =MF4870 =NBIMCC 3426 =SANK 18767 =UAMH 7547]. Cholesterol inhibitors ML-236a, B & C (J. Antibiot. 29:1346-1348, 1976). Application: produces cholesterol inhibitors ML-236A, ML-236B and ML-236C (Endo A, et al., J. Antibiot. 29:1346-1348, 1976).
- 5149 J.I. Pitt FRR 2759. Pigment: yellow.
- 5403 J. Vederas [=ATCC 36277 =NRRL 3754]. Curvularin (J. Environ. Sci. Health B11:289-297, 1976).
- 5802 R. Shukla.
- 6743 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls [=DAOM 212027]. Pigment: green.

- 7547 J. Vederas [=ATCC 20606 =FERM P-2609 =NRRL 8082 =UAMH 4749]. Dihydrocompactin (Eur. Pat. Appl. 52,366 (This strain has been cited in a US or other patent & should not be used to infringe patents)).
- 8098 indoor air ex RCS strip Lethbridge, Alta. S.P. Abbott (SA-M247) 30 May 1995 /S.P. Abbott (SA-M247). Pigment: yellow.

Penicillium claviforme* see *Penicillium vulpinum

***Penicillium clavigerum* Demelius**

- 450 rodent survey Alberta J.W. Carmichael 1955 /J.W. Carmichael. Asperfuran, patulin, penitrem "x" & viomellein.
- 451 rodent survey Alberta J.W. Carmichael 1955 /J.W. Carmichael.
- 452 rodent survey Alberta J.W. Carmichael 1955 /J.W. Carmichael.
- 2763 gopher hair Cardston Alta. D. Remington 31 May 1967 /D. Remington. Asperfuran, patulin, viomellin, xanthomegnin & vioxanthin (Fide J.C. Frisvad, pers. comm.).
- 2764 gopher hair Cardston Alta. D. Remington 29 May 1967 /D. Remington.
- 2765 gopher hair Cardston, Alta. 31 May 1967 /D. Remington.
- 2766 gopher hair Cardston Alta. D. Remington 31 May 1967 /D. Remington.
- 7540 ex air New Delhi, India 1989 /J. Frisvad IBT 4898.
- 10577 soil ex gopher hole Pike Lake, Sask. 1993 /S. Kaminskyj.

***Penicillium commune* Thom (syn. *Penicillium palitans*)**

- 5777 beef jerky Leduc, Alta. M. Hamilton Apr 1987 /M. Hamilton KB014A.
- 5778 beef jerky Leduc, Alta. M. Hamilton Apr 1987 /M. Hamilton KB015.
- 5969 beef jerky Edmonton, Alta. M. Hamilton Jul 1987 /M. Hamilton KBS009.
- 5970 beef jerky Edmonton, Alta. M. Hamilton Jul 1987 /M. Hamilton KBS019C.
- 6497 salad dressing UAMH L. Sigler Jul 1989 /M. Krahn C.
- 7541 ex black pepper goat cheese Paris, France 1990 /J. Frisvad IBT 10501. Cyclopaldic acid, cyclopiazonic acid.

***Penicillium concentricum* Samson, Stolk & Hadlok (syn.**

***Penicillium glandicola* var. *glaucovenetum*)**

- 3893 oil-spilled soil Norman Wells NWT /D. Westlake NWF 97.
- 11416 swab ex fur of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 2-Feb-2010 /K.J. Vanderwolf Bat 31 C.1. Molecular systematics: determined as *Penicillium concentricum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

Penicillium convolutum* see *Talaromyces convolutus

***Penicillium coprophilum* (Berkley & Curtis) Seifert & Samson**

- 6992 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 115) Aug 1990 /D. Inglis (HD 115).
- 7542 ex rabbit dung Baarn, Netherlands /J. Frisvad IBT 5551. Meleagrins, oxalin, griseofulvin, roquefortine C.

***Penicillium corylophilum* Dierckx**

- 5168 honeycomb Alberta 1985 /C. Jenkins EM 85-3093 (grey).
- 6993 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 199) Aug 1990 /D. Inglis (MR 199).
- 7816 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Camp Creek, Alta. S.P. Abbott (OHS 158) 21 Jan 1994 /S.P. Abbott (OHS 158).

- 7817 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 159) 31 Jan 1994 /S.P. Abbott (OHS 159). Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 11417 swab ex fur of living male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 97 C.3 CP2. Molecular systematics: determined as *Penicillium corylophilum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.
- 11454 swab ex fur of living female little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 86. Molecular systematics: confirmed as *Penicillium corylophilum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

Penicillium crateriforme see *Talaromyces purpurogenus*

Penicillium crustosum Thom

- 6875 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 595) Aug 1990 /D. Inglis (MR 595).
- 7543 ex thyme Denmark 1983 /J. Frisvad IBT 3425. Carolic acid, cyclophenin, cyclophenol, penitrem A, roquefortine C, terrestric acid, viridicatin.
- 11593 degenerate culture, proficiency sample /S.P. Abbott SA1509 [=AIHA EMPAT 002F1-2011]. Molecular systematics: Blast match 100% ITS similarity to numerous strains of *Penicillium crustosum* (fide UAMH 2012).

Penicillium decumbens Thom

- 6753 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls [=DAOM 212029].
- 7818 indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Fairview, Alta. S.P. Abbott (OHS 15) 2 Dec 1993 /S.P. Abbott (OHS 15). Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 7819 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Clyde Corner, Alta. S.P. Abbott (OHS 403) 16 Mar 1994 /S.P. Abbott (OHS 403).
- 8715 unknown Tennessee C.D. Sherbakoff 1933 /ATCC 10436 [=CBS 318.48 =IMI 39755 =NRRL 742 =THOM 5330 =IFO 6093 =QM 1920]. Thujopsene, 3-octanone, nerolidol, 1-octen-3-ol & phenethyl alcohol (*Mycologia* 67:1158-1165, 1975); 5alpha-reductase (*Steroids* 59:642-647, 1994). Application: Transformation of corticosteroids (*Steroids* 60:646-649, 1995).

Penicillium digitatum (Pers.) Sacc.

- 1916 contaminant ex sputum Edmonton, Alta. J.W. Carmichael 4 Feb 1964 /J.W. Carmichael.
- 3626 moldy tomato Edmonton, Alta. L. Sigler Nov 1973 /L. Sigler. Molecular systematics: BLAST match 100% with *Penicillium digitatum*.
- 5137 rotting fruit of *Citrus sinensis* Canberra, Australia G.A. Chilvers /J.I. Pitt FRR 1562.
- 7544 ex mouldy orange Mar 1990 /J. Frisvad IBT 10188.
- 8066 ex toenail, male 67 yr Alberta Provincial Laboratory for Southern Alberta /R. Rennie MY 1918.
- 9210 indoor air of school hallway ex Anderson sampler Squamish, BC S.P. Abbott (SA-M210) 17 Feb 1998 /S.P. Abbott (SA-M210).
- 10537 ex sputum, male 72 yr Mount Sinai Hospital & Toronto Medical Laboratories, ON 19-01-2005 /R. Rennie MY 481 [=OMH FR 1023]. Mesophilic: NG @ 35C (fide UAH).

Penicillium dimorphosporum Swart

- 6538 soil of *Brassica actinophylla* indoor plant Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell W 1903.

Penicillium dodgei see *Eupenicillium brefeldianum*

Penicillium duclauxii Delacroix

- 5138 mine timber Johannesburg, South Africa J.W. Bowen 1938 /J.I. Pitt FRR 1031 [=ATCC 9121 =IMI 200309 =NRRL 1031 =Thom 5648.360]. Pigment: grey/brown on CER & OAT.

Penicillium dupontii see *Talaromyces thermophilus*

Penicillium echinulatum Raper & Thom ex Fassatiava

- 5167 honeycomb Alberta 1985 /C. Jenkins EM 85-3093 (green).
- 7545 ex mouldy bakers yeast Denmark /J. Frisvad IBT 5103. Cyclophenin, cyclophenol, palitantin, penechins, viridicatin.
- 7820 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 162) 31 Jan 1994 /S.P. Abbott (OHS 162).
- 7821 indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning facility Girouxville, Alta. S.P. Abbott (OHS 375) 23 Apr 1994 /S.P. Abbott (OHS 375).

Penicillium emmonsii see *Talaromyces stipitatus*

Penicillium emodense see *Talaromyces emodensis*

Penicillium erythromellis Hocking

- 9540 (*T. Penicillium erythromellis*) soil from creek bank Little River, NSW, Australia A.D. Hocking 1977 /DAOM 225712 [=CBS 644.80 =FRR 1868 =IMI 216899].

Penicillium expansum Link

- 7546 ex acorn Lyngby, Denmark Nov 1990 /J. Frisvad IBT 11501. Chaetoglobosin C, patulin, citrinin, roquefortine C.
- 11415 swab ex fur of living female little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 86 C.3. Molecular systematics: determined as *Penicillium expansum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.
- 11457 swab ex skin of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 51 C.2. Molecular systematics: determined as *Penicillium expansum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

Penicillium fellutanum Biourge

- 7916 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 11) 2 Dec 1993 /S.P. Abbott (OHS 11).
- 7917 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 157) 31 Jan 1994 /S.P. Abbott (OHS 157).
- 11455 swab ex skin of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 2-Feb-2010 /K.J. Vanderwolf Bat 38 C.5. Biodiversity: mycobiota of bat caves.

Penicillium funiculosum Thom

- 7579 ex mercury treated fabric Maryland P.Marsh (BPI 66) /NRRL 3647 [=ATCC 11797 =NRRL A-1616 =NRRL A-622 =QM 474 =CBS 235.94 =BPI 66 =NBRC 100958]. Dextranase (*Carbohyd. Res.* 36:53-66, 1974; *J. Dent. Res.* 51:409, 1972); acid phosphatase with phosphodiesterase & phosphomonoesterase activity (*J. Biochem.* 105:794-798,

- 1989). Fungus resistance testing: U.S. military specifications; airborne equipment, automotive components, paint, polymers; Environmental test methods and engineering guidelines, Washington DC (Military Standard MIL-STD-810F, 2000).
- 9541 (T neotype *Penicillium funiculosum*) *Lagenaria vulgaris* India J.S. Chohan 1975 /DAOM 225713 [=CBS 272.86 =IMI 193019 =FRR 1630 =IHEM 18555 =IMI 211742 =GenBank JN680288 RPB1 =GenBank JN899377 ITS =GenBank KC992264 BenA =GenBank KC962103 ITS =GenBank NR_103678 Ref seq =GenBank JX091383 Btub]. Molecular systematics: phylogeny of *Talaromyces* and taxa in *Penicillium* subgenus *Biverticillium* (Samson RA, Yilmaz N, Houbraken J et al, *Studies in Mycology* 70:159-183, 2011).

Penicillium gaditanum see *Penicillium minioluteum*

***Penicillium glabrum* (Wehmer) Westling**

- 5354 white spruce seeds Alberta R. Mittal 9 Jan 1986 /R. Mittal M39. Plant pathogen: on seed (pathogen?) (Mittal & Wang, *Can. J. For. Res.* 17:1026-1034, 1987).
- 8099 indoor air in portable school classroom ex RCS strip Devon, Alta. S.P. Abbott (SA-M249) 11 Apr 1995 /S.P. Abbott (SA-M249). Pigment: brown.

Penicillium gladioli see *Eupenicillium crustaceum*

***Penicillium glandicola* (Oud.) Seifert & Samson**

- 7548 ex soil of *Salix-Populus* forest Wisconsin, USA /J. Frisvad IBT 12298. Patulin, roquefortine C, penitrem A, meleagrins, oxaline. Pigment: yellow.

Penicillium glandicola var. *glaucovenetum* see

Penicillium concentricum

***Penicillium granulatum* Bain.**

- 6879 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 303) Aug 1990 /D. Inglis (MR 303). Pigment: gold.

***Penicillium griseofulvum* Dierckx**

- 2688 D. Westlake [=PRL 2306].
- 5147 cassava Mozambique C.J. Rabie 1977 /J.I. Pitt FRR 2002.
- 5397 ex NRRL 2159A, J. Sekiguchi strain S11 /J. Vederas [=ATCC 48165]. Patulin (Appl. Environ. Microbiol. 33:147-158, 1977; *Biochem. J.* 182:445-453, 1979; *Can. J. Biochem.* 25:881-887, 1979; *Dev. Ind. Microbiol.* 22:219-232, 1981). Pigment: yellow.
- 6123 albino strain /J. Vederas [=ATCC 24632 =NRRL 2159A]. Patulin (Appl. & Env. Microbiol. 33:147-158, 1977; *Appl. & Env. Microbiol.* 33:814-816, 1977; *Biotechnol. Lett.* 6:231-236, 1984); griseofulvin (Appl. & Env. Microbiol. 33:147-158, 1977); 6-methylsalicylic acid (*Bioorganic Chem.* 1:380-399, 1971; *Biotech. Lett.* 6:231-236, 1984); m-hydroxy-benzyl alcohol dehydrogenase (*Biochemistry* 11:1102-1107 & 1108-1114, 1972; *Can. J. Microbiol.* 32:167-175, 1986).
- 6720 indoor air ex RCS strip Saskatoon, Sask. D. Inglis (2N) 19 Feb 1991 /S. Poznanski.
- 7822 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 152) 24 Jan 1994 /S.P. Abbott (OHS 152).
- 7823 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 410) 11 Mar 1994 /S.P. Abbott (OHS 410).

Penicillium helicum see *Talaromyces helicus*

***Penicillium hirsutum* Dierckx**

- 7549 Netherlands 1990 /J. Frisvad IBT 3941.

Penicillium hirsutum v. *hordei* see *Penicillium hordei*

***Penicillium hordei* Stolk (syn. *Penicillium hirsutum* v. *hordei*)**

- 7550 ex wheat-field soil Flakkebjerg, Denmark S. Elmholt /J. Frisvad IBT 6470 [=CBS 558.90]. Terrestrial acid, roquefortine C.

Penicillium indigoticum see *Talaromyces indigoticus*

Penicillium indonesiae see *Eupenicillium javanicum*

***Penicillium inflatum* Stolk & Malla**

- 6503 ex soil of potted *Brassica actinophylla* in hospital Toronto, Ont. R.C. Summerbell Sep 1986 /R.C. Summerbell RCS-W2045.

***Penicillium islandicum* Sopp**

- 2673 D. Westlake [=PRL 1525].
- 5142 soil Ghana K.B. Raper 1950 /J.I. Pitt FRR 2239 [=NRRL 2239]. Pigment: red.
- 7294 ex soil Edmonton, Alta. L. McKercher (7) 1 Dec 1992 /L. McKercher (7). Pigment: red.
- 7824 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 1) 2 Dec 1993 /S.P. Abbott (OHS 1).
- 9542 (T neotype *Penicillium islandicum*) Cape Town, South Africa F.M. Putterill (PP-54-K-1746) 1922 /DAOM 225714 [=CBS 338.48 =ATCC 10127 =IFO 6963 =Thom 4658.35.144.2 =IMI 40042ii =NRRL 1036 =FRR 1036 =B 51913 =CECT 2762 =IHEM 3834 =MUCL 31324 =NI 6295 =QM 7571]. 1:4:5 Trihydroxy-2-methylanthraquinone (Howard & Raistrick, *Biochem. J.* 44:227-233, 1949); skyrin & flavoskyrin (Howard & Raistrick, *Biochem. J.* 56:56-65, 1954); iridoskyrin, rubroskyrin, & erythroskyrin (Howard & Raistrick, *Biochem. J.* 57:212-222, 1954); islandicin (Franck et al., *Angew. Chem. Int. Ed. Engl.* 19:460-461, 1980); chitosanase (Fenton & Eveleigh, *J. Gen. Microbiol.* 126:151-165, 1981; Reyes et al., *Curr. Microbiol.* 9:301-304, 1983).

***Penicillium italicum* Wehmer**

- 7551 ex imported mandarin orange Denmark /J. Frisvad IBT 4517. Pigment: yellow.

***Penicillium janczewskii* Zaleski**

- 6995 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 434) Aug 1990 /D. Inglis (MR 434).
- 7825 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 156) 30 Jan 1994 /S.P. Abbott (OHS 156).

***Penicillium janthinellum* Biourge**

- 9211 indoor air of school classroom ex Anderson sampler Squamish, BC S.P. Abbott (SA-M211) 17 Feb 1998 /S.P. Abbott (SA-M211).
- 9991 shed dorsal skin ex Honduran milksnake (*Lampropeltis triangulum hondurensis*), male 6yr Six Flags Marine World, Vallejo, CA UAMH (UW028B-A) 5 Dec 2000. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, *J. Herpetol. Med. Surg.* 13:10-15, 2003).

***Penicillium kananaskense* Seifert, Frisvad & McLean**

- 7437 (T) ex soil, FH horizon in a *Pinus contorta* v. *latifolia* forest Kananaskis Centre Env. Res., Kananaskis Valley, Alta. M.A. McLean Sep 1990 /DAOM 216105 [=ATCC 90282 =CBS 530.93 =IBT 11775 =IMI 356791]. 16 different chromophore families (Seifert et al *Can. J. Bot.* 72:20-24, 1994). Pigment: yellow.

Penicillium kongii L. Wang

11674 (T *Penicillium kongii*) leaf sample (No. GBJD3F) *Cotoneaster* sp. Gongbujiangda (3400 m), Linzhi, Tibet, China P.-J. Han 12-Aug-2012 /L. Wang AS3.15329 [=GenBank KC427151 CaM =CGMCC AS3.15329 =GenBank KC427191 ITS =GenBank KC427171 btub =HMAS 244382 holotype dried colony =NRRL 62674]. Pigment: light pink on PDAC (fide UAMH 2013) // systematics/taxonomy: New terverticillate *Penicillium* species from plant leaves (Wang B, Wang L, Mycologia 2013 Epub Aug 6).

Penicillium lagunense see ***Talaromyces lagunensis******Penicillium lanosum*** Westling

7552 ex soil under *Abies* sp. Rothwald, Simpton Pass, Switzerland Jun 1989 /J. Frisvad IBT 4964. Griseofulvin, kojic acid. Pigment: yellow.

Penicillium lapidosum see ***Eupenicillium lapidosum******Penicillium lignorum*** Stolk

4531 spruce log centre Alberta L. Kennedy (SYLIC-RBA) 1982 /L. Kennedy [=FRR 2472].

Penicillium lineatum see ***Talaromyces striatus******Penicillium lividum*** Westling (syn. *Penicillium odoratum*)

5136 (T *Penicillium odoratum*) peaty soil, spruce-larch bog Wisconsin M. Christensen /J.I. Pitt FRR 3007 [=IMI 94208 =NRRL 3007 =CBS 294.62 =ATCC 14769 =GenBank AB032069 18S =DSM 2419 =IFO 7741 =IMI 094208ii].

Penicillium loliense Pitt

5789 mycorrhizae of *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. L. Ippolito (59 B4-a) Aug 1981 /R.C. Summerbell 59 B4-a.

Penicillium marneffeii Segretain & al. apud Segretain

2993 (T *Penicillium marneffeii*) Segretain strain /Pasteur Institute CIP 560.
4181 human spleen ex male S. Carolina 1967 /A.S. Sekhon PLM 689 [=ATCC 24100 =DiSalvo SC-587]. Human/animal pathogen: deep infection (Di Salvo, J. Clin. Pathol. 60:259-263,1973) // application: QC & teaching strain (Summerbell, Clinical Microbiology Procedures Handbook 2002).
4381 lung biopsy Thailand /CDC B-3420 [=PLM 872].
8556 lung BAL, R middle lobe, male Toronto, Ont. 18 Dec 1995 /R.C. Summerbell FR 57. Pigment: red.
9280 disseminated infection, female 30 yr, HIV+, treated with itraconazole Assam, India A. Chakrabarti (PM 163) /CDC B-5830. Human/animal pathogen: four cases of disseminated disease in India (Singh et al., J. Clin. Microbiol. 37:2699-2702, 1999).

Penicillium melanoconidium (Frisvad) Frisvad & Samson

(syn. *Penicillium aurantiogriseum* v. *melanoconidium*)

7532 ex wheat Denmark /J. Frisvad IBT 4107. Penicillic acid, verrucosidin, penitrem A, oxaline.

Penicillium melinii Thom

5140 cultivated soil Norfolk, England G. Smith 1943 /J.I. Pitt FRR 1666 [=IMI 61835 =CBS 243.56]. Pigment: brown.

Penicillium miczynskii Zaleski

4690 stump of *Picea glauca* in damp chamber Devonian Bot. Garden, Alta. L. Sigler 12 Oct 1982 /L. Sigler.
5150 chalk soil Great Britain V. Sankey 1955 /J.I. Pitt FRR 633

[=IMI 59911]. Pigment: red // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).

- 5151 (T *Penicillium atosanguineum*) wheat in silo Prague, Czech. B.X. Dong 1971 /J.I. Pitt FRR 1726 [=IMI 197488 =CBS 380.75 =GenBank JN606590 RPB2]. Pigment: red.
9212 indoor air of school classroom ex Anderson sampler Pemberton, BC S.P. Abbott (SA-M212) 18 Feb 1998 /S.P. Abbott (SA-M212). Pigment: yellow.
11456 swab ex skin of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 24 C.1. Molecular systematics: confirmed as *Penicillium miczynskii* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

Penicillium minioluteum Dierckx (syn. *Penicillium*

gaditanum)

- 4727 ex gall *Endocronartium harknessii* Jasper Alta. E. Allen 1982 /E. Allen.
6744 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls [=DAOM 212026]. Pigment: red.
7826 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 143) 30 Jan 1994 /S.P. Abbott (OHS 143). Pigment: pink.
7827 outside air ex RCS strip Barrhead, Alta. S.P. Abbott (OHS 408) 21 Apr 1994 /S.P. Abbott (OHS 408). Pigment: pink.
9206 contaminant ex orchid (*Dendrobium pulchellum*) seedlings in flask Chiang Mai, Thailand S.P. Abbott (SA-M206) 05 Jan 1998 /S.P. Abbott (SA-M206).
9543 (T *Penicillium minioluteum*) P. Biourge (60) 1923 /DAOM 225716 [=CCRC 31698 =IMI 89377 =LSHB P44 =MUCL 28666 =NRRL 1714 =Thom 4733.89 =FRR 1714 =CBS 642.68]. Minioluteic acid; spiculisporic acid.

Penicillium montanense Christensen & Backus

- 1610 (T *Penicillium montanense*) soil sample lodgepole pine-Douglas fir Ravalli Co. Mont. Christensen & Backus /M. Christensen [=IMI 99468 =NRRL 3407 =FRR 3407 =CBS 310.63 =ATCC 14941 =IFO 7740 =GenBank AF527058 ITS LSU]. Molecular systematics: comparison with darkly pigmented species (Peterson & Sigler, Mycol. Res. (submitted Feb 02)) // pigment: brown.
3891 oil-spilled soil Norman Wells NWT /D. Westlake NWF 8.
6876 *Megachile rotundata* (alfalfa leafcutting bee) larvae (instar II) Lethbridge, Alta. D. Inglis (MR 1006) Aug 1990 /D. Inglis (MR 1006).
6994 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, pre-defecation Lethbridge, Alta. D. Inglis (MR 1073) Aug 1990 /D. Inglis (MR 1073).
11198 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 18-May-2007 /G. Kernaghan ARSL 180507.8 [=GenBank HQ157959 ITS]. Molecular systematics: Blast match 99-100% ITS similarity with *Penicillium montanense* AF527058 NRRL 3407 T in CBS & UAMH databases // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
11199 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 23-May-2007 /G. Kernaghan ARSL 230507.17 [=GenBank HQ157860 ITS]. Molecular systematics: Blast match 99-100% ITS similarity with *Penicillium montanense* AF527058 NRRL 3407 T in CBS & UAMH databases // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).

Penicillium notatum see *Penicillium chrysogenum*

Penicillium oblatum Pitt & Hocking

- 5303 spoiled baby food Sydney, Australia A. Hocking 1979 /A. Hocking FRR 2233 [=IMI 288718 =ATCC 56978]. Pigment: red.
- 5330 (T *Penicillium oblatum*) spoiled baby food, vacuum packed & pasteurized after sealing Sydney, Australia A. Hocking 1979 /A. Hocking FRR 2234 [=IMI 288719 =ATCC 56979 =GenBank AB033529 18S =GenBank AB047230 28S]. Pigment: red.

Penicillium odoratum see *Penicillium lividum*

Penicillium ohiense see *Talaromyces ohiensis*

Penicillium olsonii Bainier & Sartory

- 6334 potted plant Chlorophyton comosum in hospital Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell.
- 7553 ex seed Denmark /J. Frisvad IBT 6920.

Penicillium oxalicum Currie & Thom

- 5148 poultry feed Queensland Australia M.D. Connole 1971 /J.I. Pitt FRR 1058 [=GenBank EF103451]. Biocontrol: method for detection of biocontrol agent for control of tomato pathogens (Larena I, Melgarejo P, Plant Disease 93:919-928, 2009).

Penicillium palitans see *Penicillium commune*

Penicillium phoeniceum see *Eupenicillium cinnamopurpureum*

Penicillium piceum Raper & Fennell

- 7828 outside air ex RCS strip Manning, Alta. S.P. Abbott (OHS 4) 2 Dec 1993 /S.P. Abbott (OHS 4). Pigment: brown // thermotolerant: rapid growth @ 37 C.
- 9544 (T *Penicillium piceum*) /DAOM 225717 [=CBS 361.48 =IMI 40038 =NRRL 1051 =FRR 1051 =ATCC 10519 =Thom 5633.6 =QM 7609].

Penicillium polonicum K.M. Zalessky (syn. *Penicillium aurantiogriseum* var. *polonicum*)

- 4009 paper boxes stored 4C Edmonton, Alta. J.W. Carmichael 30 Sep 1976 /J.W. Carmichael.
- 7533 ex barley Videbaek, Denmark Oct 1980 /J. Frisvad IBT 3450. Verrucofortine, verrucosidin, 3-methoxyviridicatin, viridicatin, cyclophenin, cyclophenol.

Penicillium pseudostromaticum Hodges, Warner & Rogerson

- 6723 R.C. Summerbell 1A-2.

Penicillium purpureum see *Talaromyces purpureus*

Penicillium radicum A.D. Hocking & Whitelaw

- 10790 ex liquid scintillator containing naphthalene, ethoxylated nonylphenol, mineral oil, diphenyloxazole and benzene University of British Columbia, Vancouver, B.C. A. Zakaryan (AZ 5) 25-Jan-06 /M.L. Berbee AZ 5 [=GenBank DQ981400]. Culture conditions: growing in liquid scintillator and interfering with detection of elementary particles (fide M. Berbee).

Penicillium raistrickii G. Smith

- 1002 lung ex Cottontail rabbit Slave Lake Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
- 3899 oil-spilled soil Norman Wells NWT /D. Westlake NWF 82.
- 5143 (T *Penicillium raistrickii*) moldy cotton yarn Great Yarwood,

England G. Smith 1929 /J.I. Pitt FRR 1044 [=NRRL 1044 =IMI 40221 =CBS 261.33 =ATCC 10490 =NRRL 2039 =Thom 5367.4 =IFO 6104 =LSHB BB100 =IBFM(MGU) F183 =MWi 477 =VKM F-337 =QM 1936 =GenBank AF033491 ITS]. 15alpha-hydroxylase (Irrang S et al., Biotechnol. Lett. 14: 33-38, 1992; Meded. Fac. Landbouwwet. Univ. Gent 57: 1755-1759, 1992).

- 5355 white spruce seeds Alberta R. Mittal 9 Jan 1986 /R. Mittal M39. Plant pathogen: on seed (pathogen?) (Mittal & Wang, Can. J. For. Res. 17:1026-1034, 1987).
- 8193 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Grimshaw, Alta S.P. Abbott (OHS 13) 02 Dec 1993 /S.P. Abbott (OHS 13).

Penicillium restrictum Gilman & Abbott

- 7829 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 58) 2 Dec 1993 /S.P. Abbott (OHS 58). Pigment: red.
- 7830 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 146) 31 Jan 1994 /S.P. Abbott (OHS 146). Pigment: red.

Penicillium retardatum see *Talaromyces retardatus*

Penicillium roquefortii Thom

- 1074 soil under poplar tree, heavy underbrush North Saskatchewan river bank, Edmonton, Alta. J.W. Carmichael 6 Jun 1961.
- 6496 salad dressing UAMH L. Sigler Jul 1989 /M. Krahn A.
- 7554 ex roquefort cheese /J. Frisvad IBT 5229. Roquefortine C, mycophenolic acid, PR-toxin.
- 7831 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 19) 13 Dec 1993 /S.P. Abbott (OHS 19). Biodiversity: indoor air fungi.
- 7832 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 401) 23 Mar 1994 /S.P. Abbott (OHS 401).

Penicillium roseopurpureum Dierckx

- 6016 ex soil of Chlorophyton comosum in hospital Toronto, Ont. R.C. Summerbell 15 Apr 1986 /R.C. Summerbell W 1308.

Penicillium rugulosum Thom

- 1019 lung ex Richardson's ground squirrel Camrose Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
- 7833 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 10) 2 Dec 1993 /S.P. Abbott (OHS 10).
- 7834 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 165) 30 Jan 1994 /S.P. Abbott (OHS 165).

Penicillium sabulosum Pitt & Hocking

- 5304 (T *Penicillium sabulosum*) spoiled pasteurized fruit juice Sydney, Australia A. Hocking 1984 /A. Hocking FRR 2743 [=ATCC 56984 =IMI 288715 =GenBank AB033530 18S =GenBank AB047231 28S =CBS 261.87 =NBRC 33092 =ATCC 65984 =GenBank JN406591 RBP2 =GenBank JN899294].

Penicillium scabrosum Frisvad, Samson & Stolk

- 7555 ex mouldy Flammulina velutipes Harderbos, Flevoland, Netherlands J. Frisvad Nov 1985 /J. Frisvad IBT 6626 [=IMI 304296]. Pigment: pale yellow.

Penicillium sclerotiorum van Beyma

- 3892 oil-spilled soil Norman Wells NWT /D. Westlake NWF 14.
- 4734 J. Vederas [=IMI 104602]. Produces pencolide.
- 5141 ex air Indonesia K.B. Boedijn /J.I. Pitt FRR 2074 [=NRRL

2074 =IMI 40569 =CBS 187.36 =ATCC 10494 =IFO 6105].
Pigment: yellow/orange.

6017 ex soil of *Dieffenbachia amoena* in hospital Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell W 1962.

Penicillium simplicissimum (Oudem.) Thom

5946 soil *Brassica actinophylla* in hospital Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell W 2004.
Biodiversity: potted plants in hospitals (Summerbell et al, *Mycopathologia* 106:13-22, 1989).

Penicillium solitum Westling

467 sputum (pulmonary infection) Edmonton, Alta. J.W. Carmichael Jan 1956 /J.W. Carmichael.
6745 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls [=DAOM 212032].
7556 ex bacon Denmark /J. Frisvad IBT 6181.
11418 swab ex skin of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 73 C.2. Molecular systematics: determined as *Penicillium solitum* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

Penicillium soppii see ***Eupenicillium shearii***

***Penicillium* sp.**

1083 soil under spruce Edmonton, Alta. J.W. Carmichael 6 Jun 1961 /J.W. Carmichael.
5169 moldy wine cork Alberta L. Sigler 28 Aug 1985.

Penicillium spinulosum Thom

6717 indoor air ex RCS strip Saskatoon, Sask. D. Inglis (1J) 19 Feb 1991 /S. Poznanski.
6746 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls [=DAOM 212028]. Pigment: yellow // application: Cited in patent US20120129718
Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).

Penicillium subarcticum S.W. Peterson & Sigler

3897 (T *Penicillium subarcticum*) oil-spilled soil Norman Wells NWT /D. Westlake NWF 146 [=NRRL 31108 =BPI 841397 (holotype specimen) =GenBank AF481120]. Molecular systematics: multi-locus DNA sequence analysis (Peterson & Sigler, *Mycol. Res.* 106:1109-1118, 2002).

Penicillium tardifaciens see ***Talaromyces tardifaciens***

Penicillium thomii Maire

2712 soil under poplar Edmonton, Alta. J.W. Carmichael 10 Jan 1967 /J.W. Carmichael. Pigment: brown.
5333 Eastern white pine seeds Algonquin Park, Ont. R. Mittal 9 Jan 1986 /R. Mittal R-48. Mesophilic: NG @ 37C // plant pathogen: on seed (pathogen?) (Mittal & Wang, *Can. J. For. Res.* 17:1026-1034, 1987).
11420 swab ex skin of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 21 C.1. Molecular systematics: confirmed as *Penicillium thomii* by ITS & beta tubulin sequencing (fide K.A. Seifert 2011) // biodiversity: mycobiota of bat caves.

Penicillium tricolor Frisvad, Seifert, Samson & Mills

7872 ex wheat in grain elevator Prince Albert, Sask. J.T. Mills 27 Jun 1990 /DAOM 216240. Pigment: brown.

Penicillium turbatum Westling

5522 ex soil /J. Vederas [=ATCC 28797 =NRRL 5630]. Antiviral

antibiotic epipolythiopiperazinedione (*J. Antibiot.* 27:57-64, 1974); antibiotic A26771B (*J. Antibiot.* 30:571-575, 1977).

Penicillium variabile Sopp

6013 ex washed mycorrhizal root tip, *Picea mariana* Burt lake nr. Kirkland Lake, Timiskaming Dist., Ont. (C) L. Ippolito & D. Malloch Aug 1981 /R.C. Summerbell Ippolito 13B2. Mycorrhizae: microhabitat (Summerbell, *Can. J. Bot.* 67:1084-1095, 1989).
6014 ex washed mycorrhizal root tip, *Picea mariana* Burt Lake nr. Kirkland Lake, Timiskaming Dist., Ont. (C) L. Ippolito & D. Malloch Aug 1981 /R.C. Summerbell Ippolito 50D-2WC. Pigment: brown // mycorrhizae: microhabitat (Summerbell, *Can. J. Bot.* 67:1085-1095, 1989).
6747 ex wood panels from CMHC test huts Edmonton, Alta. B. Grylls Jul 1990 /B. Grylls [=DAOM 212030].
7835 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 57) 2 Dec 1993 /S.P. Abbott (OHS 57).
7836 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Camp Creek, Alta. S.P. Abbott (OHS 151) 21 Jan 1994 /S.P. Abbott (OHS 151).

Penicillium vermiculatum see ***Talaromyces flavus***

Penicillium verrucosum Dierckx

7557 ex barley Denmark /J. Frisvad IBT 5203. Citrinin, ochratoxin A.
7837 outdoor air ex RCS strip Manning, Alta. S.P. Abbott (OHS 164) 30 Jan 1994 /S.P. Abbott (OHS 164).

Penicillium viridicatum Westling

4333 ex dust & grain from bin Alberta L. Sigler 2 Jun 1980 /L. Sigler.
4334 ex dust & grain from bin Alberta L. Sigler Oct 1980 /L. Sigler.
5728 packaged ham Canada /M. Hamilton [=ATCC 18411]. Ochratoxin A (*Can. J. Microbiol.* 14:131-137, 1971); 4-hydroxyochratoxin A; 7-carboxy-3, 4-dihydro-8-hydroxy-3-methylisocoumarin (*Tetrahedron Letters* 43:4033-4036, 1971).
7014 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 314) Aug 1990 /D. Inglis (MR 314).
7039 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 205) Aug 1990 /D. Inglis (MR 205).
7534 chemotype I, ex barley Videbaek, Denmark Oct 1980 /J. Frisvad IBT 5357. Brevianamide A, viomellein, xanthomegnin, vioxanthin.
7535 chemotype II, ex barley Ribe, Denmark 1977 /J. Frisvad IBT 5186. 3-methoxyviridicatin, penicillic acid, verrucofortine, viomellein, vioxanthin, xanthomegnin.
7896 ex dust sample from concrete vent in school Northern Saskatchewan S.P. Abbott (SA-M246) 7 Mar 1995 /S.P. Abbott (SA-M246).

Penicillium vulpinum (Cooke & Masseur) Seifert & Samson
(syn. *Penicillium claviforme*)

2219 K. Zachariah [=QM 7504].
5139 unknown - may be Bainier's original fide Pitt /J.I. Pitt FRR 1002 [=IMI 194564 =NRRL 1002]. Pigment: brown on OAT.

Penicillium waksmanii Zaleski

9262 indoor air of home ex RCS strip Maple Ridge, BC S.P. Abbott (SA-M231) 19 Mar 1998 /S.P. Abbott (SA-M231). Pigment: yellow-brown.

Peniophora aspera see ***Hyphoderma setigerum***

Peniophora candida see *Bulbillomyces farinosus*

Peniophora polygonia (Pers.:Fr.) Bourd. & Galzin

- 6837 ex fruiting bodies on *Populus tremuloides* Blueridge, Alta. C. Myrholm 24 Jan 1991 /P. Chakravarty [=NOF 1494 =UAMH 7006]. Pigment: brown.
- 6838 decay in *Populus tremuloides* Newfoundland J.H. Ginns /DAOM 195089. Pigment: brown.
- 6839 decay in *Populus tremuloides* Newfoundland J.H. Ginns /DAOM 195090. Pigment: brown.
- 7006 ex *Populus tremuloides* (aspen poplar) Blueridge, Alta. C. Myrholm 24 Jan 1991 /L. Hutchison NOF 1494 [=UAMH 6837]. Sesquiterpenes (peniopholide, etc.) (Ayer & Trifonov, J. Nat. Products 55:1454-1461, 1992); volatile & non-volatile compounds (Trifonov & al, Eur. J. For. Path. 22:441-448, 1992); benzaldehyde derivatives & peniophoral (Ayer & Trifonov, J. Nat. Prod. 56:85-89, 1993); benzoic acid and 2-phenylethanol (Ayer, Can. J. Chem. 73:465-470, 1995). Culture conditions: antagonistic to *Phellinus tremulae* (Chakravarty & Hiratsuka, Eur. J. For. Path. 22:354-361, 1992) // pigment: brown.
- 8166 *Populus tremuloides* (aspen poplar) Ontario /S. Davies FC-099 [=NOF 148]. Biodeteriogen/biodegradation: white rot // pigment: brown.
- 8167 *Populus* (poplar) Colorado R.W. Davidson /S. Davies FC-095 [=NOF 359]. Biodeteriogen/biodegradation: white rot.

Peniophora pseudopini Weresub & S. Gibson

- 8172 *Pinus contorta* (lodgepole pine) Alberta M.K. Nobles 27 Aug 1953 /S. Davies FC-172 [=NOF 114]. Biodeteriogen/biodegradation: white rot (Ginns & Lefebvre, 1993, Mycol. Mem. 19:112).

Peniophora rufa (Fries) Boidin

- 8169 Alberta L.L. Kennedy (T-41) /S. Davies FC-044. Biodeteriogen/biodegradation: white rot // pigment: brown.

Peniophora septentrionalis Laurila

- 8173 *Picea glauca* (white spruce) Alberta M.K. Nobles 1951 /S. Davies FC-184 [=NOF 69]. Biodeteriogen/biodegradation: white rot (Ginns & Lefebvre, 1993, Mycol. Mem. 19:113) // pigment: brown.

Peniophora setigera see *Hyphoderma setigerum*

Periconia cambrensis Mason & Ellis

- 1451 soil Univ. of Alberta campus, Edmonton, Alta. J.W. Carmichael 23 Jul 1962. Pigment: yellow.
- 4932 peat moss Smokey Lake, Alta. L. Sigler Feb 1984 /K. Mallett. Pigment: brown.

Periconia macrospinosa Lefebvre & Johnson

- 1545 G.L. Barron 12007.
- 5040 roots of clover North Carolina /M. McGinnis NCMH 2264. Thermotolerant: grows better @ 30C than @ 35C.
- 5041 roots of clover North Carolina /M. McGinnis NCMH 2265. Pigment: green on CMA and Takashio's medium; brown // thermotolerant: grows @ 35 C // culture conditions: degenerate poorly sporulating.

Periconia saraswatipurensis Bilgrami

- 8761 soil ex interior building of ruins of Bidar Fort Bidar Dist., Karnataka State, India R.S. Khan 18 Dec 1989 /J.C. Krug TRTC 51984 [=IMI 373133]. Pigment: rose-brown.
- 9066 blood ex HIV + Arabic male, 34 yr Dallas, Texas Parkland Memorial Hospital 1997 /M.G. Rinaldi UTHSC 97-910.

Periconia typhicola Mason & M.B. Ellis

- 10289 from floating mats of *Typha latifolia* in a beaver pond eastern

border of Elk Island National Park, Alta. A. Smreciu (RAM5) Nov 1999 /R.S. Currah RAM5. Culture conditions: gelatinolytic, cellulolytic, lignolytic, utilizes starch // biodeteriogen/biodegradation: decomposition of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).

Periconiella musae see *Ramichloridium musae*

Persiciospora africana Krug

- 6102 (*T. persiciospora africana*) soil at base of ebony tree (*Diospyros mespiliformis*) Island Forest Area, Okavango Delta, Botswana (C) D. Pearce 26 Sep 1986 /R. Khan TRTC 50986 [=CBS 160.88].

Pesotum an. Ophiostoma ips see *Ophiostoma ips*

Pesotum an. Ophiostoma novae-zelandiae see *Ophiostoma novae-zelandiae*

Pesotum canum see *Ophiostoma canum*

Pesotum cupulatum see *Ophiostoma setosum*

Pesotum introcitrinum see *Ophiostoma introcitrinum*

Pesotum piceae see *Ophiostoma piceae*

Pesotum pini (L.J. Hutchison & J. Reid) G. Okada & Seifert (morph *Grosmania radiaticola*)

- 9591 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Onemana, Tairua State Forest, Coromandel, New Zealand J. & S. Reid (82-82a) 20 May 1982 /J. Reid UM 651. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused yellowish to brown staining on all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988).
- 9592 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Onemana, Tairua State Forest, Coromandel, New Zealand J. & S. Reid (82-87b) 20 May 1982 /J. Reid UM 652. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused yellowish to brown staining on all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988).
- 9593 (*T. hyalopesotum pini*) Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Onemana, Tairua State Forest, Coromandel, New Zealand J. & S. Reid (82-88) 20 May 1982 /J. Reid UM 653b [=WIM 88]. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused yellowish to brown staining on all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988).
- 9647 Loblolly pine (*Pinus taeda*), inner bark & outer sapwood showing bark beetle activity Compartment 21, Riverhead State Forest, Auckland, NZ J. & S. Reid (82-189d) 11 Jul 1982 /J. Reid UM 798. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused yellowish to brown staining on all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988).
- 9648 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Compartment 36, Woodhill State

- Forest, Auckland, NZ J. & S. Reid (82-89) 14 May 1982 /J. Reid UM 799. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused yellowish to brown staining on all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988).
- 9691 Loblolly pine (*Pinus taeda*), inner bark & outer sapwood showing bark beetle activity Compartment 21, Riverhead State Forest, Auckland, NZ J. & S. Reid (82-187a) 11 Jun 1982 /J. Reid UM 800 [=GenBank AF155680 =GenBank AF155691 =GenBank AF155692]. Systematics/taxonomy: descriptions of some potential wood-staining fungi from New Zealand (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // biodeteriogen/biodegradation: caused yellowish to brown staining on all wood tested (Hutchison & Reid, NZ J. Bot. 26:83-98, 1988) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000).
- Pesotum ulmi* see *Ophiostoma ulmi*
- Pestalotiopsis maculiformans* (Guba & Zeller) Steyaert
7431 midstream urine, female 11 yr Mannville, Alta. Mannville General Hospital Aug 1993 /R. Rennie MY 3272. Pigment: brown.
11474 swab ex skin of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 13 C.2 CC1. Molecular systematics: confirmed by sequencing (fide G. Thorn, Univ Waterloo) // cellulolytic.
- Petalosporus anodosus* see *Gymnascella nodulosa*
- Petalosporus nodulosa* see *Gymnascella nodulosa*
- Petriella asymmetrica* var. *cyprina* Nattrass
8893 (T *Petriella asymmetrica* var. *cyprina*) bark of poplar (*Populus nigra*) Nicosia, Cyprus R.M. Nattrass (367) Sep 1933 /W. Untereiner MUCL 9888 [=CBS 238.38 =IMI 62756 =GenBank AY882361 (ITS) =GenBank AF027661 (LSU)]. Molecular systematics: distinct from *Petriella sordida* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006).
- Petriella boulangeri* Curzi (morph *Graphium* an. *Petriella boulangeri*, *Graphium eumorphum*, *Sporotrichum* an. *Petriella boulangeri*)
8696 lesions on leaves of *Vicia faba* in growth chamber Saskatchewan R.A.A. Morrall /DAOM 145233. Cycloheximide: sensitive // culture conditions: ascospores not produced.
8890 manganese plates in soil Hamburg, Germany R. Schweisfurth (P29) 1965 /W. Untereiner MUCL 8206. Culture conditions: ascospores not produced.
9737 skin scrapings ex male 63 Y Quebec 2000 /G. St-Germain MY 54364. Cycloheximide: sensitive (fide G. St-Germain) // mesophilic: NG @ 37C (fide G. St-Germain) // culture conditions: ascospores not produced.
- Petriella guttulata* Barron & Cain (morph *Graphium* an. *Petriella guttulata*, *Sporothrix* an. *Petriella guttulata*)
3996 Partridge dung Bei Tamsel, Germany P. Vogel / G.L. Barron /CBS 362.61 [=TRTC 33049 =MUCL 9886 =GenBank AY879800 (ITS) =GenBank AF027622 (LSU)]. Cellulolytic // culture conditions: produces anamorph only // molecular systematics: phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006).
- 2006).
8399 rabbit dung Toronto, Ontario J. Scott (JS 173) 11-Jun-1991 /D. Malloch.
9564 dung Toronto, Ontario R.F. Cain / G.L. Barron 1960 /NRRL 2901 [=TRTC 33048]. Benomyl: resistant (2 ppm).
- Petriella lindforsii* Curzi (morph *Sporothrix* an. *Petriella lindforsii*)
3999 (T *Petriella lindforsii*) /CBS 352.59 [=IMI 89336 =GenBank AY882362 (ITS)]. Molecular systematics: distinct from the *Pseudallescheria*-*S. prolificans*-*Pe. setifera* clades (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: ascospores produced on OAT.
- Petriella musispora* Malloch (morph *Scopulariopsis* an. *Petriella musispora*)
3986 (T *Petriella musispora*) decaying wood ex *Populus grandidentata* D. Malloch /CBS 745.69 [=ATCC 18772 =TRTC 45436 =GenBank AY882350 (ITS) =GenBank AF275537 (LSU)]. Cellulolytic // molecular systematics: grouped with *Petriella setifera* but conidial type quite different (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: ascospores not produced.
- Petriella proteophila* see *Microascus albonigrescens*
- Petriella setifera* (Schmidt) Curzi (morph *Sporothrix* an. *Petriella setifera*)
1662 contaminant ex UAMH 1620 Edmonton, Alta. J.W. Carmichael 22 Apr 1963 /J.W. Carmichael. Culture conditions: ascospores produced.
1924 soil Tokyo, Japan 1962 /S.-I. Udagawa NHL 2279 [=CBS 265.64 =GenBank AY882349 (ITS)]. Molecular systematics: phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: ascospores produced.
2174 P. Martin 1588. Culture conditions: ascospores not produced.
2702 soil ex corn field Waterloo, Ont. G.C. Bhatt 1966 /G.C. Bhatt CR 15 [=IMI 149503 =CBS 395.69 =GenBank AY882348 (ITS) =GenBank AY882376 (LSU)]. Molecular systematics: phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: ascospores not produced.
5170 wooden pot labels in mix of Canadian peat-perlite Wooster, Ohio G. Kuter 1985 /G. Kuter 1949E.
5945 soil Chlorophyton comosum in hospital Toronto, Ontario R.C. Summerbell 15 Sep 1986 /R.C. Summerbell W 1791 [=TRTC RCS W1791].
8575 soil Singapore J. Guarro Mar 1994 /J. Guarro FMR 5550 [=CBS 710.96 =GenBank AY882347 (ITS)]. Cycloheximide: sensitive // molecular systematics: phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006).
9565 wilted oak (*Quercus*) tree West Virginia G.L. Barron (2310) 1960 /NRRL 2907. Benomyl: resistant (2 ppm).
- Petriella sordida* (Zukal) Barron & Gilman (morph *Graphium* an. *Petriella sordida*, *Sporothrix* an. *Petriella sordida*)
1410 ex *Chrysanthemum* Ottawa, Ontario H.S. Thompson 1958 /DAOM 60250. Culture conditions: ascospores not produced.
3983 (T *Petriella asymmetrica*) dry branch ex *Pyrus communis* Italy M. Curzi /CBS 258.31 [=IMI 38601 =GenBank AY882351 (ITS) =GenBank AF275497 (LSU)]. Cellulolytic // molecular systematics: grouped with *Petriella sordida* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); phylogeny of

- Scedosporium, Pseudallescheria and Petriella (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: ascomata not produced.
- 3985 soil ex mixed wood Canada G.L. Barron /CBS 180.65 [=MUCL 8228 =GenBank AY882358 (ITS)]. Cellulolytic // molecular systematics: phylogeny of Scedosporium, Pseudallescheria and Petriella (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: ascomata not produced.
- 4754 cucumber Brooks, Alta. R.J. Howard (BR82-GH30A) 1982 /DAOM 185713. Cellulolytic.
- 7493 porcupine dung Whitefish Lake Algonquin Prov. Pk., ON J. Scott 4 Apr 1991 /D. Malloch JS 154. Petriellin A, a depsipeptide active against some coprophilous fungi (Sleebs MM, Scanlon D, Karas J, Maharani R, Hughes AB, The Journal of Organic Chemistry 76:6686-6693, 2011; Lee et al., J. Organic Chem. 60:5384-5385, 1995); antifungal peptides including cytotoxic tetrapeptide (Gloer, Chpt 16, The Mycota IV, p 261, 1997).
- 8695 twigs/wood of apple (cv Robusta 5) Kentville, Nova Scotia C.O. Gourley /DAOM 162159. Cycloheximide: slightly sensitive // systematics/taxonomy: morphologic & molecular comparison of isolates of Pseudallescheria boydii from oil-soaked soils or sewage (April et al., Can. J. Microbiol. 44:270-278, 1998).
- 9457 wood from poplar (Populus sp.) stump, early stage decay Wizard Lake near Calmar, Alta S.P. Abbott (SA-M276) 8 Jan 1999 /S.P. Abbott (SA-M276). Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC).
- 9566 pepper seed Ottawa, Ontario G.L. Barron 1960 /NRRL 1659 [=TRTC 33042]. Benomyl: resistant (2 ppm).
- 9567 mouse dung G.F. Orr (O-891) 1960 /NRRL A-10406. Benomyl: resistant (2 ppm).
- 9682 ex air RCS strip, basement cellar Lethbridge, AB L. Sigler (HC1-2D) 2 Dec 1999 /N. Rahemtulla 1.
- Petriella sp.**
- 11511 swab ex fur of living male little brown bat (Myotis lucifugus) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 101 C.2b. Mesophilic: NG @ 35C // culture conditions: yeast-like in PDA (fide UAMH 2011).
- Petriellidium africanum** see **Pseudallescheria africana**
- Petriellidium desertorum** see **Pseudallescheria desertorum**
- Petriellopsis africana** see **Pseudallescheria africana**
- Petromyces albertensis** Tewari (morph *Aspergillus albertensis*)
- 2976 (T *Petromyces albertensis*) ear swab Edmonton, Alta. J.W. Carmichael 7 Jun 1968 /J.W. Carmichael [=ATCC 58745 =IMI 300485 =GenBank AY320066 pks gene =GenBank AF128859 ITS =NRRL 20602 =GenBank U28910 LSU =GenBank EU021628 RPB2 =GenBank U29229 mitochondrial rRNA gene]. Pigment: orange // molecular systematics: DNA fingerprinting shows close relationship with *Petromyces alliaceus* (McAlpin CE, Wicklow DT, Can J Microbiol 51:1039-1044, 2005); molecular analysis of variability (Varga J, Kevei E, Toth B, Kozakiewicz Z, Hoekstra RF, Can J Microbiol 46:593-599, 2000); genetic variability within *Petromyces* (Varga J, Toth B, Kevei E, Palagyi A, Kozakiewicz Z, Ant v Leeuw 77:83-89, 2000); polyketide synthase gene sequences in *Aspergillus* species (Varga J, Rigo K, Kocsube S, Farkas B, Pal K, Res Microbiol 154:593-600, 2003) // systematics/taxonomy: description (Tewari JP, Mycologia 77: 114-120, 1985; Tewari JP, Trans Br Mycol Soc 80:127-130, 1983).
- Petromyces muricatus** Udagawa, Uchiyama & Kamiya (morph *Aspergillus muricatus*)
- 8238 (T *Petromyces muricatus*) grassland soil Laguna, Phillipines S. Uchiyama & S. Kamiya 22-Feb-1993 /S.-I. Udagawa BF 42515.
- Peyronelia rudis** (Ehrenb.) Hughes
- 1372 conifer wood Alberta S.J. Hughes Aug 1960 /DAOM 71114.
- Peyronelia sp.**
- 1554 C.L. Kramer.
- 3745 soil under pine Okanagan B.C. L. Sigler 1974 /L. Sigler.
- Pezicula cinnamomea** (DC.: Fr.) Sacc. (morph *Cryptosporiopsis grisea*)
- 10860 ex dying lower twigs on young tree, *Betula pendula* (Betulaceae) along stream, Glenn Gouge, Toronto, ON G. Verkley 04-Oct-1996 /CBS 482.97 [=CBS H-15833]. Culture conditions: grow on cherry decoction agar (CHA); grow on oatmeal agar; morphology of conidiomata by SEM (Wang W, Mycology 2:237-247, 2011).
- Pezicula ocellata** (Pers.) Seaver (morph *Cryptosporiopsis scutellata*)
- 10861 Isolated from unknown tree, *Salix* sp. or *Populus* sp. Steinfort-Clairfontaine, Luxembourg, near border with Belgium (I) G. Verkley; (C) W. Gams 04-Oct-1996 /CBS 949.97 [=CBS H-15200]. Culture conditions: grow on malt extract agar (MEA); grow on oatmeal agar.
- Peziza ostracoderma** Korf (morph *Chromelosporium fulvum*)
- 1401 plaster of house near Paris J. Nicot (970) /DAOM 75828. Cellulolytic.
- 1431 peat soil Caribou Bog, Aylesford, N.S. C.O. Gourly (KE 43) 23 Mar 1961 /DAOM 88677. Cellulolytic.
- 4089 Medicine Hat clay Edmonton, Alta. L. Sigler 8 Feb 1978 /L. Sigler. Cellulolytic.
- 5963 ex *Picea* seeds Edmonton, Alta. S. Hambleton Nov 1987 /D. Gifford. Pigment: red-brown.
- 9008 lt. maxillary sinus Minneapolis, Minnesota Viromed Labs 1997 /M.G. Rinaldi UTHSC 97-811.
- 10558 ex soil-less growth medium sample (3) Fort Langley, B.C. C. Gibbs 29-Apr-2005 /Westcreek Farms.
- 11591 indoor air New Jersey S.P. Abbott 28-Jun-2011 /S.P. Abbott SA1506. Biodiversity: indoor air fungi.
- Peziza vesiculosa** see **Oedocephalum pallidum**
- Pezizella chapmanii** Whitney & Funk
- 4523 *Abies lasiocarpa* infested with *Dryocoetes confusus* Smithers, B.C. J.H. Borden 12 Apr 1981 /H.S. Whitney. Cellulolytic.
- 4610 bark ex lodgepole pine Lynn Creek Rd., B.C. L. Sigler Jul 1982 /H.S. Whitney. Cellulolytic.
- Phacidiopycnis boycei** see **Potebniamyces balsamicola** var. **boycei**
- Phaeoacremonium aleophilum** W. Gams, Crous, M.J. Wing, & L. Mugnani
- 9099 black xylem decline of 2-3 yr grape rootstock (*Vitis riparia* X *Vitis berlandieri*) California S. Ferreira & L. Morton 1997 /L. Morton TZ 420A [=GenBank AF197984 =CBS 101568]. Plant pathogen: black xylem decline of *Vitis* or "black goo".
- Phaeoacremonium alvesii** L. Mostert, Summerb. & Crous
- 5059 keratomycosis, synovial fluid /I. Weitzman [=CDC B2991 =GenBank AY579236 =GenBank AY579303 =CDC 78-042877 =CBS 408.78 =GenBank AY579286].

- Human/animal pathogen // systematics/taxonomy: formerly treated under *Phialophora parasitica* (Crous et al., *Mycologia* 88:786-796, 1996) // molecular systematics: formerly treated under *Phialophora parasitica* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- 10571 (T *Phaeoacremonium alvesii*) human subcutaneous infection Brazil /CBS 110034 [=CBS H-7958 (Holotype) =GenBank AY579234 =GenBank AY579301 =GenBank AY579284]. Molecular systematics: *Phaeoacremonium* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- Phaeoacremonium amstelodamense* L. Mostert, Summerb. & Crous**
- 10572 (T *Phaeoacremonium amstelodamense*) elbow joint interior Amsterdam, Netherlands /CBS 110627 [=CBS H-7960 (Holotype) =GenBank AY579228 =GenBank AY579295 =GenBank AY579278]. Molecular systematics: *Phaeoacremonium* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- Phaeoacremonium angustius* W. Gams, Crous & M.J. Wingf.**
- 5192 i/t passage through guinea-pig (substrate *Salix* bark) Uruguay /I. Conti 4113B. Molecular systematics: >99% ITS similarity with *Ph. angustius* AB278178 (CBS 249.95 T) (fide UAMH).
- 9164 sinus aspirate ex caucasian homosexual male, 44 yr with HIV infection Australia Mar 1993 /D. Muir AMMRL 148.02. Human/animal pathogen: dual infection caused by *Scytalidium dimidiatum* & *Phaeoacremonium parasiticum* (originally determined as *Lecytophora hoffmannii*) (Marriott et al., *J. Clin. Microbiol.* 35:2949-2952, 1997) // molecular systematics: >99% ITS similarity with *Ph. angustius* AB278178 (CBS 249.95 T) (fide UAMH).
- Phaeoacremonium griseorubrum* L. Mostert, Summerb. & Crous**
- 10573 (T *Phaeoacremonium griseorubrum*) ex human blood Baltimore, MD /CBS 111657 [=UTHSC 02-949 =CBS H-7954 (Holotype) =GenBank AY579227 =GenBank AY579294 =GenBank AY579277]. Molecular systematics: phaeohyphomycosis (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- Phaeoacremonium krajdenui* L. Mostert, Summerb. & Crous**
- 5723 clinical material /A. Espinel [=NCMH 184 =GenBank AY579266 =GenBank AY579329 =CBS 110365]. Molecular systematics: formerly treated under *Phialophora repens* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- 10045 biopsy tissue ex mass on right foot, female 72 yr, histology + Mobile, Alabama 2001 /CDC B-6091 [=GenBank AY579266 =GenBank AY579329 =CBS 110367 =CDC 2001-00-8325 =GenBank AY579268 =GenBank AY579331]. Human/animal pathogen: subcutaneous phaeohyphomycosis (Padhye et al., *J. Clin. Microbiol.* 36:2763-2765, 1998) // molecular systematics: formerly treated under *Phialophora inflatipes* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005) // mesophilic: NG @ 37C.
- 10046 white grain mycetoma, male 46 yr, histology + for white grains Belgaum, South India 2001 /CDC B-6093 [=GenBank AY579270 =GenBank AY579333 =CBS 110361 =CDC 2001-00-8993]. Human/animal pathogen: eumycetoma (Hemashettar BM et al, *J Clin Microbiol* 2006 (in press)) // molecular systematics: formerly treated under *Phialophora inflatipes* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- 10255 L foot ex male 64 yr Ont. 2002 /R. Rennie MY 8857 [=OMH SF09219-02].
- 10550 ex left palm, male 66 yr Toronto, Ont. 2005 /R. Rennie MY 2311 [=OMH FR 390]. Thermotolerant: grows @ 37 C.
- 10574 (T *Phaeoacremonium krajdenui*) ex human Toronto, Ont. /CBS 109479 [=OMH FR 60 =CBS H-7959 (Holotype) =GenBank AY579267 =GenBank AY579330]. Molecular systematics: *Phaeoacremonium* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- Phaeoacremonium parasiticum* (Ajello, Georg & C.J.K. Wang) W. Gams, Crous & M.J. Wingf. (syn. *Phialophora parasitica*)**
- 3629 (T *Phialophora parasitica*) subcutaneous lesion ex kidney transplant patient Stanford, California Georg & Wang Ajello /C.J.K. Wang [=ATCC 26366 =CBS 860.73 =CDC B-1335 =IMI 181115 =IMI 341971 =GenBank AY579253 =GenBank AF246803 =GenBank U31841]. Systematics/taxonomy: reevaluation of *Phialophora parasitica* (Crous et al., *Mycologia* 88:786-796, 1996) // molecular systematics: relationships among *Phialophora* species based on rDNA ITS (Yan et al., *Mycologia* 87:72-83, 1995); relationships among *Phaeoacremonium* species (Dupont et al., *Mycol. Res.* 102:631-637, 1998; Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- 5024 saw-dust *Salix* tree & by i/t passage through guinea pig Colonia Co., Uruguay /I. Conti 4041. Pigment: yellow-brown.
- 5053 foot abscess New York /I. Weitzman HD 337 [=CBS 513.82 =GenBank U31842]. Systematics/taxonomy: formerly treated under *Phialophora parasitica* (Crous et al., *Mycologia* 88:786-796, 1996) // molecular systematics: relationships among *Phialophora* species based on rDNA ITS (Yan et al., *Mycologia* 87:72-83, 1995); relationships among *Phaeoacremonium* species (Groenewald M, Kang J-C, Crous PW, Gams W, *Mycol Res* 105:651-657, 2001).
- 5054 synovial fluid human knee /I. Weitzman HD 873 [=ATCC 58205 =GenBank AY579240 =CBS 514.82 =GenBank AY579306]. Human/animal pathogen: subcutaneous (Kaell & Weitzman, *Am. J. Med.* 74:519-522, 1983) // systematics/taxonomy: different from other strains of *P. parasiticum* (Crous et al., *Mycologia* 88:786-796, 1996) // molecular systematics: relationships among *Phialophora* species based on rDNA ITS (Yan et al., *Mycologia* 87:72-83, 1995); relationships among *Phaeoacremonium* species (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).
- 9738 sinus tract ex left foot of Vietnamese immigrant; histopathology negative Melbourne, Australia /A. Woodgyer 9924738. Molecular systematics: >99% ITS similarity with *Ph. parasiticum* AB197980 (CBS 101007) (fide UAMH); 99% ITS similarity with *Ph. parasiticum* UAMH 3629 T.
- 10341 ex wound, foot, male 91 yr; isolated from 3 swabs; DE - & histopathology not done Surrey Memorial Hospital, B.C. 6-03 /R. Rennie MY 3783 [=BC CDC A3MR302]. Thermotolerant: grows @ 37 C (fide submitting laboratory) // molecular systematics: 100% ITS similarity in pair-wise comparison with CBS 101007 (AF197980); 99% ITS similarity with UAMH 3629 (ex-type).
- 10415 foot abscess, male 67 yr Vancouver, B.C. 01-04 /R. Rennie MY 662. Thermotolerant: grows well @ 35C // molecular systematics: BLAST match 100% ITS similarity to AF197980 (CBS 101007) (fide UAMH).
- Phaeoacremonium rubrigenum* W. Gams, Crous & M.J. Wingf.**
- 10575 (T *Phaeoacremonium rubrigenum*) male patient suffering from pneumonia National Institute of Health, Bethesda, MD /CBS 498.94 [=CBS H-5717 (holotype) =GenBank AY579238 =GenBank AY579288 =GenBank AF246802 =GenBank AF197988 =GenBank AB278174]. Molecular systematics: *Phaeoacremonium* (Mostert et al., *J. Clin. Microbiol.* 43:1752-1767, 2005).

***Phaeoacremonium* sp.**

- 5055 bronchial washing State of New York Dept. Health (M723) /I. Weitzman HD 307 [=ATCC 58206]. Systematics/taxonomy: formerly treated under *Phialophora parasitica* (Crous et al., Mycologia 88:786-796, 1996) // molecular systematics: relationships among *Phialophora* species based on rDNA ITS (Yan et al., Mycologia 87:72-83, 1995).
- 10541 ex ankle swab, male 75 yr St. Michael's Hospital, Toronto, Ont. 10-11-04 /R. Rennie MY 1081 [=OMH FR 1484]. Thermotolerant: grows @ 35 C, NG @ 42 C (fide submitting laboratory).

***Phaeoacremonium tardicrescens* L. Mostert, Summerb. & Crous**

- 10576 (T *Phaeoacremonium tardicrescens*) ex human Dallas, TX /CBS 110573 [=CBS H-7953 (Holotype) =UTHSC 00-14 =GenBank AY579233 =GenBank AY579300 =GenBank AY579283]. Molecular systematics: *Phaeoacremonium* (Mostert et al., J. Clin. Microbiol. 43:1752-1767, 2005).

***Phaeoacremonium venezuelense* L. Mostert, Summerb. & Crous**

- 4034 (T *Phaeoacremonium venezuelense*) mycetoma foot Venezuela /L.A. Yarzabal [=CBS 651.85 =ATCC 32628 =GenBank AY579320 =GenBank AY579256 =CBS H-7957 (Holotype)]. Human/animal pathogen: mycetoma // systematics/taxonomy: formerly treated under *Phialophora parasitica* (Crous et al., Mycologia 88:786-796, 1996) // molecular systematics: formerly treated under *Phialophora parasitica* (Mostert et al., J. Clin. Microbiol. 43:1752-1767, 2005).
- 10256 R ankle human 40 yr Ont. 2002 /R. Rennie MY 8856 [=GenBank AY579255 =GenBank AY579319 =OMH SF09587-02]. Molecular systematics: relationships among *Phaeoacremonium* species (Mostert et al., J. Clin. Microbiol. 43:1752-1767, 2005).

Phaeoannellomyces werneckii* see *Hortaea werneckii***Phaeocalicium polyporaeum* (Nyl.) Tibell**

- 5625 ex pileus of *Hirschioporus parmagenus* Mt. Toby Forest Reserve, Franklin Co., Mass. L. Hutchison 10 Aug 1986 /L. Hutchison LH-14-86 [=TRTC LH-14-86].

***Phaeocalicium populneum* (Brond. ex Duby) Alb. Schmidt**

- 11093 single ascospore from ascoma on branch of *Populus balsamifera* (balsam poplar) Ogilvie Ridge, Edmonton, Alta. A. Tsuneda 14-Mar-2009 /A. Tsuneda.
- 11094 single ascospore from ascoma on branch of *Populus tremuloides* (trembling aspen) Ogilvie Ridge, Edmonton, Alta. A. Tsuneda 29-Mar-2009 /A. Tsuneda.

***Phaeococcomyces catenatus* (de Hoog &**

- Hermanides-Nijhof) de Hoog (syn. *Phaeococcus catenatus*)
- 2901 air contaminant Edmonton, Alta. A. Padhye 1968 /A. Padhye.
- 4357 (T *Phaeococcomyces catenatus*) air Switzerland /CBS 650.76 [=NCMH 1942 =ATCC 42183 =CBS 650.76 =GenBank AF050277]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: Herpotrichiellaceae (Untereiner & Naveau, Mycologia 91:67-83, 1999).
- 4533 ex rock with lichen (*Xanthoria elegans*) Deem Hills, Phoenix, Arizona L. Linarez Mar 1982 /F. Palmer.

Phaeococcomyces exophialae* see *Exophiala exophialae***Phaeococcomyces nigricans* (Rich & Stern) de Hoog (syn. *Phaeococcus nigricans*)**

- 4084 (T *Phaeococcomyces nigricans*) ex paint of storage tank

U.S.A. /CDC B-2920 [=CBS 652.76 =NRRL Y-2459 =ATCC 13285 =GenBank AF050278]. Molecular systematics: ITS sequence comparison (Ujihof, Mycol. Res. 100:1265-1271, 1996); Herpotrichiellaceae (Untereiner & Naveau, Mycologia 91:67-83, 1999).

- 4123 contaminant ex UAMH 1253 Edmonton, Alta. L. Sigler 17 May 1978 /L. Sigler.
- 4297 ex gall *Endocronartium harknessii* on *Pinus contorta* Jasper Alta. L. Sigler 1980 /A. Tsuneda.
- 4345 rectum of barnacle /CBS 651.76. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989).
- 5861 contaminant ex UAMH 5816 UAMH A. Flis Sep 1987 /A. Flis.
- 6036 decaying lobe *Opuntia* sp. Cache Creek, B.C. J. & R. Summerbell Apr 1987 /R.C. Summerbell S4.
- 7450 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-2-2a) 28 Sep 1990 /L. Hutchison NOF 1589. Culture conditions: physiological reactions (Hutchison & Hiratsuka, Mycologia 86:386-391, 1994).
- 7509 scalp, male St. Louis, MO 1993 /M.G. Rinaldi UTHSC 93-1775.
- 8770 lung tissue ex patient with interstitial lung disease USA 1996 /M.G. Rinaldi UTHSC 96-1407.

Phaeococcus catenatus* see *Phaeococcomyces catenatus***Phaeococcus nigricans* see *Phaeococcomyces nigricans******Phaeoisaria clematidis* (Fuckel) Hughes**

- 3167 litter under *Quercus* Claremont, Calif. J.W. Carmichael 1969 /J.W. Carmichael.

***Phaeoisaria curvata* De Hoog & Papendorf**

- 8522 crumbly nail, male 60 yr, DE- Vegreville, Alta. Apr 1996 /R. Rennie MY 750 LT [=CBS 100452].

***Phaeolus schweinitzii* (Fries) Pat.**

- 8137 *Pinus strobus* Ontario J. Faull Sep 1927 /S. Davies FC-166 [=NOF 44]. Biodeteriogen/biodegradation: brown rot.

***Phaeomollisia piceae* T.N. Sieber & C.R. Gruenig (morph *Cadophora*-like, *Phialocephala*-like)**

- 10851 (T *Phaeomollisia piceae*) needle, *Picea abies* Creux du Van, Switzerland (C) V. Queloz 31-May-05 /C. Gruenig CdV 2 2.4b [=CBS 124638 =GenBank EU434836 ITS =GenBank EU434866 SSU]. Culture conditions: produced teleomorph and anamorph; produced teleomorph and anamorph in original cultures (fide C. Gruenig); no ascospores produced in subcultures (fide UAMH) // biodiversity: Form taxon *Phialocephala* sp. 35 (Menkis A, Allmer J, Vasiliauskas R, Lygis V, Stenlid J, Finlay R, Mycological Research 108:965-973, 2004); molecular characterization of dark septate endophytes (DSE) (Menkis A, Allmer J, Vasiliauskas R, Lygis V, Stenlid J, Finlay R, Mycological Research 108:965-973, 2004) // molecular systematics: phylogeny of *Phaeomollisia piceae* a conifer-needle endophyte and relationships to *Phialocephala* and *Acephala* (Grunig CR, Queloz V, Duo A, Sieber TN. Mycological Research 113:207-221, 2009).

Phaeosclera* an. *Cylindrocarpon cyanescens* see *Cylindrocarpon cyanescens***Phaeosclera dematioides* Sigler, Tsuneda & Carmichael**

- 4251 pith ex *Pinus contorta* Alberta R.J. Bourchier 19 May 1957 /A. Tsuneda NFRC C-430.
- 4265 (T *Phaeosclera dematioides*) pith ex *Pinus contorta* Strachan Alta. R.J. Bourchier 19 May 1957 /A. Tsuneda NFRC C-428 [=GenBank EU981288 LSU =GenBank Y11716 SSU =GenBank AJ244254 ITS =IMI 254605 =DAOM 178455

- =CBS 157.81 =ATCC 44386].
- 4816 submucosa of anterior nasal cavity, cow Australia /M. McGinnis NCMH 1711. Human/animal pathogen: phaeohyphomycosis (McKenzie & Connole, Aust. Vet. J. 53:268-270, 1977).
- 4817 submucosa of anterior nasal cavity, cow Australia /M. McGinnis NCMH 1712. Human/animal pathogen: phaeohyphomycosis (McKenzie & Connole, Aust. Vet. J. 53:268-270, 1977).
- 5849 skin nodule, male Arizona M. Fried 1987 /M. Fried 4015. Cycloheximide: resistant // pigment: brown // culture conditions: dry and wet colony types.
- 6566 pleural fluid ex AIDS patient Morgantown, W. Virginia /CDC B-4369.
- 6597 foot Germany /CDC B-4370 [=UAMH 6254]. Human/animal pathogen: phaeohyphomycosis (Krempel-Lamprecht & al., Mykosen 30:454-467, 1987; Krempel-Lamprecht, Pilzdialog 3:37-38, 1987) // pigment: purple/brown; pink PDA.

Phaeosphaeria nodorum (E. Müll.) Hedjar. (morph *Stagonospora nodorum*)

- 4492 wheat leaves U of Alberta Farm, Edmonton /J. Williams leaf 3C. Molecular systematics: BLAST match 100% ITS similarity with *Phaeosphaeria nodorum* (fide UAMH).
- 10605 aspirate ex antral sinus, female 49 yr, DE negative Mount Sinai Hospital, Toronto, ON (MRN 456923358) 20-Jun-2005 /R. Rennie MY 6746 [=OMH FR 775 =MRN 456923358]. Benomyl: slightly sensitive // pigment: yellow/brown // culture conditions: degenerate, not sporulating when received // molecular systematics: BLAST match 99% ITS similarity with *Phaeosphaeria nodorum* (fide UAMH) // mesophilic: grows @ 30 C but more slowly @ 35 C.

***Phaeosphaeria* sp.**

- 11186 growth on keratin extracted from wool by a reduction method leaving keratin in a sponge form USDA-ARS Eastern Regional Center, Wyndmoor, PA J. Cardamone 2009 /J. Cardamone NRRL 58761 [=NRRL 58761]. Molecular systematics: Blast match 99% ITS similarity to FN386274 *Leptosphaeria microscopica* (fide UAMH 2010); Blast match 90% ITS similarity to U04234 *Leptosphaeria microscopica* (as ATCC 426352 but may be based on ATCC 38151).

Phaeosphaeria typhae (Karsten) Shoemaker & Babcock

- 10284 old *Typha latifolia* leaves Elk Island National Park, Alta. M. Schulz (MS-5) June 2001 /R.S. Currah MS-5 [=DAOM 231302]. Culture conditions: non sporulating on deposit; gelatinolytic, cellulolytic, lignolytic, utilizes starch and tannic acid (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005) // biodeteriogen/biodegradation.

Phaeotheca fissurella Sigler, Tsuneda & Carmichael

- 4245 (T *Phaeotheca fissurella*) ex canker *Cronartium cladosporioides* Banff, Alta. J. Petty Sep 1979 /A. Tsuneda NFRC C-722 [=GenBank EU981289 LSU =GenBank Y18697 SSU =GenBank AJ244255 ITS =ATCC 44385 =CBS 158.81 =CBS 520.89 =DAOM 178454 =IMI 254604]. Psychrophilic: opt. 18C // systematics/taxonomy: production of endoconidia (Tsuneda, Hambleton & Currah, Mycologia 96:1136-1142, 2004) // biodiversity: endoconidial black meristematic fungus (BMF).
- 4487 contaminant ex UAMH 4469 L. Sigler 30 Nov 1981 /; .

***Phaeotheca* sp.**

- 6670 soil sand dune, New Valley Region, Western Desert, Egypt J. Mouchacca 1974 /J. Mouchacca.

Phaeotheca triangularis de Hoog & Beguin

- 8915 (T *Phaeotheca triangularis*) humidifier of air-conditioning

system Brussels, Belgium H. Beguin Mar 1990 /CBS 471.90 [=GenBank EU019279 LSU =GenBank AJ244256 ITS].

Phaeotrichum hystricinum Cain & Barr

- 6361 porcupine dung St. Nora Lake, Sherborne Twp, Haliburton Co., Ont. D. Malloch (C) Sep 1987 /L. Hutchison.
- 11467 swab ex skin of living female little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 58 C.1. Biodiversity: mycobiota of bat caves.
- 11507 swab ex fur of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 51 C.1. Culture conditions: infertile ascomata produced; grows better @ 22C than @ 18C (fide UAMH 2011) // biodiversity: mycobiota of bat caves.

Phanerochaete chrysosporium Burds. (morph *Sporotrichum pruinosum*)

- 40 textile Canal Zone /Farlow Herb 578 [=QM 678].
- 693 tent New Guinea W.L. White 1945 /E. Simmons QM 774.
- 810 (T *Sporotrichum pruinosum*) soil Iowa, USA J. Elphick /CBS 129.27 [=IMI 74692 =ATCC 1727 =IFO 7586 =IMI 074692 =MUCL 9852 =QM 1242].
- 884 photographic film University of Pennsylvania W.G. Mutchison Jul-1946 /E. Simmons QM 168 [=QM 168].
- 885 burlap Philadelphia QM Depot May 1947 /E. Simmons QM 244.
- 887 raincoat New Guinea 1 Dec 1944 /E. Simmons QM 591 [=Harvard 256].
- 888 shoes New Guinea Dec 1944 /E. Simmons QM 593 [=Harvard 260].
- 889 head band, army hat Papua, New Guinea W.L. White Nov 1945 /E. Simmons QM 826 [=IMI 110120 =ATCC 24782 =QM 826 =VKM F-3556]. Beta-D-1,3-glucanase & beta-1,4-glucanase. Biodeteriogen/biodegradation: lignocellulose degradation.
- 2549 subcutaneous lesion Upper Volta, Africa /C.W. Emmons B2590 [=ATCC 16498].
- 2810 (T *Emmonsia ciferrina*) soil Pimpri, Poona, India A. Padhye /Hindustan Antibiotics Cult. Col. 138 [=GenBank AB361645 ITS =CBS 363.65 =IFM 47494 =ATCC 16107 =IMI 113156 =HACC 150 =GenBank AB359433 LSU].
- 2811 sputum ex patient Poona, India A. Padhye /A. Padhye 16A.
- 2812 contaminant ex culture *Malbranchea sulfurea* Delhi, India R. Maheshwari 9 Sep 1967 /K.E. Mukerji.
- 3005 L. Carneiro 1798 SA6.
- 3259 decaying leaves ex *Shorea robusta* Gorakhpur, U.P., India /IMI 137990.
- 3260 decaying leaves ex *Shorea robusta* Gorakhpur, U.P., India /IMI 137991.
- 3262 spruce & pine Forest Prod. Lab. Vancouver B.C. /A. Ofosu-Asiedu A.
- 3263 spruce & pine Forest Prod. Lab. Vancouver B.C. /A. Ofosu-Asiedu B.
- 3641 wood chip ex Southern Pine Fargo, GA Dec 1960 /W.E. Eslyn ME 461 [=GenBank HV516235]. Lignin peroxidase (LiP). Biodeteriogen/biodegradation: white rot; low biodegradation of polychlorinated biphenyl congeners (Beaudette et al., Appl. Env. Microbiol. 64:2020-2025, 1998) // application: enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999); pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhal R, Chemosphere 77:687-692, 2009); evaluation of white rot fungi for bioremediation of waste water (Robles-Vargas D, Montoya-Castillo SM, Avelar-Gonzalez FJ, et al, J Environ Sci Health A Tox Hazard Subst Environ Eng 47:589-597, 2012); ancestral amino acid substitution to improve thermal stability of recombinant ligninperoxidase from UAMH 3641. (Semba Y, Ishida M, Yokoboi SI, Yamagishi A, Protein Eng

- Des Sel 2015 Apr 8 [Epub]; lignin peroxidase mutant patent (Mitsuzawa S, Yamagishi A, Ishida M, Onodera M, Patent: JP 2011188771-A 1/A-4 29-SEP-2011).
- 3642 (T *Phanerochaete chrysosporium*) deadwood ex *Platanus wrightii*, Arizona sycamore (*P. fremontii*) Sonoran Desert, Cochise Co. H. Burdsall 25 Aug 1971 /W.E. Eslin HHB 6251. Veratryl alcohol during lignin degradation (Arch. Microbiol. 129:321-324, 1981). Biodeteriogen/biodegradation: delignification of unbleached kraft pulp (Biotechnol. Lett. 1:347-352, 1979); white rot; low biodegradation of polychlorinated biphenyl congeners (Beaudette et al., Appl. Environ. Microbiol. 64:2020-2025, 1998) // cellulolytic // thermotolerant: grows @ 37C // application: enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999).
- 3658 great millet grains /B.S. Mehrotra B.
- 4521 (T *Sporotrichum pulverulentum*) grape fruit & petiole (*Vitis vinifera*) A.U.C of Micro-Org., Alma-Ata, Kazakstan, USSR T.I. Novobranova 1968 /H. Burdsall VKM-F-1767 [=IMI 174727 =ATCC 24725 =CBS 481.73 =QM 9998 =NRRL 6361 =CCRC 36200 =GenBank L18991 =MUCL 19343 =VTT D-85242 =VKM-F-1767 =VTT D-86270 =CECT 2798 =LCP 87.3505 =BKM-F-1767 (in literature)]. Ligninase and peroxidase (J. Biotechnol. 2: 379-382, 1985); lignin peroxidase and manganese peroxidase (FEMS Microbiol. Rev. 13: 125-135, 1994); glyoxal oxidase (J. Bacteriol. 169: 2195-2201, 1987; Proc. Natl. Acad. Sci. USA 87: 2936-2940, 1990); lignin peroxidase (Bio-Technology 6:571-573, 1988; Enzyme Microb. Technol. 11: 322-328, 1989; Arch. Biochem. Biophys. 279: 158-166, 1990; Acta Biotechnol. 12: 191-201, 1992; Appl Environ Microbiol 59:1919-1926, 1993); extracellular peroxidase (FEMS Microbiol. Lett. 29: 37-41, 1985; J. Biol. Chem. 262: 419-424, 1987); n-(chlorophenyl)-succinimides (Pestic. Biochem. Physiol. 27: 173-181, 1987); nADH:quinone oxidoreductase (J. Gen. Microbiol. 137: 2209-2214, 1991); aryl-alcohol dehydrogenase (Eur. J. Biochem. 195: 369-375, 1991); xylanase (Appl. Environ. Microbiol. 58: 3466-3471, 1992); cellobiose:quinone oxidoreductase (Biochim. Biophys. Acta 1119: 90-96, 1992); coal-solubilizing agents (Biodegradation 5: 55-62, 1994). Biodeteriogen/biodegradation: pine and straw alkali lignins (Eur. J. Appl. Microbiol. Biotechnol. 14: 174-181, 1982); lignin (FEMS Microbiol. Lett. 29: 37-41, 1985; Appl. Environ. Microbiol. 60: 4509-4516, 1994); pulp and paper-mill wastewater (Biotechnol. Lett. 12: 869-872, 1990; J. Biotechnol. 24: 267-275, 1992); olive-mill wastewater (Appl. Microbiol. Biotechnol. 37: 813-817, 1992); fluorene in soil (Biotechnol. Bioeng. 33: 1306-1310, 1989); veratryl alcohol and its methyl ether by lignin peroxidase (Biochemistry 28: 1776-1783, 1989); o-chlorophenol (Water Res. 24: 75-82, 1990; Hazard., Waste & Hazard. Mater. 9: 213-229, 1992); pentachlorophenol (Biotechnol. Bioeng. 35:1125-1134, 1990; Appl. Environ. Microbiol. 54: 2885-2889, 1988); 2,4,6-trichlorophenol (Appl. Environ. Microbiol. 60: 1711-1718, 1994; Biotechnol. Bioeng. 46: 599-609, 1995); 2,4,5-trichlorophenol (Biotechnol. Bioeng. 46: 599-609, 1995); 2,4,5-trichlorophenoxyacetic acid (Appl. Microbiol. Biotechnol. 31: 302-307, 1989); lindane (Pestic. Sci. 47: 51-59, 1996); aldrin, chlordane, dieldrin, heptachlor, lindane, and mirex (Appl. Environ. Microbiol. 56:2347-2353, 1990); DDT (Appl. Environ. Microbiol. 53: 2001-2008, 1987); Acid Yellow 9 and other azo dyes (Appl. Environ. Microbiol. 58:3605-3613, 1992); Amaranth, Azure B, and Orange G (World J. Microbiol. Biotechnol. 10: 556-559, 1994); azo dyes (World J. Microbiol. Biotechnol. 8: 309-312, 1992; Appl. Environ. Microbiol. 58: 3598-3604, 1992); sulfanilic acid (Appl. Environ. Microbiol. 58: 3598-3604, 1992); phenanthrene and other polycyclic aromatic hydrocarbons (Appl. Environ. Microbiol. 55: 154-158, 1989; Appl. Environ. Microbiol. 58:3000-3006, 1992); benzene, ethylbenzene, toluene and xylene (Appl. Environ. Microbiol. 59: 756-762, 1993); Azure B, Congo Red, Tropaeolin O, and Orange II (Appl. Environ. Microbiol. 56: 1114-1118, 1990); trinitrotoluene. TNT (Appl. Environ. Microbiol. 56: 1666-1671, 1990; Curr. Microbiol. 28: 185-190, 1994; Appl. Biochem. Biotechnol. 34/35: 709-723, 1992); cyclotrimethylene trinitramine (=RDX) (Appl. Biochem. Biotechnol. 34/35: 709-723, 1992); biphenyl and polychlorinated biphenyls (Biotechnol. Bioeng. 40: 1395-1402, 1992); Rose Bengal (Lett. Appl. Microbiol. 14: 58-60, 1992); DDE (=1,1-dichloro-2,2-bis(4-chlorophenyl)ethene) (Mycol. Res. 97:95-98, 1993; FEMS Microbiol. Lett. 94: 209-216, 1992); 3,4-dichloroaniline and benzo(a)pyrene (Soil Biol. Biochem. 25:279-287, 1993); atrazine (Soil Biol. Biochem. 26: 1665-1671, 1994; Appl. Environ. Microbiol. 60: 705-708, 1994); creosote (Appl. Environ. Microbiol. 61: 2631-2635, 1995); cellobiohydrolase genes (Curr. Genet. 22: 407-413, 1992); white rot; low biodegradation and mineralization of polychlorinated biphenyl congeners (Beaudette et al., Appl. Environ. Microbiol. 64:2020-2025, 1998); evaluation of surfactants in stimulating degradation of polychlorinated biphenyl congeners (Beaudette et al., Letters in Appl. Microbiol. 30:155-160, 2000); treatment of methane and swine slurry by biofiltration (Girard M, Viens P, Ramirez AA, Brzezinski R, Buelna G, Heitz M, J Chem Technol Biotechnol 87:697-704, 2012) // application: Decolorization of textile-industry wastewater (Biotechnol. Lett. 17: 761-764, 1995); ligninolytic enzymes (Pickard et al., Can. J. Microbiol. 45:627-631, 1999); metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999); oxidation of dibenzyl sulfide to dibenzyl sulfoxide (van Hamme JD, Wong ET, Dettman H, Gray MR, Pickard MA, Appl. Env. Microbiol. 69:1320-1324, 2003) // benomyl: resistant (Environ. Sci. Technol. 25: 1329-1333, 1991) // culture conditions: UV (Environ. Sci. Technol. 25: 1329-1333, 1991) // molecular systematics: glyoxal oxidase cDNA (Proc. Natl. Acad. Sci. USA 90: 7411-7413, 1993); Concordia Univ Fungal Genomics Project (<https://fungalggenomics.concordia.ca/fungi/Pchr.php>); identification of fungal enzymes for industrial and environmental applications (<https://fungalggenomics.concordia.ca/home/index.php>) // thermotolerant.
- 5597 tissue ex upper lobe of lung Gaston, N.C. /M. McGinnis NCMH 2731. Thermotolerant: grows @ 42C.
- 6721 sputum, immunocompromised male (AIDS) 31 yr 1990 /M. Kemna M714-90. Thermophilic: growth @ 45C.
- 6733 soil D. Dixon /D. Dixon DMD 7a-87. Thermotolerant: grows @ 45C // cellulolytic.
- 8127 white rot /S. Davies FC-012.
- 9521 sputum, male 77 yr who died of pneumonia Quebec G. St-Germain 1999 /G. St-Germain MY-52975. Thermotolerant: Grows well @ 37C (40 mm in 24 hr) // cycloheximide: sensitive // benomyl: resistant.
- 9678 bronchial wash, male Wisconsin State Laboratory of Wisconsin 1999 /M.G. Rinaldi UTHSC 99-1554. Benomyl: resistant // cycloheximide: sensitive // thermotolerant: grows well @ 37C.
- 10119 gut, coffee berry borer (*Hypothenemus hampei*) Finca La Alianza, Chiapas, Mexico J. Perez 18 Mar 2001 /F. Vega AL-TD R45-9. Thermotolerant: grows well @ 35C.
- 10715 ex lung biopsy, histopathology negative Johns Hopkins University School of Medicine, Baltimore, MD /S.S. Magill 6C4195. Thermotolerant: grows better @ 35C than @ 30C.
- Phanerochaete gigantea*** (Fries: Fries) Rattan, Abdullah & Ismail
7376 ex *Pinus contorta* Alberta R. Bourchier 25 Jun 1954 /L. Hutchison NOF 131. Pigment: brown // mesophilic: NG @

- 37C.
7377 ex Pinus contorta Alberta W. Blythe 24 Jun 1954 /L. Hutchison NOF 202. Pigment: brown // mesophilic: NG @ 37C.
- Phanerochaete sordida** (P. Karst.) J. Erikss. & Ryvarde
11615 ex sputum, male, 59 yr Alberta /R. Rennie MY 8487. Molecular systematics: Blast match 97-99% ITS similarity with *Phanerochaete sordida* isolates, but sequence diversity in Genbank suggests species complex (fide UAMH 2012) // benomyl: resistant (fide UAH) // cycloheximide: sensitive (MYC) (fide UAH) // thermotolerant: grows @ 35 C (fide UAH) // culture conditions: produces chlamydoconidia (fide UAMH 2011); Blast probe - (fide UAH 2011).
- Phellinus igniarius** (L.:Fr.) Quel. (syn. *Fomes igniarius*)
8178 Alberta L.L. Kennedy /S. Davies FC-052. Biodeteriogen/biodegradation: white rot // pigment: brown.
- Phellinus pini** (Thore.:Fr.) Ames (syn. *Fomes pini*)
8176 Alberta L.L. Kennedy (T-546) /S. Davies FC-059 [=GenBank AY089744 ITS]. Biodeteriogen/biodegradation: white rot.
8177 *Picea glauca* (white spruce) British Columbia Sep 1945 /S. Davies FC-170 [=NOF 9]. Biodeteriogen/biodegradation: white rot.
8229 P. Chakravarty NOF 2322.
- Phellinus robustus** (Karsten) Bourd. & Galz. (syn. *Fomes robustus*)
8175 *Quercus pedunculata* (oak) USSR J. Westerdijk /S. Davies FC-167 [=NOF 139]. Biodeteriogen/biodegradation: white rot.
- Phellinus sp.**
11742 ex percutaneous aspirate of paravertebral mass post surgery, male 11 yr, with chronic granulomatous disease (CGD); isolated multiple times Clinical Center, National Institutes of Health, Bethesda, MD A. M. Zelazny 31-May-2013 /A. M. Zelazny NIH 73-053113 [=UTHSC D113-195]. Human/animal pathogen: paravertebral abscess in patient with chronic granulomatous disease (De Ravin SS, Parta M, Sutton DA, Wickes BL, Thompson EH, Wiederhold NP, Nakasone KK, et al, J Clin Microbiol Epub May 14, 2014) // molecular systematics: phylogenetic comparison with reference strains suggests closest relationship to *Phellinus umbrinellus* (De Ravin SS et al 2014).
- Phellinus tremulae** (Bond.) Bond. & Borison
7005 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. C. Myrholm 6 Jul 1989 /L. Hutchison NOF 1464. Tremulanes (sesquiterpenes) (Ayer & Cruz, J. Organic Chem. 58:7529-7534, 1993; Ayer, Can. J. Chem. 73:465-470, 1995); 2-carbomethoxyoxepin: 1-carbomethoxybenzene 1,2-oxide (Ayer & Cruz, Tetrahedron Letters 34:1589-1592, 1993); methylates benzoic acid and transforms to methyl salicylate (oil of wintergreen) (Ayer, Can. J. Chem. 73:465-470, 1995); benzoic acid, salicylic acid and role of black galls on aspen (Pausler et al., Can. J. For. Res. 25:1479-1483, 1995). Pigment: brown // culture conditions: inhibited by *Peniophora polytonia* (UAMH 7006) (Chakravarty & Hiratsuka, Eur. J. For. Path. 22:354-361, 1992; Trifonov & al, Eur. J. For. Path. 22:441-448, 1992).
- Phellinus tropicalis* see *Inonotus tropicalis*
- Phellinus weirii** (Murr.) Gilbn. (syn. *Poria weirii*)
8190 *Pseudotsuga menziesii* (Douglas fir) Oregon Childs /S. Davies FC-183 [=NOF 610]. Biodeteriogen/biodegradation: white rot // pigment: brown.
- Phialemonium curvatum** W. Gams & McGinnis
4963 (T *Phialemonium curvatum*) ex human Cincinnati, OH J. Schwarz 1963 /M. McGinnis NCMH 1603 [=CBS 490.82 =CDC 45-294-63]. Molecular systematics: PCR-RFLP analysis.
7266 ex knee fluid, female 72 yr Quebec City, Que. G. St.-Germain /G. St.-Germain MY 3907. Molecular systematics: >99% ITS similarity with *Phialemonium curvatum* AB278180 (CBS 490.82 T) (fide UAMH).
7451 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-2-1b) 28 Sep 1990 /L. Hutchison NOF 1545.
10177 twice from blood culture, post-dialysis sepsis, male diabetic, 69 yr West Suburban Hospital, Oak Park, IL Susan Vanek W 49875 /P. Kammeyer H50198 [=UTHSC 01-1959 =W49875 =UTHSC 02-127]. Human/animal pathogen: hemodialysis-associated endovascular infection (Proia, Hayden, Kammeyer et al., Clin. Inf. Dis. 39:373-379, 2004).
10178 blood culture, male 35 yr post renal transplant; now deceased Rush Presbyterian St. Luke's Medical Center, Chicago, IL M. Hayden /P. Kammeyer T 54423 [=CBS 110656 =GenBank AY464126 =UTHSC 01-1853 =Rush-01-223-0835]. Human/animal pathogen: hemodialysis-associated endovascular infection (Proia, Hayden, Kammeyer et al., Clin. Inf. Dis. 39:373-379, 2004).
10495 vitreous fluid ex eye, pre-enucleation Petach Tikva, Israel /M.G. Rinaldi R-3447 [=UAMH 10496 =GenBank AY818323 ITS =GenBank FR745927 D1D2]. Thermotolerant: grows @ 35 C // human/animal pathogen: endogenous endophthalmitis (Weinberger M, Mahrshak I, Keller N, Goldscmidt RA, et al, Med Mycol 44:253-2539, 2006.) // molecular systematics: characterization of *Phialemonium* and *Lecythophora* (Perdomo H, Sutton DA, García D, Fothergill AW, Gené J, Cano J, Summerbell RC, Rinaldi MG, Guarro J, J Clin Microbiol 49:1209-16, 2011).
10496 vitreous fluid ex eye, post-enucleation; 1 year later; same patient as 10495 Petach Tikva, Israel /M.G. Rinaldi R-3448 [=UAMH 10495 =GenBank AY818324 ITS]. Human/animal pathogen: endogenous endophthalmitis (Weinberger M, Mahrshak I, Keller N, Goldscmidt RA, et al, Med Mycol 44:253-2539, 2006.).
10825 ex pleural fluid (isolated 3 times), 2 year old male poodle Texas A&M College of Veterinary Medicine, College Park, TX M. Libel 27 Oct 2006 /D.A. Sutton UTHSC 06-4324 [=UTHSC R-3884 =GenBank EU035984 ITS =GenBank EU035985 LSU =GenBank FR691981 D1D2]. Human/animal pathogen: disseminated infection in canine (Sutton DA, Wickes BL, Thompson EH, Rinaldi MG, Roland RM, Libal MC, Russell K, Med Mycol 46:355-359, 2008) // molecular systematics: characterization of *Phialemonium* and *Lecythophora* (Perdomo H, Sutton DA, García D, Fothergill AW, Gené J, Cano J, Summerbell RC, Rinaldi MG, Guarro J, J Clin Microbiol 49:1209-16, 2011).
- Phialemonium dimorphosporum** W. Gams & W.B. Cooke
1201 soft rot of cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
2456 blood ex post mortem Edmonton, Alta. J.W. Carmichael 12 Apr 1965 /J.W. Carmichael.
2526 contaminant ex dried spore mass Tippetts 1965 /G.F. Orr.
2709 bovine stomach Edmonton, Alta. J.W. Carmichael 1967 /G.A. Chalmers.
4937 galleries mountain pine beetle Waterton, Alta. /P. Muruyama NFRC C-857.
4964 (T *Phialemonium dimorphosporum*) soil Chaparral area Mt. Shasta Calif. W.B. (S4-22-12) Cooke 1964 /M. McGinnis NCMH 1605 [=GenBank AJ012298 (ITS) =CBS 491.82 =EMBL AJ 012298]. Molecular systematics: PCR-RFLP and ITS sequence analysis (Guarro et al., J Clin Microbiol 37:2493-2497, 1999).

9672 synovial fluid, male 42 yr Quebec G. St-Germain 1999 /G. St-Germain MY 53771. Pigment: yellow to tan.

Phialemonium obovatum W. Gams & McGinnis

- 4962 (T *Phialemonium obovatum*) spleen at autopsy ex 5 mo old child with thermal burn Charleston N.C. 1975 /M. McGinnis NCMH 20 [=CBS 279.76 =GenBank AB278187 ITS].
- 9839 subcutaneous lesion in dog USA A.A. Padhye /CBS 400.83 [=CDC 83-026849 =GenBank AB278189 ITS]. Pigment: green.
- 9840 mycetoma in dog South Africa D.B. Scott (M7273) /CBS 116.74 [=GenBank AB278186 ITS].

***Phialemonium* sp.**

- 7561 ex soft nodule excised from anterior of knee, female 30 yr with lupus, on prednisone; DE+; isolated twice Montreal, Que. G. St-Germain 28 May 1993 /G. St-Germain LSPQ 284 [=UAMH 7562]. Pigment: black // molecular systematics: BLAST match 94-96% ITS similarity with *Phialemonium dimorphosporum* & *P. curvatum* (fide UAMH) // human/animal pathogen: subcutaneous infection // thermotolerant: growth strongly inhibited @ 35 C.
- 7562 ex soft nodule excised from anterior of knee, female 30 yr with lupus, on prednisone; DE+; repeat isolate Montreal, Que. G. St-Germain Dec 1993 /G. St-Germain LSPQ 299 [=UAMH 7561]. Pigment: black // human/animal pathogen: subcutaneous infection.
- 10399 sinus, sinusitis 2003 /M.G. Rinaldi UTHSC 03-3661. Molecular systematics: Determined as *Phialemonium* sp. 2 based on LSU rDNA sequence analysis (Perdomo H, Sutton DA, García D, Fothergill AW, Gené J, Cano J, Summerbell RC, Rinaldi MG, Guarro J, J Clin Microbiol 49:1209-16, 2011).

Phialocephala botulispora (Cole & Kendrick) C.R. Grunig & T.N. Sieber (syn. *Phialophora botulispora*)

- 4522 centre spruce log Alberta L. Kennedy (SYLIC-RBA) 1982 /L. Kennedy. Molecular systematics: relationships among *Phialocephala* species (Grunig CR, Queloz V, Duo A, Sieber TN. Mycological Research 113:207-221, 2009) // biodiversity: spruce wood.

Phialocephala compacta T. Kowalski & Kehr

- 11051 (T *Phialocephala compacta*) ex bark of a living, 3 cm thick branch of *Alnus glutinosa* (European alder) near Braunschweig, Germany T. Kowalski (AI 28a) 8-Aug-1990 /CBS 507.94 [=IMI 363203 (Holotype) =GenBank AF486125 ITS =GenBank AF326072 =GenBank AF326083 =GenBank EU434869]. Culture conditions: sporulates in dark on MEA especially at 4C (fide Kowalski & Kehr) // biodiversity: bark endophyte of *Alnus glutinosa* (Kowalski, T., Kehr, R.D., Can J Bot 73:26-32, 1995; Kowalski, T., Kehr, R.D., Sydowia, 44: 137-168, 1992) // molecular systematics: phylogeny of *Phialocephala* (Grunig CR, Sieber TN, Rogers SO, Holdenrieder O, Can J Bot 80:1239-1249, 2002; Jacobs A, Coetzee MPA, Wingfield BD, Jacobs K, Wingfield MJ, Mycologia 95:637-645, 2003; Grunig CR, Queloz V, Duo A, Sieber TN. Mycological Research 113:207-221, 2009).

Phialocephala dimorphospora Kendrick

- 7527 ex slime in pulp mill New Brunswick, Canada W.B. Kendrick /CBS 300.62 [=DAOM 87232 =GenBank AF081434 =GenBank AF486121]. Pigment: black // molecular systematics: diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999).
- 8326 pediatric isolator, patient on chemotherapy Winnipeg, MN U. of Manitoba Health Sciences Centre (13287) Sep 1994 /R. Rennie MY 3291.

Phialocephala europaea C.R. Guenig & T.N. Sieber

- 10856 ex fine root *Picea abies* (Norway spruce) Zürichberg, Switzerland C.R. Grünig 01-May-02 /C. Gruenig 3 171 5 [=GenBank DQ013019 B-tubulin =GenBank DQ013033 EF1-alpha =GenBank DQ013073 pPF-018 =GenBank DQ013121 pPF-076 =GenBank DQ013099 pPF-061 =CBS 119271 =GenBank AY347399 ITS]. Molecular systematics: Form taxon cryptic species CSP3 (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); Population biology of endophyte *Phialocephala fortinii* (Gruenig CR, Ph.D. thesis, Swiss Federal Inst Technol, Zurich, 2004); Population genetic analysis of the *Phialocephala fortinii* complex; dark septate endophyte (DSE).
- 11659 ex fine root of *Picea abies* (Norway spruce) Zurichberg, Switzerland C. Gruenig 17-Jun-2002 /C. Gruenig 3_136_1 [=1 ZB 37 (136-1) =GenBank DQ013123 probe pPF-076 =GenBank DQ013101 probe pPF-061 =GenBank DQ103031 EF1-alpha =GenBank DQ13021 Btub =GenBank DQ013110 probe pPF-075 =GenBank DQ013075 probe pPF-018 =GenBank HM347275 MAT1-2 idiomorph =GenBank JN091539 NADH =GenBank JN091505 N-acetyl transferase gene =GenBank AY347402 SSU =GenBank JN091464 LSU]. Biocontrol: Inhibition of *Phytophthora* species by secondary metabolites (Tellenbach C, Sumarah MW, Grunig CR, Miller JD, Fungal Ecology Epub Dec 2012) // molecular systematics: Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007; Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); Population genetic analysis of the *Phialocephala fortinii* complex; characterization of the mating type (MAT) locus in the *Phialocephala fortinii* complex (Zaffarano PL, Duo A, Gruenig CR, Fungal Genet Biol 47:761-772, 2010; Zaffarano PL, Queloz V, Duo A, Gruenig CR, BMC Evolutionary Biology 2011, 11:282-); mitochondrial genome evolution in species within the *Phialocephala fortinii* complex (Duo A, Bruggmann R, Zoller S, Bernt M, Gruenig CR, BMC Genomics 13:166-182, 2012).
- 11693 ex roots of *Picea abies* (Norway spruce) Bödmerenwald, Switzerland /T. Sieber 3_22_2. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11704 ex roots of *Picea abies* (Norway spruce) Bödmerenwald, Switzerland /T. Sieber 3_17_4. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006) // mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011).
- 11705 ex roots of *Picea abies* (Norway spruce) Bödmerenwald, Switzerland /T. Sieber 3_20_2. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006) // mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011).
- 11706 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 3_24_6v. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006) // mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011).
- 11707 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 3_24_7v. Molecular systematics:

- Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006) // mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011).
- 11708 ex roots of *Picea abies* (Norway spruce) Bödmerenwald, Switzerland /T. Sieber 3_36_5. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006) // mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011).
- Phialocephala fortinii* Wang & Wilcox (syn. *Mycelium radialis atrovirens pro parte*)**
- 5424 endophyte fairy slipper orchid *Calypso bulbosa* Grassi Lakes, Alta. R. Currah 3 Jul 1985 /R. Currah [=ATCC 64845]. Molecular systematics: dark root endophytes (Harney et al., Mycol. Res. 101:1397-1404, 1997).
- 5425 ex *Orchis rotundifolia* Wagner Bog, Edmonton, Alta. R. Currah (81ra) 10 Jul 1985 /R.S. Currah 81ra. Biodiversity: orchid endophyte.
- 5901 washed feeder roots *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. R.C. Summerbell 6 Jun 1982 /R.C. Summerbell RCS W401 [=DMCC 398]. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989; Summerbell, New Phytol. 105:437-448, 1989) // pigment: tan.
- 5960 serially washed mycorrhiza *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C)L. Ippolito/D. Malloch Aug 1981 /R.C. Summerbell [=DMCC 48]. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989).
- 6088 endophyte ex roots *Corallorhiza trifida* Otauwau River, Alta. S. Hambleton (RC 235d) 2 Jun 1987 /R.S. Currah RC 235d.
- 6089 endophyte ex roots fairy slipper orchid *Calypso bulbosa* Edson, Alta. S. Hambleton (RC 259b) 3 Jun 1987 /R.S. Currah RC 259b.
- 6677 endophyte of *Luetkea pectinata* (Rosaceae) Outpost Lake, Jasper National Park, Alta. G. Stoyke (G13IIC) 1988 /R.S. Currah G13IIC [=GenBank AF214580 =GenBank EF485227 =GenBank EF485186 =GenBank EF485145]. Mycorrhizae: with *Menziesia ferruginea* (Ericaceae) (Stoyke & Currah, Arctic & Alpine Research 25:189-193, 1993; Stoyke & Currah, Can. J. Bot. 69:347-352, 1991) // culture conditions: laccase +, tyrosinase - (Currah & Tsuneda, Trans. Mycol. Soc. Japan 34:345-356, 1993); cultural group 1; fast growing, producing sclerotia (Addy et al., Mycol. Res. 104:1213-1221, 2000) // molecular systematics: dark root endophytes (Harney et al., Mycol. Res. 101:1397-1404, 1997; Grünig CR, Queloz V, Sieber TN, Holdenrieder O, Botany 86:1355-1369, 2008); RFLP & ITS sequence comparison with *Leptodontidium orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002).
- 6815 ex roots *Cassiope mertensiana* in subalpine dwarf shrub heath Outpost Lake, Jasper National Park, Alta.) G. Stoyke (G4P 26 Jul 1988 /R.S. Currah G4P,F [=GenBank AF081433]. Mycorrhizae: RFLP analysis (Stoyke & Currah, Can. J. Bot. 69:347-352, 1991; Stoyke et al., Can. J. Bot. 70:2009-2016, 1992) // molecular systematics: diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999).
- 7137 endophyte of *Kalmia microphylla* v. *occidentalis* (alpine bog *kalmia*) Port Renfrew, Vancouver Island, B.C. S. Hambleton Aug 1991 /R.S. Currah 9043. Pigment: black // mycorrhizae: ericoid.
- 8148 root of *Salix glauca* Cardinal River Divide, Alta. A.A. Fernando Oct 1993 /R.S. Currah F-SM2A [=GenBank EF485208 =GenBank EF485166 =GenBank EF485126]. Mycorrhizae: resynthesis experiments (Fernando & Currah, Can. J. Bot. 7:1071-1078, 1996); dark septate endophyte (DSE) (Grünig CR, Queloz V, Sieber TN, Holdenrieder O, Botany 86:1355-1369, 2008).
- 8321 roots of 2-3 yr old *Pinus strobus* (Eastern White Pine) seedlings Ontario Ministry of Natural Resources Nursery, St. Williams, Ont. M. Kronick -Ursic (MRA 2) 1994 /R.L. Peterson MRA 2. Mycorrhizae: not mycorrhizal in pot culture, but capable of colonizing some root cells intracellularly, tentatively classified as mild pathogen (fide M. Kronick-Ursic).
- 9522 roots of *Betula platyphylla* v. *japonica* in deciduous, broadleaf forest zone at 1300 m. Mt. Norikura, Japan Y. Hashimoto (B-5) /R.S. Currah H-49 [=GenBank AF214586]. Mycorrhizae: endophyte // molecular systematics: RFLP & ITS sequence comparison with *Leptodontidium orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000) // culture conditions: cultural group 1; fast growing, producing sclerotia (Addy et al., Mycol. Res. 104:1213-1221, 2000); sporulated initially, but no sporulation observed at UAMH.
- 9523 roots of *Betula platyphylla* v. *japonica* in deciduous, broadleaf forest zone at 1300 m. Mt. Norikura, Japan Y. Hashimoto (B-2) /R.S. Currah H-46 [=GenBank AF214585]. Molecular systematics: RFLP & ITS sequence comparison with *Leptodontidium orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000) // culture conditions: cultural group 1; fast growing, producing sclerotia.
- 9525 sterilized roots *Vaccinium vitis-idaea* Alder Flats, Alta. S. Hambleton 21 Nov 1993 /R.S. Currah S-7Aa [=GenBank AF214579 =DAOM 228562 =GenBank EF485201 =GenBank EF485159 =GenBank EF485119 =GenBank AY524846 (SSU)]. Molecular systematics: analysis of SSU rDNA sequences (Hambleton, University of Alberta Ph.D. thesis, 1998); RFLP & ITS sequence comparison with *Leptodontidium orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002); comparison with *Phialocephala sphaeroides* (Wilson, Addy, Tsuneda, Hambleton & Currah, Can. J. Bot. 82:607-617, 2004); dark septate endophyte (DSE) (Grünig CR, Queloz V, Sieber TN, Holdenrieder O, Botany 86:1355-1369, 2008) // mycorrhizae: dark septate endophyte (DSE) (Peterson RL, Wagg C, Pautler M, Botany 86:445-456, 2008) // culture conditions: cultural group 1; fast growing, producing sclerotia (Addy et al., Mycol. Res. 104:1213-1221, 2000).
- 9526 sterilized roots *Vaccinium vitis-idaea* Grande Prairie, Alta. H. Addy 24 Jun 1994 /R.S. Currah H-32 [=GenBank AF214584]. Mycorrhizae: endophyte // molecular systematics: RFLP & ITS sequence comparison with *Leptodontidium orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000) // culture conditions: cultural group 2; slower growing, producing sclerotia (Addy et al., Mycol. Res. 104:1213-1221, 2000).
- 9527 sterilized roots *Vaccinium vitis-idaea* Grande Prairie, Alta. H. Addy 24 Jun 1994 /R.S. Currah H-10 [=GenBank AF214584]. Mycorrhizae: endophyte // molecular systematics: RFLP & ITS sequence comparison with *Leptodontidium orchidicola* (Addy et al., Mycol. Res. 104:1213-1221, 2000) // culture conditions: cultural group 1; fast growing, producing sclerotia (Addy et al., Mycol. Res. 104:1213-1221, 2000).
- 9608 (*Phialocephala fortinii*) root of *Pinus sylvestris* Suonenjoki, Finland H.E. Wilcox Jul 1975 /C.J.K. Wang FAP-7 (F) [=CBS 443.86 =ATCC 60614 =GenBank AF011326 =Gruenig K93_444]. Mycorrhizae: dark septate endophyte (DSE) (Peterson RL, Wagg C, Pautler M, Botany 86:445-456, 2008).
- 9740 white spruce (*Picea glauca*) Fairview Nursery, Fairview, Alta. G. Kernaghan 01 Jun 1999 /G. Kernaghan [=GenBank AY219837 (ITS)]. Molecular systematics: matched to UAMH 6677 by RFLP; rDNA sequence analysis (Kernaghan, Sigler & Khalsa, Microbial Ecology 45:128-136, 2003) // pigment: black

- // mycorrhizae: identification of root associated fungi from containerized *Picea glauca* seedlings (Kernaghan, Sigler & Khasa, *Microbial Ecology* 45:128-136, 2003).
- 10189 decomposing willow roots (*Salix planifolia*) in fen with water sedge (*Carex aquatilis*), wool fruited sedge (*C. lasiocarpa*) and willow (*Salix* spp.) nr Perryvale, Alta. M.N. Thormann 28 May 1999 /R.S. Currah MNT 14 [=ALTA 10702].
- 10261 ex root of *Salix arctica* in arctic tundra Alexandra Fjord, Ellesmere Island, Nunavut M. Piercey (M8RBb) July 2000 /R.S. Currah M8 [=GenBank AY237619]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10262 ex root of *Salix arctica* in arctic tundra Alexandra Fjord, Ellesmere Island, Nunavut M. Piercey (D3CMAa) July 2000 /R.S. Currah D3 [=GenBank AY237600]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10263 ex root of *Salix arctica* in arctic tundra Alexandra Fjord, Ellesmere Island, Nunavut M. Piercey (D6CMAa) July 2000 /R.S. Currah D6a. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10264 ex root of *Salix arctica* in arctic tundra Alexandra Fjord, Ellesmere Island, Nunavut M. Piercey (D6RBA) July 2000 /R.S. Currah D6b [=GenBank AY237594]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10265 ex root of *Salix arctica* in arctic tundra Alexandra Fjord, Ellesmere Island, Nunavut M. Piercey (D8RBb) July 2000 /R.S. Currah D8 [=GenBank AY237599]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10266 ex root of *Salix arctica* in arctic tundra Alexandra Fjord, Ellesmere Island, Nunavut M. Piercey (K3CMAc) July 2000 /R.S. Currah K3 [=GenBank AY237604]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004) // mycorrhizae: dark septate endophyte (DSE) (Peterson RL, Wagg C, Pautler M, *Botany* 86:445-456, 2008).
- 10267 ex root of *Salix arctica* in arctic tundra Alexandra Fjord, Ellesmere Island, Nunavut M. Piercey (K6RBb) July 2000 /R.S. Currah K6 [=GenBank AY237623]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10268 ex root of *Salix* sp. in boreal forest approx. 30 km E of Yellowknife, NWT M. Piercey (N6RBA) July 2000 /R.S. Currah N6 [=GenBank AY237603]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10269 ex root of *Salix* sp. in boreal forest approx. 30 km E of Yellowknife, NWT M. Piercey (W2CMAai) July 2000 /R.S. Currah W2 [=GenBank AY237590]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10270 ex root of *Salix* sp. in boreal forest approx. 30 km E of Yellowknife, NWT M. Piercey (W4RBd) July 2000 /R.S. Currah W4 [=GenBank AY237608]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10271 ex root of *Salix* sp. in boreal forest approx. 30 km E of Yellowknife, NWT M. Piercey (T1RBe) July 2000 /R.S. Currah T1 [=GenBank AY237591]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10272 ex root of *Salix* sp. in boreal forest approx. 30 km E of Yellowknife, NWT M. Piercey (T6RBb) July 2000 /R.S. Currah T6 [=GenBank AY237597]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10273 ex root of *Salix* sp. in boreal forest Fort McMurray, Alta. (approx. 10 km up Tower Road) M. Piercey (B2CMAci) July 2000 /R.S. Currah B2 [=GenBank AY237609]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10274 ex root of *Salix* sp. in boreal forest Fort McMurray, Alta. (approx. 10 km up Tower Road) M. Piercey (B5RBA) July 2000 /R.S. Currah B5. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10275 ex root of *Salix* sp. in boreal forest Fort McMurray, Alta. (approx. 10 km up Tower Road) M. Piercey (SP3RBC) July 2000 /R.S. Currah SP3 [=GenBank AY237606]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10276 ex root of *Salix* sp. in grassland grazed by cattle Clayton Pearson's ranch approx. 200 km N of One Four, Alta. M. Piercey (C3RBdiA) May 2000 /R.S. Currah C3 [=GenBank AY237605]. Molecular systematics: distribution and genetic variation in dark septate endophytes (Piercey M, Graham SW, Currah RS, *Mycol. Res.* 108:955-964, 2004).
- 10425 culture ex root (8) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCtra 152. Mycorrhizae: with salal (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002) // molecular systematics: DNA and culture-based detection of ericoid mycorrhizal fungi (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002); Assemblage A (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002).
- 10432 culture ex root (48) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCtra 348.
- 10991 ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Bilby lake natural area, Alta. W. Wang 2008 /R.S. Currah BDC-22-66d [=GenBank FJ665279].
- 10992 ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Bilby lake natural area, Alta. W. Wang 2008 /R.S. Currah BWC-29-86a [=GenBank FJ665280].
- 10993 ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Lloyd Creek natural area, Alta. W. Wang 2008 /R.S. Currah YWL-78-232a [=GenBank FJ665282].
- 10994 ex root of aspen (*Populus tremuloides*), 5 to 7 yr old Bilby lake natural area, Alta. W. Wang 2008 /R.S. Currah BWC-29-86g [=GenBank FJ665281].
- 11197 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.33 [=GenBank HQ157895 ITS]. Molecular systematics: BLAST match 98-99% ITS similarity with *Phialocephala fortinii* (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11228 ex *Salix arctica* roots Alexandra Fjord, Ellesmere Island, Nunavut M. Day (2 S4 C1 Saar 2.5) 2000 /R.S. Currah MJD 261. Culture conditions: colonization of bryophyte tissue (*Hyaloconium splendens*) in vitro (Day MJ, Currah RS, *Botany*

- 89:349-359, 2011).
- 11280 ex *Piceirhiza bicolorata* ectomycorrhizal *Pinus sylvestris* root tip, in soil core 0-12 cm deep Hill of Fare planted Scots Pine Forest, Echt, Aberdeenshire, Scotland G.A. Grelet Fall 2006 /G. Grelet FT8P3 [=GenBank FN678812 ITS =Grelet PF24]. Biodiversity: isolated from *Piceirhiza bicolorata* roots (Grelet GA, Johnson D, Vrålstad T, Alexander IJ, Anderson IC, New Phytologist 188:210-222, 2010).
- 11690 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 7_10_6v. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Sieber TN, Gruenig CR, Molecular Ecology Resources 10, 348-367, 2010); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- 11691 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 7_62_6v. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Sieber TN, Gruenig CR, Molecular Ecology Resources 10, 348-367, 2010); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- 11695 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 7_63_4. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Microsatellite-based quantification method for biomass estimation of endophytic *Phialocephala* species (Reininger V, Grunig CR, Sieber TN, Microbial Ecology 61:676-683, 2011); interactions of *Phialocephala* species with *Betula pendula* and *Picea abies* (Reininger V, Grunig CR, Sieber TN, Environmental Microbiology 14:1064-1076, 2012); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007) // mycorrhizae: mycorrhiza, PAC and host interaction (Reininger V, Sieber TN, Plos One 7(8): e42865, 2012).
- 11710 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 7_39_7v [=GenBank DQ274827 btub =GenBank DQ274561 EF1 =GenBank DQ274752 pPF-076 =GenBank DQ274677 pPF-018]. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Sieber TN, Gruenig CR, Molecular Ecology Resources 10, 348-367, 2010); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007) // mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011).
- 11711 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 7_54_7v [=GenBank DQ274829 btub =GenBank DQ274563 EF1 =GenBank DQ274679 pPF-018 =GenBank DQ274754 pPF-076 =GenBank FJ418305 =GenBank FJ418440 =GenBank FJ418492 =GenBank FJ418240 =GenBank FJ418466 =GenBank FJ418529 =GenBank FJ418362 =GenBank FJ418401]. Mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, Environmental Microbiology 13(9): 2508-2517, 2011) // molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Sieber TN, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- Phialocephala glacialis*** C.R. Grünig & T.N. Sieber
10852 (T *Phialocephala glacialis*) ex fine root *Vaccinium myrtillus* (European blueberry) Creux du Van, Switzerland (C) V. Queloz 31-May-05 /C. Gruenig 444-7v [=ZT Myc 551 Holotype =GenBank EU434843 ITS =GenBank EU434873 SSU]. Biodiversity: Correlate to form taxon *Phialocephala* sp. 18 as defined by Menkis et al (Menkis A, Allmer J, Vasiliauskas R, Lygis V, Stenlid J, Finlay R, Mycological Research 108:965-973, 2004) // culture conditions: produced anamorph (fide C. Gruenig) // molecular systematics: phylogeny of *Phaeomollisia piceae* a conifer-needle endophyte and relationships to *Phialocephala* and *Acephala* (Grunig CR, Queloz V, Duo A, Sieber TN, Mycological Research 113:207-221, 2009).
- 10853 ex needle of *Picea abies* (Norway spruce) Creux du Van, Switzerland V. Queloz 31-May-05 /C. Gruenig CdV 5-3.5s [=GenBank EU434842 ITS =GenBank EU434872 SSU]. Biodiversity: Correlate to form taxon *Phialocephala* sp. 18 as defined by Menkis et al (Menkis A, Allmer J, Vasiliauskas R, Lygis V, Stenlid J, Finlay R, Mycological Research 108:965-973, 2004) // culture conditions: no sporulation observed (fide C. Gruenig) // molecular systematics: phylogeny of *Phaeomollisia piceae* a conifer-needle endophyte and relationships to *Phialocephala* and *Acephala* (Grunig CR, Queloz V, Duo A, Sieber TN, Mycological Research 113:207-221, 2009).
- Phialocephala helvetica*** C.R. Gruenig & T.N. Sieber
10857 ex fine root *Picea abies* (Norway spruce) Zürichberg, Switzerland C.R. Grünig 01-May-02 /C. Gruenig 4 138 5 [=GenBank DQ274798 B-tubulin =GenBank DQ274532 EF1-alpha =GenBank DQ274648 pPF-018 =GenBank DQ274723 pPF-076 =GenBank DQ274607 pPF-061 =CBS 119273]. Molecular systematics: Form taxon cryptic species CSP4 (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); Population biology of endophyte *Phialocephala fortinii* (Gruenig CR, Ph.D. thesis, Swiss Federal Inst Technol, Zurich, 2004); Population genetic analysis of the *Phialocephala fortinii* complex; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); dark septate endophyte (DSE).
- Phialocephala lagerbergii*** (Melin & Nannf.) Grünig & T.N. Sieber (syn. *Cadophora lagerbergii*, *Phialophora lagerbergii*)
1395 lumber piles Calumet Quebec S.J. (CK60) Hughes 1938 /DAOM 75251 [=IMI 96745].
11048 *Pinus sylvestris*, wood Sweden (C) E. Melin 1933 /CBS 266.33 [=CBS H-7581 =GenBank AF083197]. Molecular systematics: phylogeny of *Phaeomollisia piceae* a conifer-needle endophyte and relationships to *Phialocephala* and *Acephala* (Grunig CR, Queloz V, Duo A, Sieber TN, Mycological Research 113:207-221, 2009); phylogeny of *Cadophora* and *Phialocephala* (Harrington TC, McNew DL, Mycotaxon 87:141-151, 2003).
- Phialocephala letzii*** C.R. Gruenig & T.N. Sieber
10855 ex fine root *Picea abies* Zürichberg, Switzerland C.R. Grünig 01-May-02 /C. Gruenig 2 120 3 [=GenBank DQ274777 B-tubulin =GenBank DQ274511 EF1-alpha =GenBank

DQ274702 pPF-076 =GenBank DQ274627 pPF-018 =GenBank DQ274586 pPF-061 =CBS 119266]. Molecular systematics: Form taxon cryptic species CSP2 (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); Population biology of endophyte *Phialocephala fortinii* (Gruenig CR, Ph.D. thesis, Swiss Federal Inst Technol, Zurich, 2004); Population genetic analysis of the *Phialocephala fortinii* complex; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); dark septate endophyte (DSE); characterization of the mating type (MAT) locus in the *Phialocephala fortinii* complex (Zaffarano PL, Duo A, Gruenig CR, Fungal Genet Biol 47:761-772, 2010; Zaffarano PL, Queloz V, Duo A, Gruenig CR, BMC Evolutionary Biology 2011, 11:282-).

***Phialocephala scopiformis* T. Kowalski & Kehr**

- 11049 (T *Phialocephala scopiformis*) living 3.5 cm thick branch of *Picea abies* approx. 40 yr old near Regensburg, Germany T. Kowalski 7-Sep-1990 /CBS 468.94 [=IMI 363204 (Holotype) =GenBank AF486126 ITS =GenBank AF326074]. Pigment: yellow on PDA // biodiversity: bark endophyte of *Picea abies* (Butin, H., Kowalski, T., Eur. J. For. Pathol. 22: 174-182, 1992; Kowalski, T., Kehr, R.D., Can J Bot 73:26-32, 1995; Kowalski, T., Kehr, R.D., Sydowia, 44: 137-168, 1992) // culture conditions: sporulates in dark after several months @ 4C (fide Kowalski & Kehr).

***Phialocephala* sp.**

- 11207 ex *Cenococcum* geophilum mycorrhiza of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.49. Culture conditions: produces sclerotia // molecular systematics: Blast match 97-98% ITS similarity to *Acephala applanata* // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11510 swab ex fur of living female little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 52 C.3. Biodiversity: mycobiota of bat caves.

***Phialocephala* sp. 8 Gruenig et al. ined.**

- 10206 living sedge roots/rhizomes (*Carex aquatilis*) in fen with water sedge (*Carex aquatilis*), wool fruited sedge (*C. lasiocarpa*) and willow (*Salix* spp.) nr Perryvale, AB (54D28'N, 113D18'W) M.N. Thormann 22 May 1997 /R.S. Currah MNT 51 [=ALTA 10701 =ALTA 10861 =GenBank EU434851 ITS =GenBank EU434878 SSU]. Culture conditions: sporulates on oatmeal salts agar // pigment: black on OAT // molecular systematics: phylogeny of *Phaeomollisia* piceae a conifer-needle endophyte and relationships to *Phialocephala* and *Acephala* (Gruenig CR, Queloz V, Duo A, Sieber TN. Mycological Research 113:207-221, 2009).

***Phialocephala sphaeroides* B. J. Wilson**

- 10279 (T *Phialocephala sphaeroides*) ex root of *Aralia nudicaulis* in Sphagnum dominated wetland (pH 3.9) eastern border Elk Island National Park, Alta. H. Addy (as A3Bo & A3Bs) 2002 /R.S. Currah A3Bo [=GenBank AY524844 (ITS)]. Culture conditions: non sporulating on deposit; no conidia obtained // pigment: brown // molecular systematics: description and phylogeny (Wilson, Addy, Tsuneda, Hambleton & Currah, Can. J. Bot. 82:607-617, 2004).
- 10294 ex root *Betula papyrifera* in Sphagnum-dominated wetland (pH 3.9) eastern border Elk Island National Park, Alta. H. Addy (B2B) 2002 /R.S. Currah B2B [=GenBank AY524845 (ITS)]. Culture conditions: non sporulating on deposit; no

- conidia obtained // pigment: brown.
- 10295 ex root *Betula papyrifera* in Sphagnum-dominated wetland (pH 3.9) eastern border Elk Island National Park, Alta. H. Addy (B3B) 2002 /R.S. Currah B3B. Culture conditions: non sporulating on deposit; no conidia obtained // pigment: brown.
- 10342 ex root of *Smilacina trifolia* growing in a Sphagnum-dominated wetland (pH 3.9) 2 km E of Elk Island National Park, Alta. H. Addy (M2A) 11-6-01 /R.S. Currah M2A. Culture conditions: non sporulating on deposit; no conidia obtained // pigment: brown.
- 10343 ex root of *Smilacina trifolia* growing in a Sphagnum-dominated wetland (pH 3.9) 2 km E Elk Island National Park, Alta. H. Addy (M3A) 11-6-01 /R.S. Currah M3A. Culture conditions: non sporulating on deposit; no conidia obtained // pigment: brown.
- 10344 root of *Rubus idaeus* (collected June 11, 2001) growing in a Sphagnum-dominated wetland (pH 3.9) 2 km E Elk Island National Park, Alta. H. Addy (R1A) 11-6-01 /R.S. Currah R1A. Culture conditions: non sporulating on deposit; no conidia obtained // pigment: brown.
- 11132 ex *Cenococcum* geophilum mycorrhizae of white spruce (*Picea glauca*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 7-Sep-2007 /G. Kernaghan ARSL 070907.7 [=GenBank HQ157937 ITS]. Molecular systematics: BLAST match 99% ITS similarity with *Phialocephala sphaeroides* (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).
- 11279 ex *Vaccinium* hair root adjacent to *P. bicolorata* ectomycorrhizal pine root tip, in soil core 0-12 cm deep Glen Tanar semi-natural Scots Pine Forest, Aboyne, Aberdeenshire, Scotland G.A. Grelet Fall-2006 /G. Grelet GG15V1 =GS15V1 [=GenBank FN678827 ITS =Grelet PS5 =Grelet GS15V1 / GG15V1]. Mycorrhizae: isolated from *Piceirhiza bicolorata* roots (Grelet GA, Johnson D, Vrålstad T, Alexander II, Anderson IC, New Phytologist 188:210-222, 2010) // molecular systematics: Blast match 99% ITS similarity with *Phialocephala sphaeroides* AY524844 UAMH 10279 T.

***Phialocephala subalpina* C.R. Gruenig & T.N. Sieber**

- 8433 roots of *Erica herbacea* northern Slovenia D. Vodnik 1995 /D. Vodnik PFO-01 [=GenBank EF485222 =GenBank EF485140 =GenBank EF485181]. Biodiversity: dark septate endophyte (DSE) (Grünig CR, Queloz V, Sieber TN, Holdenrieder O, Botany 86:1355-1369, 2008).
- 10859 ex fine root *Picea abies* (Norway spruce) Bödmeren, Switzerland C.R. Grünig 10-Sep-03 /C. Gruenig 6 78 2 [=GenBank DQ274823 B-tubulin =GenBank DQ274557 EF1-alpha =GenBank DQ274673 pPF-018 =GenBank DQ274748 pPF-076 =CBS 119280]. Molecular systematics: Form taxon cryptic species CSP6 (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); Population biology of endophyte *Phialocephala fortinii* (Gruenig CR, Ph.D. thesis, Swiss Federal Inst Technol, Zurich, 2004); Population genetic analysis of the *Phialocephala fortinii* complex; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007; Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); Microsatellite markers for *Phialocephala subalpina* and *P. fortinii* (Queloz V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); dark septate endophyte (DSE).
- 11012 ex fine root of *Picea abies* (Norway spruce) Bödmerenwald, Switzerland C.R. Grünig 10-Sep-2003 /C. Gruenig 6 70 1 [=GenBank FJ418397 microsatellite =GenBank FJ418266 microsatellite =GenBank FJ418489 microsatellite =GenBank FJ418463 microsatellite =GenBank FJ418437 microsatellite =GenBank FJ418525 microsatellite

- =GenBank FJ418237 microsatellite =GenBank FJ418359 microsatellite =GenBank FJ418302 microsatellite =GenBank DQ274555 EF1-alpha =GenBank DQ274746 RFLP probe =GenBank DQ274821 beta tubulin =GenBank DQ274671 RFLP probe] Mating type 2. Molecular systematics: Form taxon cryptic species CSP6; Population genetic analysis of the *Phialocephala fortinii* complex; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, Mycologia 100:47-67, 2008); dark septate endophyte (DSE); Microsatellite markers for *Phialocephala subalpina* and *P. fortinii* (Queloz V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); mitochondrial genome evolution in species within the *Phialocephala fortinii* complex (Duo A, Bruggmann R, Zoller S, Bernt M, Gruenig CR, BMC Genomics 13:166-182, 2012).
- 11675 ex roots of *Picea abies* (Norway spruce) Bödmerenwald, Switzerland /T. Sieber 6_16_1. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Gruenig CR, Molecular Ecology Resources 8:1322-1325, 2008); suitability of qPCR to estimate the biomass of root endophytes (Tellenbach C, Grunig CR, Sieber TN, Applied and Environmental Microbiology 76:5764-5772, 2010); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11676 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 6_2_7v. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Sieber TN, Gruenig CR, Molecular Ecology Resources 10, 348-367, 2010); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Microsatellite-based quantification method for biomass estimation of endophytic *Phialocephala* species (Reininger V, Grunig CR, Sieber TN, Microbial Ecology 61:676-683, 2011); interactions of *Phialocephala* species with *Betula pendula* and *Picea abies* (Reininger V, Grunig CR, Sieber TN, Environmental Microbiology 14:1064-1076, 2012); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007) // mycorrhizae: mycorrhiza, PAC and host interaction (Reininger V, Sieber TN, Plos One 7(8): e42865, 2012).
- 11677 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 6_37_6v. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Sieber TN, Gruenig CR, Molecular Ecology Resources 10, 348-367, 2010); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Microsatellite-based quantification method for biomass estimation of endophytic *Phialocephala* species (Reininger V, Grunig CR, Sieber TN, Microbial Ecology 61:676-683, 2011); interactions of *Phialocephala* species with *Betula pendula* and *Picea abies* (Reininger V, Grunig CR, Sieber TN, Environmental Microbiology 14:1064-1076, 2012); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007) // mycorrhizae: mycorrhiza, PAC and host interaction (Reininger V, Sieber TN, Plos One 7(8): e42865, 2012).
- 11678 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 6_8_7v. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Fung Gen Biol 43:410-421, 2006; Queloz V, Duo A, Sieber TN, Gruenig CR, Molecular Ecology Resources 10, 348-367, 2010); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, Fungal Gen Biol 44:773-788, 2007).
- 11679 host unknown Noonday, Oregon, USA /T. Sieber 6_A_02-2. Molecular systematics: biogeographical structure of the root-associated *Phialocephala fortinii*-*Acephala applanata* species complex (Queloz V, Sieber TN, Holdenrieder O, McDonald BA, Grunig CR, Global Ecology and Biogeography 20:160-169, 2011); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11680 host unknown Noonday, Oregon, USA /T. Sieber 6_A_04-1 [=GenBank HM044737 btub =GenBank HM044675 pPF_018 =GenBank HM044706 pPF_076]. Molecular systematics: biogeographical structure of the root-associated *Phialocephala fortinii*-*Acephala applanata* species complex (Queloz V, Sieber TN, Holdenrieder O, McDonald BA, Grunig CR, Global Ecology and Biogeography 20:160-169, 2011); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11681 host unknown Noonday, Oregon, USA /T. Sieber 6_A-06-7 [=GenBank HM044676 pPF_018 =GenBank HM044707 pPF_076 =GenBank HM044738 btub]. Molecular systematics: biogeographical structure of the root-associated *Phialocephala fortinii*-*Acephala applanata* species complex (Queloz V, Sieber TN, Holdenrieder O, McDonald BA, Grunig CR, Global Ecology and Biogeography 20:160-169, 2011); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11682 host unknown Noonday, Oregon, USA /T. Sieber 6_A_07-4. Molecular systematics: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11683 host unknown Noonday, Oregon, USA /T. Sieber 6_A_10-1. Molecular systematics: biogeographical structure of the root-associated *Phialocephala fortinii*-*Acephala applanata* species complex (Queloz V, Sieber TN, Holdenrieder O, McDonald BA, Grunig CR, Global Ecology and Biogeography 20:160-169, 2011); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11684 ex roots of *Pinus sylvestris* (Scots pine) Kevo, Finland /T. Sieber 6_K93_386. Biodiversity: dark septate endophyte (DSE) (Ahlich K, Sieber TN, New Phytologist 132:259-270 1996) // molecular systematics: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11685 ex roots of *Pinus sylvestris* (Scots pine) Kevo, Finland /T. Sieber 6_K93_388. Biodiversity: dark septate endophyte (DSE) (Ahlich K, Sieber TN, New Phytologist 132:259-270 1996) // molecular systematics: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11686 ex roots of *Pinus sylvestris* (Scots pine) Kevo, Finland /T. Sieber 6_K93_390. Biodiversity: dark septate endophyte (DSE) (Ahlich K, Sieber TN, New Phytologist 132:259-270 1996) // molecular systematics: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11687 ex roots of *Pinus sylvestris* (Scots pine) Kevo, Finland /T. Sieber 6_K93_394. Biodiversity: dark septate endophyte (DSE) (Ahlich K, Sieber TN, New Phytologist 132:259-270 1996) // molecular systematics: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11688 ex roots of *Pinus sylvestris* (Scots pine) Kevo, Finland /T. Sieber 6_K93_398. Biodiversity: dark septate endophyte (DSE) (Ahlich K, Sieber TN, New Phytologist 132:259-270 1996) // molecular systematics: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11689 ex roots of *Pinus sylvestris* (Scots pine) Kevo, Finland /T. Sieber 6_K93_403. Biodiversity: dark septate endophyte

- (DSE) (Ahlich K, Sieber TN, *New Phytologist* 132:259-270 1996) // molecular systematics: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings.
- 11692 ex roots of *Picea abies* (Norway spruce) Bödmerenwald, Switzerland /T. Sieber 6_70_4. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex; effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, *Fungal Gen Biol* 44:773-788, 2007).
- 11694 ex roots of *Vaccinium myrtillus* (Bilbery) Bödmerenwald, Switzerland /T. Sieber 6_53_6v. Molecular systematics: Population genetic analysis of the *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, *Fung Gen Biol* 43:410-421, 2006; Queloz V, Duo A, Gruenig CR, *Molecular Ecology Resources* 8:1322-1325, 2008); effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings; Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, *Fungal Gen Biol* 44:773-788, 2007).
- 11709 host unknown Noonday, Oregon, USA /T. Sieber 6_A_10-6. Mycorrhizae: effects of *P. subalpina* and other PAC on survival and performance of Norway spruce seedlings (Tellenbach C, Grunig CR, et al, *Environmental Microbiology* 13(9): 2508-2517, 2011) // pigment: yellow/brown (fide UAMH 2013).

Phialocephala turiciensis C.R. Guenig & T.N. Sieber

- 10854 ex fine root *Picea abies* (Norway spruce) Zürichberg, Switzerland C.R. Grünig 01-May-02 /C. Gruenig 1 176 1 [=GenBank DQ274774 B-tubulin =GenBank DQ274508 EF1-alpha =GenBank DQ274699 pPF-076 =GenBank DQ274583 pPF-061 =GenBank DQ274624 pPF-018 =CBS 119264 =GenBank AY347389 ITS]. Molecular systematics: Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Brunner PC, Duo A, Sieber TN, *Fungal Gen Biol* 44:773-788, 2007; Gruenig CR, Duo A, Sieber TN, Holdenrieder O, *Mycologia* 100:47-67, 2008); Population biology of endophyte *Phialocephala fortinii* (Gruenig CR, Ph.D. thesis, Swiss Federal Inst Technol, Zurich, 2004); Population genetic analysis of the *Phialocephala fortinii* complex; Form taxon cryptic species CSP1 (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, *Mycologia* 100:47-67, 2008); dark septate endophyte (DSE).

Phialocephala uotolensis C.R. Guenig & T.N. Sieber

- 10858 ex fine root *Picea abies* (Norway spruce) Üetliberg, Switzerland C.R. Grünig 10-Feb-04 /C. Gruenig 5 264 1r [=GenBank DQ274810 B-tubulin =GenBank DQ274544 EF1-alpha =GenBank DQ274660 pPF-018 =GenBank DQ274735 pPF-076 =GenBank DQ274619 pPF-061 =CBS 119275]. Molecular systematics: Population biology of endophyte *Phialocephala fortinii* (Gruenig CR, Ph.D. thesis, Swiss Federal Inst Technol, Zurich, 2004); Population genetic analysis of the *Phialocephala fortinii* complex; Form taxon cryptic species CSP5 (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, *Mycologia* 100:47-67, 2008); Species recognition within *Phialocephala fortinii* complex (Gruenig CR, Duo A, Sieber TN, Holdenrieder O, *Mycologia* 100:47-67, 2008); dark septate endophyte (DSE).

Phialocephala urceolata Wang & McGhee

- 10827 (T *Phialocephala urceolata*) ex black film on water soluble proprietary heparin solution (pH 2.5) originating in England Tyco Healthcare, Hazelwood, MO D. McGhee Aug 2005 /R.S. Currah [= GenBank EU155145 ITS = GenBank EU155146 SSU]. Biodeteriogen/biodegradation: heparin solution kept in refrigerator 3-4 months // molecular systematics: relationship

among *Phialocephala* species (Wang, McGhee, Gibas, Tsuneda & Currah, *Mycologia* in press, 2008).

Phialocephala virens Siegfried & Seifert

- 7358 (T) ex standing *Tsuga* or *Picea* butt rot Kenai Peninsula, Alaska K. Reynolds 1 Jan 1988 /DAOM 214746. Cycloheximide: sensitive.

Phialomyces macrosporus Misra & Talbot

- 2631 G.L. Barron 10420 [=IMI 103664].
3191 (T *Phialomyces macrosporus*) soil Rotorua N. Z. K.F. Baker & P.N.B. Talbot 1961 /IMI 110130.

Phialophora alba v. Beyma

- 684 DAOM 54765.
7232 ex *Populus tremuloides* (aspen poplar) Blue Ridge, Alta. L. Hutchison (DS-91-2c-4a) 25 Apr 1991 /L. Hutchison NOF 1598 [=ATCC 96295]. Anthraquinones & 10-hydroxyanthrone (Ayer & Trifonov, *J. Nat. Prod.* 57:317-319, 1994). Pigment: brown.
8262 contaminant ex FC-100 *Fomes fomentarius* Vegreville, Alta /S. Davies FC-100. Benomyl: resistant // pigment: brown.
9929 rhizomes of living & decomposing water sedge (*Carex aquatilis*) and decomposing sedge leaves (*C. aquatilis* & *C. planifolia*) in fen dominated by sedge (*Carex aquatilis*, *C. utriculata*), water horsetail (*Equisetum fluviatile*) & willow (*Salix* spp.) nr Perryvale, AB (54D28'N, 113D14'W) M.N. Thormann Sep 1997 /R.S. Currah MNT 94 [=ALTA 12287]. Benomyl: resistant (fide M.N. Thormann) // pigment: brown.
10184 aspen root with wound; root sectioned and surface sterilized nr Cynthia, Alta J. Pankuch 2001 /P. Blenis M16-28-F. Pigment: brown on CER.
10188 decomposing willow roots (*Salix planifolia*) in fen with water sedge (*Carex aquatilis*), wool fruited sedge (*C. lasiocarpa*) and willow (*Salix* spp.) nr Perryvale, AB (54D28'N, 113D18'W) M.N. Thormann 18 Nov 1997 /R.S. Currah MNT 73 [=ALTA 11715]. Pigment: red/brown.

Phialophora americana (Nannf.) Hughes (morph *Capronia semi-immersa*)

- 187 wood /N.F. Conant. Molecular systematics: assessment of *Phialophora* based on 5.8s & ITS of rDNA (Yan et al., *Mycologia* 87:72-83, 1995).
188 Uruguay 1947 /N.F. Conant. Molecular systematics: assessment of *Phialophora* based on 5.8s & ITS of rDNA (Yan et al., *Mycologia* 87:72-83, 1995).
1404 peat, cedar bog Guelph Ont. G.L. Barron 1960 /DAOM 82822 [=IMI 96744]. Molecular systematics: assessment of *Phialophora* based on 5.8s & ITS of rDNA; miscited as UAMH 1401 (Yan et al., *Mycologia* 87:72-83, 1995).
2509 skin Los Angeles Waldeck 1964 /G.F. Orr. Molecular systematics: assessment of *Phialophora* based on 5.8s & ITS of rDNA (Yan et al., *Mycologia* 87:72-83, 1995).
2989 C.J.K. Wang 446. Molecular systematics: assessment of *Phialophora* based on 5.8s & ITS of rDNA (Yan et al., *Mycologia* 87:72-83, 1995).
5020 i/t passage through guinea pig (substrate *Salix babylonica*) Calonia Co., Uruguay /I. Conti 4038.
9218 dry, rotted wood (stage 3 decay), aspen log (*Populus tremuloides*) Mariana Lake, Alta. 11-20C) T. Lumley (ML-07-S4E 20 Nov 1997 /R.S. Currah TCL 017.
9609 verrucous dermatosis of the legs, man /W. Untereiner CBS 281.35 [=CBS 281.35 =ATCC 4806 =IMI 021191 =NIH 8719]. Molecular systematics: relationships among *Phialophora* species based on rDNA ITS (Yan et al., *Mycologia* 87:72-83, 1995); mitochondrial DNA analysis of *Phialophora verrucosa*. (Yamagishi Y et al. *Mycoses* 40: 329-334, 1997, PubMed: 98131192).
9936 shed head skin ex corn snake (*Elaphe guttata guttata*), male

- Topeka Zoological Park, Topeka KS UAMH (UW056B-C) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10875 ex pulp Wisconsin, USA /W. Untereiner WUC 400 [=CDC 10 =Conant 333 =GenBank EU514696 LSU =GenBank EU514712 beta-tubulin]. Molecular systematics: systematics of the *Phialophora verrucosa* complex (Untereiner WA, Angus A, Reblova M, Orr M-J, Botany 86:742-750, 2008).
- 10876 ex decayed wood New York, USA C.J.K. Wang 1050 /W. Untereiner WUC 402 [=Wang 1050 =GenBank EU514697 LSU =GenBank EU514713 beta-tubulin]. Molecular systematics: systematics of the *Phialophora verrucosa* complex (Untereiner WA, Angus A, Reblova M, Orr M-J, Botany 86:742-750, 2008); phylogeny of *Phialophora* (Yan et al., Mycologia 87:72-83, 1995).
- 10951 biopsy of mass on right forepaw, feline Ithaca, N.Y. 2008 /D.A. Sutton UTHSC 08-111 [=UTHSC R-4233]. Molecular systematics: 99% beta tubulin similarity with CBS 839.69 (fide UTHSC) // thermotolerant: growth equivalent at 30 & 35C.
- 11480 ex contaminated manufactured juice beverage Toronto, Ont. (C) M. Goldberg; (I) J.A. Scott 27-Nov-2009 /J. Scott SPORO 14998-54.
- 11481 ex contaminated manufactured juice beverage Toronto, Ont. (C) M. Goldberg; (I) J.A. Scott 27-Nov-2009 /J. Scott SPORO 14998-60.
- Phialophora benthica* Millar**
6118 lake sediment core Jack Lake nr Apsley, Ont. K. Millar Mar 1988 /K. Millar [=CBS 241.89].
6484 (T) lake sediment Jack Lake, Apsley, Ont. K. Millar May 1988 /K. Millar L8811 [=DAOM 211271 =ATCC 66465]. Pigment: yellow.
6515 lake sediment Jack Lake, Apsley, Ont. K. Millar Jun 1989 /K. Millar L891 [=TRTC 51144]. Pigment: yellow.
6516 lake sediment Anstruther Lake, Apsley, Ont. K. Millar Sep 1988 /K. Millar L8812.
- Phialophora botulispورا* see ***Phialocephala botulispورا***
- Phialophora cf. hyalina***
11610 swab ex skin of living male bat (*Myotis lucifugus*) Markhamville Mine, New Brunswick K.J. Vanderwolf 09-Feb-2010 /K.J. Vanderwolf Bat 42 C.1 CC1 skin ox [=Untereiner WUC S42]. Molecular systematics: Blast match D1D2 sequence shows 98% similarity with FJ176862 identified as *Leotiomycetes* sp. CBS 259.65 (fide UAMH 2012); *Leotiomycetes* CBS 259.65 groups in clade with *Phialophora hyalina* fide Bogale et al. (Bogale M, Orr MJ, O'Hara MJ, Untereiner WA, Fungal Biol 114:396-409, 2010); Blast match 95% ITS similarity with *Phialophora hyalina* // biodiversity: mycobiota of bat caves.
- Phialophora cyanescens* see ***Cylindrocarpon cyanescens***
- Phialophora fastigiata* see ***Cadophora fastigiata***
- Phialophora finlandica* see ***Cadophora finlandica***
- Phialophora hoffmannii* see ***Lecythophora hoffmannii***
- Phialophora intermedia* Iwatsu, Udagawa & Toyazaki**
6766 (T *Phialophora intermedia*) household dust Suita, Osaka, Japan N. Toyazaki 5 Apr 1984 /S.-I. Udagawa NHL 2979 [=CBS 635.88]. Pigment: brown.
- Phialophora japonica* Iwatsu & Udagawa**
5375 (T *Phialophora japonica*) rotting wood Sawara Chiba, Japan T. Iwatsu 12 Dec 1978 /S.-I. Udagawa NHL 2953 [=ATCC 60806 =CBS 220.86].
- Phialophora lagerbergii* see ***Phialocephala lagerbergii***
- Phialophora lasiosphaeriae* see ***Lasiosphaeria hirsuta***
- Phialophora lignicola* see ***Lecythophora lignicola***
- Phialophora malorum* see ***Cadophora malorum***
- Phialophora mustea* Neergaard**
5135 ex glasshouse soil G.J. Bollen /CBS 898.70. Pigment: brown.
- Phialophora mutabilis* see ***Lecythophora mutabilis***
- Phialophora olivacea* Gams**
4959 wall paper Germany /CBS 122.74.
6798 house plant soil /R.C. Summerbell W 1945.
- Phialophora oxyspora* Gams**
4325 soil base *Euphorbia pulcherrima* (poinsettia) Dixon 1980 /D.M. Dixon G-8a-1.
4935 (T *Phialophora oxyspora*) aphids in *Clerodendron monahassa* Sri Lanka /CBS 698.73 [=GenBank JQ766375 =GenBank JQ766450 =GenBank JQ766498 =GenBank JQ766402 =GenBank JQ766375 Btub2 =GenBank JQ766450 ITS =GenBank JQ766498 LSU =GenBank JQ766402 RPB1]. Molecular systematics: relationships among *Cyphellophora* and related *Phialophora* species (Feng P, Lu Q, Najafzadeh MJ, van den Ende AHG et al, Fungal Diversity epub 15-Aug-2012).
- Phialophora parasitica* see ***Phaeoacremonium parasiticum***
- Phialophora phaeophora* Gams**
6358 soil mixed with straw Whitemud Equine Center, Edmonton, Alta. J. Galbraith (C) Oct 1988 /J. Galbraith (C).
- Phialophora repens* (Davidson) Conant**
5060 (T *Cadophora repens*) pine lumber /I. Weitzman [=CBS 294.39 =NCMH 227]. Thermotolerant: grows @ 37C, NG @ 40C.
- Phialophora reptans* De Hoog**
5718 environment /A. Espinel [=NCMH 489]. Serology: exoantigen (Espinel-Ingroff & al, JCM 23:305-310, 1986) // molecular systematics: Identity indeterminate fide Yan et al. (Yan et al., Mycologia 87:72-83, 1995) // mesophilic: NG @ 33C // culture conditions: gelatin +.
- Phialophora rhodogena* see ***Catenulifera rhodogena***
- Phialophora richardsiae* (Nannf.) Conant**
1422 pulp mill Quebec D. Brewer Feb 1962 /DAOM 87712.
1732 rotting *Alnus* log Port Coquitlam B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael.
2987 C.J.K. Wang 234.
4377 ex wound middle finger, male; DE + for hyphae Washington /CDC B-3333a.
5052 cystic lesion, foot /I. Weitzman HD 792. Human/animal pathogen: subcutaneous (Corrado et al., Sabouraudia 18:97-104, 1980) // pigment: red on OAT.
5056 subcutaneous cystic granuloma /I. Weitzman [=NIH 8752]. Human/animal pathogen: subcutaneous (Schwarz & Emmons, Am. J. Clin. Path. 49:500-505, 1968).
5058 leg ulcer /I. Weitzman HD 430. Human/animal pathogen:

- subcutaneous (Corrado et al., Sabouraudia 18:97-104, 1980).
 6354 beer sample after pasteurization Calgary, Alta. L. Sigler 3 Feb 1989 /J. Schulz 2378-3.
 8335 fatal brain abscess, male 8 yr with chronic granulomatous disease & unresponsive pneumonia Vancouver, BC C. Sand 9 Jan 1996 /R. Rennie MY 0151.
 8350 S.E. Lopez BAFC 229.
 8654 left stump tendon tissue, male 49 yr, amputee; *Sporothrix albicans* (UAMH 8701) also isolated; histopathology + Melbourne, Australia Austin & Repatriation Medical Centre 1996 /A. Woodgyer 9605972.
 10082 subcutaneous nodule/abscess on left foot, male 45 yr, one month post renal transplant, DE+ Auckland, New Zealand 2001 /K. Rogers MF 1277 pink.
 10452 swab Rt foot, male 7 yr Sunnybrook & Women's College Health Sci. Centre ON Toronto 26-5-04 /R. Rennie MY 4088 [=OMH FR 710].

Phialophora sessilis de Hoog

- 6690 African violet tissue culture Edmonton, Alta. R. Nagarajan Jul 1990 /R. Nagarajan.

***Phialophora* sp.**

- 1027 frozen foods /H.H. Kuehn 541.
 1205 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael.
 7243 ex moose dung Ravenscliff, Muskoka Dist., Ontario D. Malloch Oct 1990 /D. Malloch JS 116. Cycloheximide: sensitive // benomyl: sensitive // thermotolerant: grows @ 37C.
 8593 bronchial wash, heart-lung transplant, male 49 yr, DE-Edmonton, Alta. C. Sand 23 May 1996 /R. Rennie MY 2232. Benomyl: sensitive // cycloheximide: resistant // pigment: brown // mesophilic: NG @ 37C.
 9773 ex stained wood associated with beetle galleries on dead standing Scots pine (*Pinus sylvestris*) As, Akershus, Norway J. Reid (73-22) Oct 1973 /J. Reid UM 421. Biodeteriogen/biodegradation: wood-staining fungus (Eyjolfsson, Ph.D. thesis, U. of Manitoba, 1990) // pigment: blue-green.
 9815 ex bark-beetle galleries associated with stain in standing, living, unthrifty Scots pine (*Pinus sylvestris*) Hwy 21, Tornby, Ostfold, Norway J. Reid (73-75) Oct 1973 /J. Reid UM 722. Pigment: blue-green.
 10183 aspen root with wound; root sectioned and surface sterilized nr Drayton Valley, Alta J. Pankuch 2001 /P. Blenis BL 26-3A(1)-2b. Pigment: purplish-red // culture conditions: slow growing (1 cm on 2%MEA at 3 wk).
 10532 sputum, female 56 yr Timmins, Ont. 23-11-04 /R. Rennie MY 7481. Thermotolerant: grows @ 35 C.
 11607 swab ex fur of living male bat (*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 24 C.2 CCI fur ox [=Untereiner WUC P24]. Biodiversity: mycobiota of bat caves // pigment: yellow on CER.
 11608 swab ex fur of living male bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 32 C.4 fur [=Untereiner WUC P32]. Biodiversity: mycobiota of bat caves.
 11609 swab ex fur of living male bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 60 C.2 fur [=Untereiner WUC P60]. Biodiversity: mycobiota of bat caves.

***Phialophora* sp. M**

- 6784 CCA-treated Douglas fir pole Candor, NY C.J.K. Wang /C.J.K. Wang ED-114 [=ATCC 66725]. Biodeteriogen/biodegradation: soft rot Type 1 (Wang & Zabel, Fungi from utility poles, 1990).

Phialophora verrucosa Medlar

- 3964 (T *Phialophora macrospora*) Strain M. Moore 1937 /M. McGinnis NCMH 15 [=CBS 273.37 =ATCC 10223]. Molecular systematics: relationships among *Phialophora* species based on rDNA ITS (Yan et al., Mycologia 87:72-83, 1995).
 5193 i/t passage through guinea pig (substrate *Salix* bark) Uruguay /I. Conti 4115. Molecular systematics: relationships among *Phialophora* species based on rDNA ITS (Yan et al., Mycologia 87:72-83, 1995).

Phialosimplex caninus Sigler, D.A. Sutton, Gibas, Summerbell & Iwen

- 9569 lymph node, male canine (Vizsla) 14 yr, also present in spleen & liver Park Animal Hospital, Las Vegas, NV D. Mauro /M.G. Rinaldi UTHSC 99-402 [=GenBank GQ169311 ITS =CBS 128033]. Human/animal pathogen: disseminated infection (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010) // thermotolerant: growth equivalent at 30 & 35C // cycloheximide: sensitive (no growth MYC) // molecular systematics: *Phialosimplex* new genus within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).
 10335 pleural fluid & tissue ex human USA /M.G. Rinaldi UTHSC R-3305 [=GenBank GQ169312 SSU =GenBank GQ169313 ITS]. Pigment: yellow // thermotolerant: growth equivalent at 30 & 35C // cycloheximide: sensitive (no growth MYC) // molecular systematics: *Phialosimplex* new genus within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).
 10336 lymph node ex canine USA /M.G. Rinaldi UTHSC 03-926 [=GenBank GQ169314 ITS]. Pigment: yellow // thermotolerant: growth equivalent at 30 & 35C // cycloheximide: sensitive (no growth MYC) // human/animal pathogen: canine infection (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010) // molecular systematics: *Phialosimplex* new genus within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).
 10337 (T *Phialosimplex caninus*) bone marrow aspirate ex 7 yr old female spayed Cocker Spaniel USA /M.G. Rinaldi UTHSC 03-1073 [=GenBank GQ169315 ITS =CBS 128032 =GenBank JN121587 RPB1 =GenBank JN121445 RPB2 =GenBank JN121751 Tsr1 =GenBank JN121892 Cct8 gene]. Pigment: yellow // thermotolerant: growth equivalent at 30 & 35C // cycloheximide: sensitive (no growth MYC) // human/animal pathogen: canine infection (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010) // molecular systematics: *Phialosimplex* new genus within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).
 10738 lymph node ex female canine, 4 year old German Shepherd Concord, CA IDEXX Veterinary Services 27 Apr 2006 /D.A. Sutton UTHSC 06-1722 [=GenBank GQ169316 ITS]. Thermotolerant: growth equivalent at 30 & 35C // cycloheximide: sensitive (no growth MYC) // molecular systematics: *Phialosimplex* new genus within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010) // human/animal pathogen: disseminated infection in canine (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).
 10936 vertebral disc ex canine USA /D.A. Sutton UTHSC R-4151 [=GenBank GQ169317 ITS =GenBank GQ169329 D1D2 =UTHSC 08-801]. Cycloheximide: sensitive (no growth MYC) // human/animal pathogen: disseminated infection in

- canine (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, *Med Mycol* 48:335-345, 2010) // molecular systematics: *Phialosimplex* new genus within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, *Med Mycol* 48:335-345, 2010) // thermotolerant: growth equivalent at 30 & 35C.
- 11502 ex 7 yr old female spayed miniature poodle with abdominal masses; cytology + for hyphae and yeast-like cells; treated with itraconazole Niagara Falls, Ont. Dec-2010 /S Richardson Submitting Lab #10-108515 [=GenBank JX218036 ITS =UAMH 11532]. Human/animal pathogen: disseminated infection in an immunocompetent dog treated with itraconazole (Sigler L, Hanselman B, Ruotsalo K, Tsui GT, Richardson S, *Medical Mycology Case Reports* 2013, <http://dx.doi.org/10.1016/j.mmcr.2012.12.007i>) // culture conditions: grows better @ 30C than @ 35C (fide UAMH 2011) // molecular systematics: ITS sequence 99-100% match to *Phialosimplex caninus* isolates (Sigler et al 2013).
- 11532 swab & tissue ex lymph node repeat specimen ex 7 yr old female spayed miniature poodle with abdominal masses; cytology + variable sized yeast cells & sparse hyphae and yeast-like cells; treated with itraconazole Mississauga Oakville Veterinary Emergency Hospital, Oakville, Ont. DVM (I) L. Sigler; (C) B. Hanselman 17-Jun-2011 /B. Hanselman 52085 [=UAMH 11502]. Human/animal pathogen: repeat specimen grew heavy growth of *Phialosimplex caninus* in pure culture from swab and tissue specimen (fide UAMH 2011) // culture conditions: grows @ 30 C but more slowly @ 35 C (fide UAMH 2011) // cycloheximide: sensitive (no growth MYC) (fide UAMH 2011) // molecular systematics: ITS 100% similarity to UAMH 11502 (fide UAMH 2012).
- 11536 ex 4 yr old Labrador Retriever with cranial mediastinal mass; cytology positive for yeast-like elements University of Tennessee College of Veterinary Medicine, Knoxville, TN D.A. Bemis /D.A. Bemis MI 09-581a [=GenBank JX 866702 ITS]. Human/animal pathogen: thoracic infection in canine (fide D. Bemis 2011) // pigment: yellow.
- 11668 right popliteal lymph node tissue ex labrador retriever 5 yr, with bilateral lymphadenopathy; radiographs suggest possible spleen and liver involvement Ellerslie, Georgia D.A. Bemis (M. Townsell) 10-Aug-2012 /D.A. Bemis MI 12-3410 [=GenBank JX866701 ITS]. Pigment: yellow (fide UAMH 2012) // thermotolerant: growth equivalent at 30 & 35C // human/animal pathogen: lymphadenopathy in canine (fide D.A. Bemis 2012).
- 11743 ex liver & spleen aspirates, 3 yr old male cocker spaniel with 6 mo history of lameness with pain and bone lesions Washington, D.C., USA (I) D.A. Bemis (C) S. Phillips 11-Feb-2013 /D.A. Bemis MI 13-635 [=GenBank KF301603 ITS]. Human/animal pathogen: disseminated infection in canine // pigment: yellow.

Phialosimplex chlamydosporus (Gene & Guarro) Sigler
(syn. *Sagenomella chlamydospora*)

- 10961 (T *Sagenomella chlamydospora*) disseminated infection in a dog (German shepherd cross) isolated post-mortem from many organs including kidneys, mitral valve, abdominal aorta & vertebral discs; histopathology + for hyphae Internal Medicine Clinic, Veterinary School of Madrid, Madrid, Spain M.E. Garcia 2000 /CBS 109945 [=GenBank AJ519984 ITS =IMI 387422 (holotype) =GenBank GQ169326 SSU-ITS =GenBank JN121566 RPB1 =GenBank JN121732 RPB2 =GenBank JN121732 Tsr1 =GenBank JN121879 Cct8 gene]. Cycloheximide: sensitive (MYC) // thermotolerant: growth equivalent at 30 & 35C // molecular systematics: *Phialosimplex* new genus within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, *Med Mycol* 48:335-345, 2010) // human/animal pathogen: disseminated infection in a dog (Garcia ME, Caballero J, Toni I, Garcia E, Martínez de Merlo E, Rollan E, González M,

Blanco JL. 2000, *J Vet Med A* 47:243-249, 2000; Gene J, Blanco JL, Cano J, García ME, Guarro J, *J Clin Microbiol* 41:1722-1725, 2003).

Phialosimplex sclerotialis (W. Gams & Breton) Sigler

- 11658 (T *Sagenomella sclerotialis*) fodder of ray-grass and lucerne France A. Breton Jul-1997 /K. Seifert CBS 366.77 [=GenBank JN121811 Tsr1 gene as CBS 366.77 =GenBank JN121908 Cct8 gene as CBS 366.77 =GenBank JN121661 RPB1 as CBS 366.77 =GenBank JN121505 RPB2 as CBS 366.77 =GenBank AB024592 SSU as CBS 366.77 =IAM 14794]. Thermotolerant: good growth @ 35 C; growth almost equivalent at 30C & 35C // culture conditions: produces numerous white sclerotia on all media.

Phialotubus microsporus Roy & Leelavathy

- 9764 R foot swab, male 75 yr, (biopsy histopathology +) New Zealand 2000 /K. Rogers MR 9298. Mesophilic: NG @ 37C; opt 30C (Roy & Leelavathy, *Trans. Br. Mycol. Soc.* 49:495-498, 1966).

Phlebia expallens see ***Crustomyces expallens***

Phlebia ludoviciana (Burt) Nakasone & Burds.

- 9431 lung, endangered species of crow with fatal infection; histopathology + for hyphae Hawaii M. Wolcott (15076-1) 1998 /M. McGinnis UTMB 5221. Benomyl: resistant // crystals.

Phlebia merismoides see ***Phlebia radiata***

Phlebia radiata Fries (syn. *Phlebia merismoides*)

- 1248 K. Nobles N 13.
3776 CBS 278.29.
3787 CBS 285.73. Culture conditions: produces arthroconidia.
7378 ex *Pinus contorta* Alberta V. Nordin 27 May 1955 /L. Hutchison NOF 190. Mesophilic: NG @ 37C.
7379 ex *Pinus contorta* Alberta M.K. Nobles 18 Aug 1955 /L. Hutchison NOF 271. Mesophilic: NG @ 37C.
8268 Lodgepole pine (*Pinus contorta*) Alberta V.J. Nordin 27-May-1955 /S. Davies FC-182 [=NOF 190]. Biodeteriogen/biodegradation: white rot // pigment: brown.
9674 Bronchial wash Edmonton, Alta 19 Jul 1999 /R. Rennie MY 4428. Crystals // benomyl: tolerant // thermotolerant: good growth @ 37C.

Phlebia rufa (Fr.) M.P. Christ.

- 5220 contaminant ex culture *Hebeloma crustuliniforme* M234C UAMH Sep 1985 /; .
5245 contaminant ex culture *Hebeloma crustuliniforme* M122 UAMH Sep 1985 /; .
5591 contaminant ex fruit body of *Hydnellum chrysinum* (M195) (C) mixed *Picea* woods, Rocky-Clearwater Forest, Alta. 13 Aug 1986 /; .
5804 branch of angiosperm wood Belgium /CBS 736.85.
5876 contaminant ex sputum Perth, W. Australia R. McAleer 1987 /R. McAleer Woodsham. Culture conditions: arthroconidia; colony orange // crystals.
7636 ex bronchial washings /D. Parr Schilder GL. Pigment: orange brown.
7637 ex bronchial washings /D. Parr. Pigment: orange brown.
8731 pulmonary nodule, male 62 yr New Zealand 1996 /D. Parr 96/MI 6261.

Phlebia subochracea (Bres.) Eriksson & Ryvarden

- 8730 bronchial wash, DE - New Zealand 1996 /D. Parr MC 6223. Benomyl: resistant // cycloheximide: sensitive // mesophilic: NG @ 37C.
8831 lung, serial specimen ex female leukemic patient prior to bone

- marrow transplant, opacification of both lung fields, histopathology + Boston, MA J. Daly 1996 /M.G. Rinaldi UTHSC 96-2321. Thermotolerant: grows well @ 37C // crystals: abundant.
- 8832 lung, serial specimen ex female leukemic patient prior to bone marrow transplant, opacification of both lung fields, histopathology + Boston, MA J. Daly 1997 /M.G. Rinaldi UTHSC 97-74. Thermotolerant: grows well @ 37C.
- Phlebia subserialis*** (Bourd. & Galz) Donk
7453 sputum, female 38 yr Calgary, Alta. Foothills Hospital 7 Sep 1993 /R. Rennie MY 4139. Pigment: brown // benomyol: resistant // cycloheximide: sensitive // thermotolerant: grows @ 37C.
- Phlebia tremellosus*** (Schrad.:Fries) Nakasone & Burdsall (syn. *Merulius tremellosus*)
8153 *Populus tremuloides* Alberta M.K. Nobles 1957 /S. Davies FC-168 [=NOF 398]. Biodeteriogen/biodegradation: white rot.
- Phlebiella sulphurea*** (Pers.: Fr.) Ginns & Lefebvre (syn. *Phlebiella vaga*, *Trechispora vaga*)
9182 sporocarp resupinate on poplar wood Forestry Trunk Road, Alta. R.M. Danielson (RMD 3184) 12 Sep 1982 /R.M. Danielson RMD 3184 [=GenBank AY180269]. Pigment: brown.
- Phlebiella vaga* see ***Phlebiella sulphurea***
- Pholiota adiposa*** Fries
7380 ex *Populus tremuloides* Alberta E.J. Carmichael 1956 /L. Hutchison NOF 334. Mesophilic: NG @ 37C.
7381 ex *Populus nigra* v. *italica* Idaho /L. Hutchison NOF 611. Mesophilic: NG @ 37C.
- Pholiota alnicola*** (Fries) Singer
7382 ex *Betula alleghaniensis* Ontario 29 Sep 1950 /L. Hutchison NOF 55. Mesophilic: NG @ 37C // culture conditions: clamps, chlamydospores.
7383 ex *Picea glauca* Alberta /L. Hutchison NOF 477 [=DAOM 25874]. Mesophilic: NG @ 37C // culture conditions: clamps, chlamydospores.
7411 ex tissue explant from basidiocarp on woodchips Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 816) 19 Jul 1993. Culture conditions: produces arthroconidia & chlamydospores.
- Pholiota malicola*** (Kauff.) Smith
5560 mixed *Picea mariana*, *P. glauca*, *Populus* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /; .
- Pholiota mutabilis* see ***Kuehneromyces mutabilis***
- Pholiota nameko*** (T. Ito) S. Ito & Imai
7384 from spawn Japan Y. Hiratsuka Jun 1982 /L. Hutchison NOF 747. Pigment: tan, yellow exudate droplets // mesophilic: NG @ 37C // edible: mushroom.
7385 ex *Fagus crenata* Japan K. Mimura 19 Oct 1973 /L. Hutchison NOF 806. Pigment: tan, yellow exudate droplets // mesophilic: NG @ 37C // edible: mushroom.
8025 cultivated edible mushroom R. Imazeki /S. Davies FC-375 [=ATCC 42261 =IFO 6141]. Edible: mushroom.
- Pholiota sp.***
10435 culture ex root (1542), Culture versus Cloning Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen Jan 28, 1999 /M.L. Berbee UBCtra 1532C. Mycorrhizae: no growth in experimental inoculation (fide T.R. Allen 2003) // culture conditions: no clamps, no arthroconidia // crystals // molecular systematics: Berbee data Oct 04: Sequence matches with those of *Pholiota mixta*, *P. lundbergii* & *P. lenta* (fide M. Berbee).
- Pholiota spumosa*** (Fr.) Sing.
5857 mixed *Picea mariana*, *Pinus contorta* Rocky-Clearwater Forest (C) A. Smreciu 27 Jul 1987 / (C) A. Smreciu.
- Pholiota terrestris*** Overholts
8296 tissue explant ex fruiting body on ground in garden Devonian Botanic Garden, Edmonton, Alta. S.P. Abbott (SA 1057) 21-Sep-1994 /S.P. Abbott (SA 1057).
- Phoma cava* see ***Pleurophoma cava***
- Phoma chrysanthemicola*** Hollos
7757 indoor air of office bldg. ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M20) 29 Sep 1994 /S.P. Abbott (SA-M20). Pigment: black.
- Phoma cruris-hominis*** Punithalingam
4362 (*T Phoma cruris-hominis*) leg lesion, woman London, England Y. Clayton 1977 /IMI 213845.
- Phoma etheridgei*** Hutchison & Hiratsuka
7003 (*T Phoma etheridgei*) ex black gall on stem of *Populus tremuloides* (aspen poplar) nr Whitecourt, Alta. P. Crane (BG-1-16d) Jul 1989 /L. Hutchison NOF 1610 [=DAOM 216539]. Phomalone & other natural products (Ayer & Jimenez, Can. J. Chem. 72:2326-2332, 1994; Ayer, Can. J. Chem. 73:465-470, 1995). Biocontrol: antifungal compounds antagonistic to *Phellinus tremulae* & *Ophiostoma crassivaginata* (Hutchison et al., Can. J. Bot. 74:1424-1431, 1994) // pigment: brown // cycloheximide: sensitive.
7458 ex bark of black galls on trunk of *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (BG-90-2-12e) 28 Sep 1990 /L. Hutchison NOF 1614. Antifungal compounds antagonistic to *Phellinus tremulae* (Hutchison et al, Can. J. Bot. 74:1424-1431, 1994; Ayer, Can. J. Chem. 73:465-470, 1995). Pigment: brick red.
- Phoma eupyrena*** Sacc.
9117 toenail, female 62 yr Alberta Prov. Lab for Southern Alberta 23 Aug 1997 /R. Rennie MY 4392.
9707 ex air in classroom, RCS sample Lethbridge, AB L. Sigler (HC-4-1K) 17 Jan 2000 /L. Sigler (HC-4-1K).
- Phoma exigua*** Desm.
6956 ex *Sonchus arvensis* (perennial sow-thistle) Vegreville, Alta. R. Varma 1989 /R. Varma WD-89-65-II. Pigment: black.
- Phoma glomerata*** (Corda) Wollenw. & Hochapf.
1346 soil Wisconsin N. Backus 1955 /DAOM 41855. Biodeteriogen/biodegradation: diagenic alteration of spar calcite (Jones & Pemberton, Can. J. Earth Sci. 24:903-914, 1987).
4360 emulsion paint treated with chromate Woolwich, U.K. S. Barry 1973 /IMI 178522.
6316 soil Edmonton, Alta. C. Starret Sep 1988 /C. Starret.
7105 shower tile grout Edmonton, Alta. L. Abbott 27 Jan 1992 /L. Abbott. Pigment: black.
7848 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Brooks, Alta. S.P. Abbott (OHS 107) 13 Dec 1993 /S.P. Abbott (OHS 107). Pigment: grey.
7849 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 322) 21 Mar 1994 /S.P. Abbott (OHS 322). Pigment: grey.
9346 elm wood Edmonton, Alta. J.P. Tewari 1997 /J.P. Tewari 2 [=Herb. IMI 377472]. Molecular systematics: Blast match

- 100% ITS similarity to *Peyronella glomerata*; ITS 100% similarity to UAMH 10658; Originally identified as *Microsphaeropsis olivacea* by IMI // culture conditions: conidia pale brown.
- 10658 ex lesions on branch of green ash (*Fraxinus pennsylvanica*) East Park Drive, City of St. Albert, Alta. (C) J. von Platen; (I) K. Basu 03-06 /J. von Platen East Park Drive. Molecular systematics: ITS sequence 100% identical to an isolate from *Prunus* (apricot, AR2785, MD) (fide Dr. Lisa Castlebury, USDA-ARS); ITS sequence matched AJ428531 *Phoma glomerata* at 500 of 502 positions (fide Dr. Lisa Castlebury, USDA-ARS) // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 10659 ex lesions on branch of green ash (*Fraxinus pennsylvanica*) Evergreen Close, City of St. Albert, Alta. (C) J. von Platen; (I) K. Basu 03-06 /J. von Platen Evergreen Close.
- Phoma medicaginis* Malbr. & Roum.**
- 10015 roots of white spruce (*Picea glauca*) seedling Smoky Lake Forest nursery, Smoky Lake AB G. Kernaghan 19 May 2000 /G. Kernaghan.
- Phoma oculo-hominis* Punithalingam**
- 4361 (T *Phoma oculo-hominis*) corneal ulcer ex man Nashville, Tenn. Y. Clayton 1975 /IMI 193307 [=IMI 193307 =CBS 634.92 =GenBank GU238196 LSU =GenBank GU237901 ITS =GenBank GU237701 betatub (tub2)].
- Phoma radicina* (McAlpine) Boerema**
- 11422 swab ex fur of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 11 C.2. Biodiversity: mycobiota of bat caves // molecular systematics: Blast match 100% ITS similarity to *Phoma radicina* FJ427058 CBS 111.79 (fide UAMH 2011).
- Phoma* sp.**
- 381 Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 789 skin scrapings ex leg Edmonton, Alta. J.W. Carmichael 21 Mar 1960 /J.W. Carmichael.
- 859 pus Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 1155 soil & quills ex porcupine paddock Edmonton, Alta. J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
- 1209 soft rot ex cedar cooling tower Toronto, Ont. J.W. Carmichael 1962 /J.W. Carmichael.
- 1214 soft rot ex cedar cooling tower Toronto, Ont. J.W. Carmichael 1962 /J.W. Carmichael.
- 1217 soft rot ex cedar cooling tower Toronto, Ont. J.W. Carmichael 1962 /J.W. Carmichael.
- 1820 moss Edmonton, Alta. J.W. Carmichael 11 Oct 1963 /J.W. Carmichael.
- 3666 soil Wendover, Utah /G.F. Orr PO-0175.
- 3669 contaminant Edmonton, Alta. 21 May 1974 /G.F. Orr.
- 3739 contaminant ex scalp hair culture Calgary, Alta. /G.F. Orr.
- 4092 surface ex spruce lumber wood soaked in copper containing preservative Alta. Research Council, Edmonton L. Sigler Jan 1978 /A. Jobson.
- 4217 culture contaminant ex immunosuppressed patient at autopsy UCLA Medical School D. Howard May 1979 /D. Howard 8225.
- 4525 lichens ex rock Deems Hills, nr. Pheonix, Ariz. L. Sigler 12 Feb 1982 /J.T. Staley.
- 5015 liver biopsy New York I. Weitzman /I. Weitzman 175.
- 6968 indoor air ex RCS strip Edmonton, Alta. L. Sigler (1-O) Jun 1991 /S. Poznanski 2 [=GenBank AY629206]. Molecular systematics: Blast match 99% ITS similarity to some isolates of *Coniothyrium fuckelii* and *Phoma* species.
- 7057 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 18) Aug 1990 /D. Inglis (MR 18). Pigment: black.
- 7059 nectar from *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 891) Aug 1990 /D. Inglis (MR 891).
- 7069 ex *Sonchus arvensis* (perennial sow thistle) Vegreville, Alta. R. Varma 1988 /R. Varma WD88 651.
- 7352 contaminant ex ascospore germination from apothecium of *Microstoma protracta* on ground in litter under *Populus tremuloides* with *Rosa acicularis* Ministik Lake Bird Sanctuary, near New Sarepta, Alta. S.P. Abbott (SA 630A) 26 Apr 1992 /S.P. Abbott (SA 630A). Pigment: brown.
- 8091 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Manning, Alta. S.P. Abbott (OHS 325) 21 Mar 1994 /S.P. Abbott (OHS 325).
- 8092 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 222) 30 Jan 1994 /S.P. Abbott (OHS 222).
- 8093 outdoor air ex RCS strip Beaverlodge, Alta. S.P. Abbott (OHS 324) 5 Apr 1994 /S.P. Abbott (OHS 324).
- 8094 indoor air ex RCS strip from *Apis mellifera* (honeybee) equipment cleaning warehouse Watino, Alta. S.P. Abbott (OHS 328) 23 Apr 1994 /S.P. Abbott (OHS 328).
- 8938 fluid ex lung, male 67 yr, DE - Edmonton, Alta. C. Sand 17 Jun 1997 /R. Rennie MY 3082.
- 9411 contaminant on cornmeal agar plate Microfungus Collection, Devonian Botanic Garden A. Flis 21 Sep 1998 /A. Flis.
- 10670 sponge *Terpios* sp. (black specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 16A. Molecular systematics: BLAST match highest ITS similarity to *Phoma* species.
- Phomopsis bougainvilleicola* M.M. Xiang, Z.D. Jiang & P.K. Chi**
- 11634 ex synovial fluid ex male 61 yr with pre-patellar bursitis and following renal transplant University of Massachusetts, Worcester, MA 2011 /D.A. Sutton UTHSC 11-1180 [=R-4745 =UTHSC 11-1155 =GenBank JX847138 EF1 alpha =GenBank JX847139 ITS =GenBank JX847137 D1D2]. Culture conditions: produced alpha and beta conidia (fide UAMH 2012) // human/animal pathogen: prepatellar bursitis in renal transplant patient (Cariello PF, Wickes BL, Sutton DA, Castlebury LA, Levitz SM, Finberg RW, et al, J Clin Microbiol 51:692-695, 2013 Epub Nov 2012).
- Phomopsis convolvulus* Ormeno-Nunez, Reeleder & Watson**
- 6430 (T *Phomopsis convolvulus*) single alpha-conidium ex leaves field bindweed (*Convolvulus arvensis*) Ste-Anne-de-Bellevue, P.Q. R. Reeleder 1984 /R. Reeleder 8412 [=IMI 312693 =IMI 312959 =DAOM 196873]. Plant pathogen: lesions on field bindweed (Ormeno-Nunez et al, Can. J. Bot. 66:2228-2233:1988).
- Phomopsis* sp.**
- 4832 lychee fruit (Litchi) Edmonton, Alta. L. Sigler Aug 1983 /L. Sigler.
- 9279 excised tissue ex leg lesion (2nd specimen), F 26 yr; 1st specimen not cultured but histopathology showed fungal elements Univ. Washington, Seattle, WA K. LaFe 1998 /K. LaFe 4341912 [=JMM 1042]. Thermotolerant: poor growth @ 37C.
- 9673 lesion ex ankle immunosuppressed female 46 yrs, following liver transplant; histopathology + for fungal elements Quebec G. St-Germain 1999 /G. St-Germain MY-54004. Culture conditions: alpha & beta conidia formed on CER // thermotolerant: grows @ 37C [slower than @ 25C].
- 10186 lung transplant patient Illinois P. Kammeyer (W 5735) /A. Rossman JMM 1027. Benomyl: sensitive (NG 2 ppm) // culture conditions: degenerate, not sporulating when received

- // mesophilic: grows @ 30 C but not @ 35 C.
- 11104 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVIHR14A. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // culture conditions: produced alpha and beta conidia // molecular systematics: Blast match 96-98% ITS similarity to unnamed endophytes, *Phomopsis* sp. & *Diaporthe* sp. (fide UAMH 2010).
- Phycomyces blakesleeanus*** Burgeff
 189 Cutter + mating type 190.
 190 Cutter - mating type 189.
 288 Dr. Munroe.
 666 lung ex *Peromyscus* Keg River, Alberta J.W. Carmichael Aug 1959 /J.W. Carmichael -.
 667 lung ex *Peromyscus* Fort Vermillion, Alta. J.W. Carmichael Aug 1959 /J.W. Carmichael -.
- Phycomyces nitens*** Kunze
 1745 cat dung ex basement Vancouver, B.C. Spencer /R.J. Bandoni B1.
- Pichia anomala* see ***Wickerhamomyces anomalus***
- Pichia burtonii* see ***Hyphopichia burtonii***
- Pichia capsulata* see ***Kuraishia capsulata***
- Pichia holstii* see ***Nakazawaea holstii***
- Pichia labacensis*** Cimerman & Kockova-Kratochvilova
 8469 (T *Pichia labacensis*) cellulose factory Yugoslavia A. Cimerman & A. Kockova-Kratochvilova /N. Gunde-Cimerman K-100 [=ATCC 60432 =ATCC 60769]. SCP from cellulose factory waste water. Application: suitable for the production of fodder yeast from ultrafiltered spent sulfite liquor (Cimerman & Kockova-Kratochvilova, Z. allg. Mikrobiol. 24:219-222, 1984).
- Pichia methylivora* see ***Ogataea methylivora***
- Pichia minuta* see ***Ogataea minuta***
- Pichia minuta* var. *nonfermentans* see ***Ogataea nonfermentans***
- Pichia pini* see ***Ogataea pini***
- Pichia scolyti* see ***Yamadazyma scolyti***
- Pichia silvicola* see ***Wickerhamomyces silvicola***
- Pichia* sp.**
 192 rotting bananas Edmonton, Alta. J.W. Carmichael 26 Oct 1948 /J.W. Carmichael.
- Pichia stipitis* see ***Scheffersomyces stipitis***
- Pidoplitckoviella terricola*** Kirilenko
 9395 (T *Pidoplitckoviella terricola*) rhizosphere of oak (*Quercus rubra*) Ukraine VKM F-2016 /CBS 180.77 [=IMI 208564]. Benomyl: sensitive (NG 2 ppm).
- Piedraia hortai*** (Brumpt) Fonseca & Leao
 4341 human hair A.C. Batista /CBS 480.64. Pigment: yellow-brown.
- Pilaira anomala*** (Cesati) Schroeter
 3193 rabbit dung Quantock Hills, Somerset, U.K. H. Dade 1950
- /IMI 43023.
- Pilidium concavum* see ***Hainesia lythri***
- Pilobolus sphaerosporus*** (Grove) Palla
 1312 sandy soil ex black bear cubs paddock Alberta Game Farm, Edmonton /see [=GenBank EJ160953 ITS =GenBank EF565872 (LSU mitochondrial) =GenBank EU595653 SSU =GenBank EF565872 LSU]. Molecular systematics: rDNA sequence matches with UAMH 3070 (fide M.K. Foos April 29, 2005); phylogeny of *Pilobolaceae* (Foos KM, May NL, Beach DL, Pomper M, Sheehan KB, Ruch DG, Mycologia 103:36-44, 2011) // culture conditions: sporulates on CER without cellophane.
 3070 *Lactuca sativa* var. delta Goole, Yorkshire, U.K. H. Wilcox 1966 /IMI 118384 [=ATCC 22499 =GenBank DQ211052 SSU =GenBank EF565869 LSU =GenBank DQ059382 ITS]. Molecular systematics: phylogeny of *Pilobolaceae* (Foos KM, May NL, Beach DL, Pomper M, Sheehan KB, Ruch DG, Mycologia 103:36-44, 2011) // culture conditions: sporulates on CER without cellophane.
- Pilobolus umbonatus*** Buller
 7297 ex deer dung Peel Co., Albion Twp., Ont. J. Scott 9 Dec 1990 /D. Malloch JS 126 [=GenBank FJ160956 ITS =GenBank DQ211050 SSU =GenBank EF565870 LSU]. Molecular systematics: phylogeny of *Pilobolaceae* (Foos KM, May NL, Beach DL, Pomper M, Sheehan KB, Ruch DG, Mycologia 103:36-44, 2011) // culture conditions: sporulates on CER without cellophane.
 7298 ex rabbit dung Peel Co., Albion Twp., Ont. J. Scott 9 Dec 1990 /D. Malloch JS 137 [=GenBank DQ211051 SSU =GenBank EF565871 LSU =GenBank DQ058412 ITS]. Molecular systematics: phylogeny of *Pilobolaceae* (Foos KM, May NL, Beach DL, Pomper M, Sheehan KB, Ruch DG, Mycologia 103:36-44, 2011) // culture conditions: sporulates on CER without cellophane.
- Piloderma bicolor* see ***Piloderma fallax***
- Piloderma fallax*** (Libert) Stalpers (syn. *Piloderma bicolor*)
 9439 sporocarp resupinate on sprucebark in spruce-feather moss stand Bragg Creek, Alta. S. Visser 13 Sep 1981 /R.M. Danielson RMD 3119. Corticocin (G. Kernaghan, pers. comm.). Pigment: brown.
- Piptoporus betulinus*** (Bull.) P. Karst.
 11651 ex living sugar maple (*Acer saccharum*) High Park, Toronto, ON D.Tudor Aug-2010 /D Tudor UTHP 0308. Culture conditions: clamps.
- Piptoporus pseudobetulinus*** (Murashk.) Pilat
 6220 on dead standing *Populus balsamifera* in sedge meadow with *Ulnus americana* & *Tilia americana* Letterbreen, Grey Co., Ont. (C) L. Banks & G. Thorn 10 Jun 1987 /G. Thorn T443 [=TRTC RGT 870610/01].
 6221 on dead standing *Populus balsamifera* in *Larix laricina* swamp Letterbreen, Grey Co., Ont. (C) L. Banks & G. Thorn 10 Jun 1987 /G. Thorn T444 [=TRTC RGT 870610/02].
- Pithoascus exsertus* see ***Microascus exsertus***
- Pithoascus intermedius* see ***Microascus intermedius***
- Pithoascus langeronii* see ***Eremomyces langeronii***
- Pithoascus nidicola* see ***Microascus nidicola***

Pithoascus platysporus Arx & Veenb.-Rijks

- 9259 (T *Pithoascus platysporus*) agricultural soil Wageningen, Netherlands J.H. van Emden /CBS 419.73. Benomyl: resistant (2 ppm) (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002) // cycloheximide: sensitive (no growth MYC) // culture conditions: sterile, needs reexamination from type (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002) // systematics/taxonomy: Microascaceae, affinity to *Kernia* or *Lophotrichus* (Abbott, Lumley & Sigler, Mycologia 94:362-369, 2002).

Pithoascus stoveri see ***Microascus stoveri******Pithomyces chartarum*** (Berkeley & Curtis) Ellis

- 1351 air Kansas C.T. Rogerson (B354-12) 1957 /DAOM 57103.
6139 black stained vinyl pool liner Edmonton, Alta. A. Flis (7eB) Jun 1988 /W. Campbell. Biodeteriogen/biodegradation.
6524 indoor air ex RCS strip Edmonton, Alta. L. Sigler (6a) 23 Oct 1989 /S. Poznanski 6.
7090 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 37) Aug 1990 /D. Inglis (MR 37).
7709 ex indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Fairview, Alta. S.P. Abbott (OHS 80) 2 Dec 1994 /S.P. Abbott (OHS 80).
9667 RCS strip ex outside air Lethbridge, AB L. Sigler (RO-1-1K) 23 Nov 1999 /R. Ovcharovitch.

Plectosphaerella cucumerina (Lindf.) W. Gams (morph*Plectosporium tabacinum*)

- 11633 ex urine ex female German shepherd dog, 3 yr old, with disseminated infection Veterinary Teaching Hospital, Blacksburg, VA 2011 /D.A. Sutton UTHSC 11-2461 [=UTHSC R-4811 =UAMH 11702 (different fungus from same dog) =GenBank JX431887 D1D2 =GenBank JX431888 ITS]. Human/animal pathogen: antifungal therapy itraconazole followed by itraconazole + terbinafine (Troy GC et al 2013); disseminated infection in a canine associated with two fungi (Troy GC, Panciera DL, Pickett JP, Sutton DA, Gene J, et al, Med Mycol 51:455-460, 2013) // systematics/taxonomy: description of *Lecytophora canina* (Troy GC, Panciera DL, Pickett JP, Sutton DA, Gene J, et al, Med Mycol 51:455-460, 2013).

Pleospora herbarum (Fries) Rabenhorst (morph *Stemphylium botryosum*)

- 2628 soil ex mixed wood Guelph, Ont. Aug 1964 /G.L. Barron 10280 [=ATCC 16083]. Cellulolytic // culture conditions: degenerate, not sporulating when received.
7015 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 549) Aug 1990 /D. Inglis (MR 549).
8053 outside air ex RCS strip Lethbridge, Alta. S.P. Abbott (SA-M251) 30 May 1995 /S.P. Abbott (SA-M251). Pigment: brown // culture conditions: sporulates on tap water agar in window.

Pleosporales

- 10669 sponge *Halichondria* sp. (purple specimen) ex water contained in interstitial space Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 12C [=GenBank KM275470 ITS =GenBank KM275471 D1D2]. Molecular systematics: BLAST match 99% D1D2 similarity to sequences from a marine sponge (JN903564) and plant endophyte (FJ890418) (fide UAMH 2014); no ITS sequence match to any identified fungus (fide UAMH 2014); compare fungi from the Atlantic marine sponge *Drumacidon reticulatum*. // culture conditions: produces pycnidia.

Pleuroascus nicholsonii Masee & Salmon

- 3979 (T Neotype *Pleuroascus nicholsonii*) dung of wood rat Lake Memet, Riverside Co., Calif. R.K. Benjamin 10 Nov 1968 /R.K. Benjamin RSA 1769 [=TRTC 46371 =CBS 345.73 =GenBank AF096196 LSU =ATCC 22102 =GenBank AF096182 SSU]. Pigment: yellow // systematics/taxonomy: morphology and development of ascogonia (Plishka M, Tsuneda A, Currah RS, Mycological Research 112 (in press), 2008).

Pleurophoma cava (Schulzer) Boerema, Loer. & Hamers(syn. *Phoma cava*)

- 7652 ex surface of desert rock Valley of Fire, Las Vegas, Nev. L. Sigler Aug 1994 /L. Sigler.

Pleurophoma pleurospora (Sacc.) Hohn.

- 9299 lesion on leg after gardening, female 56 yr, heart transplant patient with diabetes mellitus, DE + Texas 1986 /M.G. Rinaldi UTHSC 87-144 [=CBS 101461]. Human/animal pathogen: subcutaneous infection in cardiac transplant patient (Dooley et al., J. Infect. Dis. 159:503-507, 1989).
9831 mass, rt lower leg, female 89 yr; histopathology showed dematiaceous hyphae Victoria, TX 2000 /Texas Dept. of Health BY 1357. Human/animal pathogen: subcutaneous phaeohyphomycosis // pigment: black.

Pleurophomopsis lignicola Petrak

- 8616 subcutaneous leg abscess, male farmer, 74 yr, treated with prednisolone for 10 yr, DE pigmented hyphal elements France D. Chabasse Aug 1992 /D. Chabasse 2286-94. Human/animal pathogen: first case of subcutaneous abscess caused by *Pleurophomopsis lignicola* (Chabasse, de Bievre et al., J. Med. Vet. Mycol. 33:415-417, 1995).
9005 pleural fluid, tissue section+ Miami, FL D. Maurer & S. Hernandez 1997 /D. Maurer JMH 45/432. Pigment: brown.
9112 abscess on right forearm, male lung transplant patient 30yr, DE+ Australia A. Woodgyer 1997 /A. Woodgyer 9706678. Pigment: black.
9227 tissue from right maxillary sinus, male 59 yr; histopathology showed fungus ball Munster, IN Jan 1992 /CDC B 5369 [=ATCC 90281 =IMI 354512]. Pigment: brown // human/animal pathogen: maxillary sinusitis (Padhye et al., J. Clin. Microbiol. 35:2136-2141, 1997).

Pleurophragmium acutum (Grove) Ellis

- 2576 CBS.

Pleurotus calypratus (Lindbl.:Fries) Sacc.

- 7960 cultivated edible mushroom from Weijer /S. Davies FC-024. Edible: mushroom.

Pleurotus citrinopileatus Singer

- 8005 Q. Yang (A-11) /S. Davies FC-370 [=ATCC 60892]. Edible: mushroom.

Pleurotus cornucopiae (Paul.:Fries) Gillet

- 7959 cultivated edible mushroom from Weijer /S. Davies FC-021. Edible: mushroom.
8023 ex *Ulmus* sp. Czechoslovakia O. Hilber (4R) /S. Davies FC-405 [=ATCC 42045]. Edible: mushroom.

Pleurotus cystidiosus O.K. Miller (morph *Antromyopsis macrocarpa*)

- 8021 cultivated edible mushroom from B. Chalmers, Western Biologicals Aldergrove, B.C. /S. Davies FC-408. Edible: mushroom.
8022 ex telephone pole Taiwan P. Chen /S. Davies FC-406 [=ATCC 28785]. Edible: mushroom.

Pleurotus dryinus (Pers.:Fr.) Kummer

- 3848 contaminant on culture of *Pleurotus* from Acer St. Foy, Quebec R. Cauchon 1972 /DAOM 148674 [=Weresub 75M-47 =CRFQ 10580].
- 6574 ex sporocarp on Acer rubrum Algonquin Park, Canisbay Twp., Nipissing District, Ont. F. Pasqualoni 30 Sep 1989 /G. Thorn FP 2.

Pleurotus eryngii (DC:Fries) Quelet

- 7958 cultivated edible mushroom from Weijer /S. Davies FC-018. Edible: mushroom.

Pleurotus flabellatus (Berk. & Br.) Sacc.

- 8102 Oil palm waste, dikaryotic K.M. Graham /S. Davies FC-403 [=ATCC 38137]. Benomyl: tolerant @ 2 ppm // edible: mushroom; genetics (Malays. Appl. Biol. 6:59-66, 1977) // culture conditions: cold sensitive, does not survive below 15C, recommended growth 24-30C // thermotolerant: grows @ 40C.
- 8103 S. Davies FC-425. Benomyl: tolerant @ 2 ppm // edible: mushroom // culture conditions: cold sensitive, does not survive below 15C, recommended growth 24-30C // thermotolerant: grows @ 40C.

Pleurotus japonicus see ***Lampteromyces japonicus******Pleurotus ostreatus*** (Jacq. ex Fr.) Kummer

- 5064 R.J. Bandoni Dunn 3280.
- 7961 cultivated edible mushroom from Weijer Florida /S. Davies FC-026. Edible: oyster mushroom.
- 7963 cultivated edible mushroom from Weijer (#2) Slovakia /S. Davies FC-258. Edible: oyster mushroom // application: pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhalt R, Chemosphere 77:687-692, 2009); white rot.
- 7964 cultivated edible mushroom from Weijer (#4) Slovakia /S. Davies FC-260. Edible: oyster mushroom // biodeteriogen/biodegradation: high biodegradation and mineralization of polychlorinated biphenyl congeners (Beaudette et al., Appl. Env. Microbiol. 64:2020-2025, 1998) // application: metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999); enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999).
- 7965 cultivated edible mushroom from Weijer (#11) Pintatopez /S. Davies FC-262. Edible: oyster mushroom.
- 7966 cultivated edible mushroom from Weijer (#14) /S. Davies FC-263. Edible: oyster mushroom.
- 7967 cultivated edible mushroom from Weijer (#27) Slovakia /S. Davies FC-265. Edible: oyster mushroom.
- 7968 cultivated edible mushroom from Weijer (#38) Slovakia /S. Davies FC-270. Edible: oyster mushroom.
- 7969 cultivated edible mushroom from Weijer (#48) W. Germany /S. Davies FC-272. Edible: oyster mushroom // culture conditions: clamps (fide UAMH 2012).
- 7970 cultivated edible mushroom from Weijer (#53) Austria /S. Davies FC-273. Edible: oyster mushroom.
- 7971 cultivated edible mushroom from Weijer (#55) Morris /S. Davies FC-274. Edible: oyster mushroom.
- 7972 cultivated edible mushroom from Weijer (#67) Belmondo /S. Davies FC-275. Edible: oyster mushroom // biodeteriogen/biodegradation: high degradation of polychlorinated biphenyl congeners (Beaudette et al., Appl. Env. Microbiol. 64:2020-2025, 1998) // application: enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999); laccase activity (Tinoco, Pickard & Vazquez-Duhalt, Lett. App. Microbiol. 32:331-335, 2001); pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhalt R, Chemosphere 77:687-692, 2009).

- 7974 cultivated edible mushroom from Weijer (#76) Slovakia /S. Davies FC-279. Edible: oyster mushroom.
- 7975 cultivated edible mushroom from Weijer (#83) /S. Davies FC-280. Edible: oyster mushroom.
- 7978 cultivated edible mushroom from Weijer (#92) Zadrzil /S. Davies FC-283. Edible: oyster mushroom.
- 7979 cultivated edible mushroom from Weijer (#93) Zadrzil /S. Davies FC-284. Edible: oyster mushroom.
- 7980 cultivated edible mushroom from Weijer (#94) Zadrzil /S. Davies FC-285. Edible: oyster mushroom // application: metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999); enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999); laccase activity (Tinoco, Pickard & Vazquez-Duhalt, Lett. App. Microbiol. 32:331-335, 2001).
- 7981 cultivated edible mushroom from Weijer (#116) /S. Davies FC-288. Edible: oyster mushroom.
- 7982 cultivated edible mushroom from Weijer (#124) Slovakia /S. Davies FC-289. Edible: oyster mushroom // application: evaluation of white rot fungi for bioremediation of waste water (Robles-Vargas D, Montoya-Castillo SM, Avelar-Gonzalez FJ, et al, J Environ Sci Health A Tox Hazard Subst Environ Eng 47:589-597, 2012).
- 7983 cultivated edible mushroom from Weijer (#125) /S. Davies FC-290. Edible: oyster mushroom.
- 7984 cultivated edible mushroom from Weijer (#130) Hungary /S. Davies FC-292. Edible: oyster mushroom.
- 7985 cultivated edible mushroom from Weijer (#131) Hungary /S. Davies FC-293. Edible: oyster mushroom.
- 7986 cultivated edible mushroom from Weijer (#132) Hungary /S. Davies FC-294. Edible: oyster mushroom.
- 7987 cultivated edible mushroom from Weijer (#138) /S. Davies FC-296. Edible: oyster mushroom.
- 7990 cultivated edible mushroom from Weijer (#VII) /S. Davies FC-300. Edible: oyster mushroom // application: enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999).
- 7991 cultivated edible mushroom from Weijer (#IX) /S. Davies FC-301. Edible: oyster mushroom.
- 7993 cultivated edible mushroom from J. Lu China /S. Davies FC-395. Edible: oyster mushroom // culture conditions: clamp connections.
- 8959 R.M. Danielson (RMD 2552) /R.M. Danielson RMD 2552. Edible: oyster mushroom.
- 9378 Xalapa, Mexico Ecology Institute /M. Pickard IE8. Culture conditions: fruiting bodies produced // application: metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999) // edible: oyster mushroom.
- 10615 fluid ex bronchial wash, female 62 yr Royal Columbian Hospital, B.C. /R. Rennie MY 74 [=BC CDC A5MR439]. Thermotolerant: grows slower @ 35C than at 30C.

Pleurotus pulmonarius (Fries) Quelet

- 7973 cultivated edible mushroom from Weijer (#69) Moravia /S. Davies FC-277. Edible: mushroom.
- 7976 cultivated edible mushroom from Weijer (#84) Moravia /S. Davies FC-281. Edible: mushroom.
- 7977 cultivated edible mushroom from Weijer (#91) Moravia /S. Davies FC-282. Edible: mushroom.
- 7989 cultivated edible mushroom from Weijer (#142) Slovakia /S. Davies FC-298. Edible: mushroom // biodeteriogen/biodegradation: high biodegradation of polychlorinated biphenyl congeners (Beaudette et al., Appl. Env. Microbiol. 64:2020-2025, 1998) // application: pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhalt R, Chemosphere 77:687-692, 2009) // culture conditions: clamps; fruiting bodies produced on PDA.
- 7992 S. Davies FC-304. Edible: mushroom //

biodeteriogen/biodegradation: high biodegradation of polychlorinated biphenyl congeners (Beaudette et al., Appl. Environ. Microbiol. 64:2020-2025, 1998) // application: enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999); laccase activity (Tinoco, Pickard & Vazquez-Duhalt, Lett. App. Microbiol. 32:331-335, 2001) // culture conditions: clamp connections (fide UAMH 2013).

Pleurotus sajor-caju see *Lentinus sajor-caju*

Pleurotus sapidus (Schulzer) Kalchbrenner

8031 dikaryon ex *Populus tremuloides* R. Kurtzman /S. Davies FC-402 [=ATCC 36568]. Culture conditions: fruiting in culture (Mycologia 70: 179-184, 1978; Mycologia 68: 286-295, 1976; Mushroom Science 9: 557-565, 1974) // edible: mushroom.

Pleurotus sp.

6215 L. Han-chan 1.

Plunkettomyces littoralis see *Gymnascella littoralis*

Pochonia chlamydosporia var. *catenulata* (Kamyschko ex G.L. Barron & Onions) Zare & W. Gams (syn. *Verticillium chlamydosporum* var. *catenulatum*)

2630 soil ex mixed wood Guelph, Ontario Jun 1963 /G.L. Barron 10250 [=ATCC 16683 =CBS 504.66 =IMI 113164].

Pochonia chlamydosporia var. *chlamydosporia* Zare & W. Gams (morph *Cordyceps chlamydosporia*)

1775 soil Christie Is., Howe Sound, B.C. J.W. Carmichael 13 Jun 1963 /J.W. Carmichael. Pochonins resorcylic acid lactones and pseurotin A (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003). Chemotaxonomy: pochonins structurally related to monordins (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003).

1776 soil Christie Is., Howe Sound, B.C. J.W. Carmichael 13 Jun 1963 /J.W. Carmichael. Pochonins resorcylic acid lactones and pseurotin A (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003). Chemotaxonomy: pochonins structurally related to monordins (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003).

1845 G.F. Orr OAP 911. Pochonins resorcylic lactones and pseurotin A (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003); pR2 - compound with monorden-like UV spectrum (Stadler et al.). Chemotaxonomy: pochonins structurally related to monordins (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003).

2439 soil ex hair bait Japan /N.M. McClung 54-H. Pochonins resorcylic acid lactones and pseurotin A (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003).

2736 soil Mozambique /C. Magalhaes 1062-86. Pochonins resorcylic acid lactones and pseurotin A (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003). Chemotaxonomy: pochonins structurally related to monordins (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003).

4324 dead leaves ex *Euphorbia pulcherima* (poinsettia) D.M. Dixon 1980 /D.M. Dixon G-7a-1. Chemotaxonomy: pochonins structurally related to monordins (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003).

5619 soil Conca de Barbera, Catalonia, Spain L. Punsola 12 Apr 1980 /J. Guarro FMR 1509.

Pochonia suchlasporia var. *catenata* (W. Gams & Dackman) Zare & W. Gams (syn. *Verticillium suchlasporium* var. *catenulatum*)

6596 decaying mushroom Algonquin Park, Canisbay Twp., Nipissing District, Ont. D. Malleau (6) 30 Sep 1989 /G. Thorn Malleau 6 [=CBS 495.90 =GenBank AF108497 =GenBank AF108469 J. PS1 and PS2 metabolites (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003). Pigment: yellow // chemotaxonomy: pochonins structurally related to monordins; secondary metabolites of *Pochonia* species (Stadler M, Tichy H-V, Katsiou E, Hellwig V, Mycological Progress 2:95-122, 2003).

Podosordaria jugoyasan (Hara) Furuya & Udagawa

7401 Quebec G. St-Germain (MY 3825) /R.C. Summerbell FR 3281. Odor: sweet.

Podospora appendiculata (Auersw.) Niessl

6869 rabbit dung New Brunswick D. Malloch Jun 1990 /R. Khan JS 107.

7225 ex dry deer dung Little Lepreau, Charlotte Co., New Brunswick D. Malloch Jun 1990 /D. Malloch DM 491 [=ATCC 90626]. Appenolides A, B, C, antifungal furanones active against *C. albicans* & some coprophilous fungi (Wang et al., J. Nat. Prod. 56:341-344, 1993).

Podospora fibrinocaudata Khan & Krug

6882 (T) dusky footed wood rat dung Crystal Springs Reservoir, San Mateo Co., Cal. D. Malloch 30 Dec 1969 /R. Khan TRTC 48343.

Podospora setosa (Winter) Niessl

4759 coyote dung Fort McMurray, Alta. L. Sigler Mar 1983 /R.S. Currah 81-193. Cellulolytic.

5368 seeds *Corallorhiza maculata* (#163) Alberta L. Sigler Apr 1986 /L. Sigler.

6881 rabbit dung in snow Palgrave, Peel Co., Ont. J. Scott /R. Khan JS 127. Pigment: black.

Polychaeton see *Scorias spongiosa*

Polychaeton sp.

4773 sooty mold /M. Pickard [=DAOM 155925].

4774 sooty mold /M. Pickard [=DAOM 166385].

Polypaecilum capsici see *Leuconeurospora capsici*

Polypaecilum insolitum G. Sm.

11254 (T) *Polypaecilum insolitum* ear, man United Leeds Hospital, Leeds, Yorkshire, UK C.J. La Touche (No. SC150) Nov-1961 /CBS 384.61 [=ATCC 18164 =IFO 8788 =IMI 075202 =LSHB BB414 =MUCL 3078 =QM 7961 =Genbank JN121911 Cct8 =Genbank JN121667 RPB1 =Genbank JN121510 RPB2 =Genbank JN121816 Tsr1]. Pigment: yellow on PDA // culture conditions: grows better @ 30C than @ 35C (fide UAMH 2010) // molecular systematics: phylogeny of *Penicillium* and related taxa in the *Trichocomaceae* (Houbrakken J, Samson RA, Stud Mycol 70:1-51, 2011).

11255 toe nail ex female 76 yr Hamburg, Germany H. Listemann Apr-1990 /CBS 181.90. Human/animal pathogen: onychomycosis // pigment: yellow on PDA.

Polyporus adustus see *Bjerkandera adusta*

Polyporus alboluteus see *Pycnoporellus alboluteus*

Polyporus brumalis (Pers.) Fr.

11522 ex *Morus* stump Madison, WI T.J. Volk /S. C. Robinson

- FP102389. Biodeteriogen/biodegradation: saprophyte of dead wood of various hardwood genera // culture conditions: clamps, chlamydospores.
- 11652 on unidentified dead hardwood log Koffler Scientific Reserve at Jokers Hill, ON D. Tudor Oct-2010 /D Tudor DT1023 [=TRTC 167759]. Biodeteriogen/biodegradation: influence of pH on pigment formation by lignicolous fungi (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013) // culture conditions: clamps.
- Polyporus fissilis* see *Tyromyces fissilis*
- Polyporus lentus* see *Polyporus tuberaster*
- Polyporus perennis* see *Coltricia perennis*
- Polyporus radicans* Schweinitz
6724 ex soil under *Acer saccharum*, *Fagus* & *Tsuga* spp. Equestrian Conservation Area, Milton, Ont. G. Thorn 27 Sep 1990 /G. Thorn T-683 [=DAOM 212548 =RGT 900927/03].
- Polyporus squamosus* (Huds.) Fr.
11653 on dead beech wood High Park, Toronto, ON D. Tudor Aug-2010 /D Tudor DT36810 [=TRTC 167758]. Biodeteriogen/biodegradation: influence of pH on pigment formation by lignicolous fungi (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013) // culture conditions: forms clamps and cystidioles.
- Polyporus tomentosus* see *Inonotus tomentosus*
- Polyporus tuberaster* (Pers.:Fr.) Fr. (syn. *Polyporus lentus*)
6391 K. Cartwright /W.A. Ayer [=CBS 283.33].
- Polyporus umbellatus* Fries
8032 Germany H. Lyr /S. Davies FC-393 [=ATCC 60546 =CBS 483.72]. Edible: mushroom.
- Polyporus versicolor* see *Trametes versicolor*
- Polyporus zonatus* see *Trametes zonatus*
- Polyscytalum fecundissimum* Riess
1501 oak litter Grange-over-Sands U.K. T.F. (BC-355) Hering 1960 /IMI 84299 [=UAMH 3082].
3082 oak litter Grange-over-Sands U.K. T.F. (BC-355) Hering 1960 /IMI 84299 [=UAMH 1501]. Crystals.
7016 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 352) Aug 1990 /D. Inglis (MR 352). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- Polyscytalum pustulans* (Owen & Wakefield) Ellis
3286 potato Fuchs /IMI 127628 [=CBS 336.54].
- Polytolypa hystricis* Scott & Malloch
7299 (*T. Polytolypa hystricis*) ex porcupine dung (*Erethizon dorsatum*) Stoneleigh Twp. 16, Muskoka District, Ont. J. Scott 16 Sep 1990 /D. Malloch JS 189 [=TRTC 51349 (holotype) =GenBank AY176718 (LSU) =Genbank AY176700 (SSU) =GenBank AY527405 (ITS)]. Polytolypin, a pentacyclic triterpenoid, antifungal against *C. albicans* & some coprophilous fungi (Gamble et al., J. Nat. Prod. 58:1984-1986, 1995). Pigment: yellow green on OAT (fide UAMH 2013); brown // culture conditions: produced ascospores.
- Poria rixosa* see *Junghuhnia collabens*

***Poria* sp.**

- 8269 Alberta L.L. Kennedy (T-335) /S. Davies FC-047. Biodeteriogen/biodegradation: brown rot // pigment: brown.

Poria weirii see *Phellinus weirii*

Poria xantha see *Antrodia xantha*

Potebniamyces balsamicola* var. *boycei Funk (morph *Phacidiopycnis boycei*)

- 6325 canker on *Abies amabilis* Kitwanga, BC A. Funk /A. Funk DAVP 23852. Crystalline phacidin (Funk & McMullan, Can. J. Microbiol. 20:422-425, 1974). Mesophilic: opt. 15C (fide A. Funk).

Preussia fleischhakii (Auersw.) Cain

- 7043 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 298) Aug 1990 /D. Inglis (HD 298). Pigment: pink // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Preussia funiculata (Preuss) Fuckel

- 7386 contaminant in UAMH 2488 lyophil UAMH S.P. Abbott (SA-M252) 21 Aug 1993 /S.P. Abbott (SA-M252). Pigment: pink.

***Preussia* sp.**

- 11443 swab ex fur of living male little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 59 C.2. Pigment: yellow on OAT (fide UAMH 2011) // biodiversity: mycobiota of bat caves // molecular systematics: Blast match highest ITS similarity (98-99%) to *Preussia intermedia* (fide UAMH 2012).

Preussia terricola Cain

- 1939 soil Tokyo, Japan Jun 1962 /S.-I. Udagawa NHL 2312. Cellulolytic.

Preussia typharum (Saccardo) Cain

- 7765 ex fingernail, male 27 yr Edmonton, Alta. CFB Edmonton 11 Aug 1994 /R. Rennie MY 3500A. Cycloheximide: sensitive // pigment: pink // thermotolerant: growth @ 35C // cellulolytic.
8474 plant debris submerged in Shatt al-Arad river Karma, Basrah, Iraq S.K. Abdullah Aug 1995 /J. Guarro FMR 5543.

Protomyces inouyei P. Hennings

- 1743 ex *Crepis japonica* /R.J. Bandoni [=ATCC 16175 =IFO 6627 =Nagao Inst. 2171 =GenBank AF170967 (Btubulin)].

Prototheca filamenta see *Trichosporon asteroides*

Pseudaegerita corticalis (Peck) Crane & Schoknecht

- 8475 decaying *Salix* spp. twig submerged in stream Artiga de Lin, Valley of Aran, Catalonia, Spain S.K. Abdullah 13 Nov 1995 /J. Guarro FMR 5581.

Pseudallescheria africana (v. Arx & Franz) McGinnis et al. (syn. *Petriellidium africanum*, *Petriellopsis africana*; morph *Scedosporium an. Pseudallescheria africana*)

- 4000 (*T. Petriellidium africanum*) sandy soil Tsiutsabis, S.W. Africa G. Franz (105) /CBS 311.72 [=GenBank AJ889603 =GenBank AJ890132 =GenBank AJ890218 =GenBank AJ888425 =GenBank AY879797 (ITS) =GenBank AF027667 (LSU)]. Cellulolytic // molecular systematics: PCR-based identification (Wedde et al., J. Med. Vet. Mycol. 36:61-67, 1998); molecular variability in *Pseudallescheria*; phylogeny of *Scedosporium*,

Pseudallescheria and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006; Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008; Lackner & de Hoog, IMA Fungus 2:39-48, 2011); transfer to *Petriellopsis* (Gilgado, Gene, Cano & Guarro, Int J Syst Evol Microbiol 57:2171-2178, 2007) // culture conditions: ascomata not produced.

Pseudallescheria angusta (Malloch & Cain) McGinnis, Padhye & Ajello

3984 (T *Petriellidium angustum*) sewage half-digestion tank Dayton, Ohio, USA D. Malloch /CBS 254.72 [=ATCC 22956 =DAOM 146023 =DAOM 146085 =TRTC 45321 =GenBank AJ889604 =GenBank AJ890129 =GenBank AJ890214 =GenBank AJ888414 =GenBank AY228114 (ITS) =GenBank AF027668 (LSU)]. Cellulolytic // molecular systematics: PCR-based identification (Wedde et al., J. Med. Vet. Mycol. 36:61-67, 1998); molecular variability in *Pseudallescheria boydii*; molecular phylogeny supports species distinction from *Pseudallescheria boydii* (Gilgado F, Cano J, Gene J, Guarro J, J Clin Microbiol 43:4930-4942, 2005); phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008; Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); rapid identification of *Pseudallescheria* and *Scedosporium* (Lackner M, Najafzadeh MJ, Sun J, Lu Q, Hoog GS, Appl Environ Microbiol 126-133, 2012) // culture conditions: ascomata produced.

Pseudallescheria boydii (Shear) McGinnis, Padhye & Ajello (morph *Graphium eumorphum*, *Scedosporium boydii*, See also *Scedosporium apiospermum*)

2 yellow grains from mycetoma of 32 years duration in Portuguese immigrant Edmonton, Alta. E.S. Keeping 9 May 1934. Human/animal pathogen: mycetoma in Portuguese immigrant (Dowding ES, Canadian Medical Association Journal 33:28-32, 1935) // culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

153 N.F. Conant. Cellulolytic // culture conditions: produced ascomata.

1101 brazil nut California /G.F. Orr UCLAB-M-148. Cellulolytic // culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

1265 swab ex ear canal St. Albert, Alta. J.W. Carmichael 6 Apr 1962 /J.W. Carmichael. Human/animal pathogen: chronic otitis media // culture conditions: produced ascomata.

1865 G.F. Orr PV 1. Culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

2217 pus ex ear of 12 yr old male High Prairie, Alta. J.W. Carmichael Nov 1964. Human/animal pathogen: otomycosis (Rippon JW, Carmichael JW, Mycopathologia 58:117-124, 1976) // culture conditions: produced ascomata.

3239 ex chicken pens Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael. Culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

3437 sputum Los Angeles Calif. D.H. Howard 1971 /G.F. Orr 0-3673. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // culture conditions: produced *Scedosporium* anamorph only.

3872 cattle manure Lethbridge, Alta. 20 Jan 1975 /R.G. Bell 1CF1. Culture conditions: produced *Scedosporium* and *Graphium* states; ascomata produced.

3873 cattle manure Lethbridge, Alta. 21 May 1975 /R.G. Bell 3CF1. Pigment: gold (yellow orange) // culture conditions: produced ascomata.

3973 (T *Pseudallescheria shearii*) aspirate of pus ex Rt knee Pabellon II del Hosp. Rawson, Buenos Aires, Argentina I. Fischer /P. Negroni 5163 [=CBS 591.90 =CDC A-495 =IHEM 21160 =NCMH 1169 =GenBank AY228118 (ITS) =GenBank

AM492778]. Cellulolytic // human/animal pathogen: molecular taxonomy (Gueho & de Hoog, J. Mycol. Med. 118:3-9, 1991) // molecular systematics: PCR-based identification (Wedde et al., J. Med. Vet. Mycol. 36:61-67, 1998); molecular variability in *Pseudallescheria boydii*; phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008; Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: produced *Scedosporium* anamorph only.

3982 (T *Allescheria boydii*) mycetoma ex man Galveston, Texas, USA M. Boyd (C.L. Shear) 1921 /CBS 101.22 [=IMI 015407 =JCM 7441 =IHEM 15933 =GenBank AF027669 LSU =GenBank AJ889590 btub =GenBank AJ890121 btub =GenBank AJ890207 cal =GenBank AJ888435 ITS =GenBank AY228111 ITS]. Cellulolytic // human/animal pathogen // molecular systematics: molecular variability in *Pseudallescheria boydii*; phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006; Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008); Blast match 100% beta tubulin similarity with *Pseudallescheria boydii* AJ889590 (CBS 101.22T, same strain) (fide UAMH 2012); rapid identification of *Pseudallescheria* and *Scedosporium* (Lackner M, Najafzadeh MJ, Sun J, Lu Q, Hoog GS, Appl Environ Microbiol 126-133, 2012) // culture conditions: produced *Scedosporium* anamorph only.

3992 soil under *Elaeis guineensis* Surinam J.H. van Emden (B 1129) /CBS 593.73. Cellulolytic // culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

4302 sputum /J. Kane OMH-1159. Cellulolytic // culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

4303 sputum Ontario /J. Kane FR 676. Culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

4304 sputum /J. Kane FR 642 [=GenBank M89994]. Cellulolytic // molecular systematics: phylogeny of *Microascaceae* (Issakainen et al., J. Med. Vet. Mycol. 35:389-398, 1997); phylogeny of *pyrenomycetes* // culture conditions: produced *Scedosporium* and *Graphium* states.

4408 farm soil Sunnyside, Alta. V. Mann 25 May 1980 /V. Mann. Cellulolytic // culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

6137 black stained vinyl pool liner Edmonton, Alta. A. Flis (4) Jun 1988 /W. Campbell. Biodeteriogen/biodegradation // culture conditions: produced ascomata.

7272 ex roots of epiphytic orchid *Encyclia fragrans* growing on *Nauclaeopsis naga* (Moraceae) La Selva, Heredia Prov., Costa Rica K. Richardson 1 Mar 1991 /R.S. Currah K8b. Mycorrhizae: root endophyte epiphytic orchid *Encyclia fragrans* // culture conditions: produced ascomata, *Scedosporium* and *Graphium* states.

7273 ex roots of orchid *Sobralia mucronata* La Selva, Heredia Prov., Costa Rica K. Richardson 6 Mar 1991 /R.S. Currah K59b. Mycorrhizae: root endophyte orchid *Sobralia mucronata* // culture conditions: produced ascomata.

8496 grass Tsukuba, Ibaraki Pref., Japan G. Okada (OFC 1384) /T. Nakase JCM 7866 [=GenBank AB007683 SSU partial]. Molecular systematics: Formerly identified as *Graphium putredinis* (*Parascedosporium putredinis*); Blast match 100% ITS similarity to CBS 101.22 (UAMH 3982) T *Pseudallescheria boydii* and dissimilar to HQ185348 *Parascedosporium putredinis* epitype (fide UAMH 2012) // culture conditions: produced *Scedosporium* and *Graphium* states but no ascomata.

8794 hydrocarbon contaminated flare-pit soil Boundary Lake, BC T. April (S-BL1-2-1) 21-Jun-1996 /R.S. Currah [=CBS 116425]. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // biodeteriogen/biodegradation: degradation of hydrocarbons in crude oil (April et al., Can. J. Microbiol. 44:270-278, 1998) // systematics/taxonomy: morphologic & molecular

- comparison of isolates from oil-soaked soils or sewage (April et al., Can. J. Microbiol. 44:270-278, 1998) // culture conditions: produced ascomata, Scedosporium and Graphium states.
- 8795 palm rhinoceros beetle (*Oryctes monoceros*) Seychelles G. Kingsland 1982 /MI 271728.
- 8860 sputum, female 38 yr Alberta Provincial Lab for Southern Alberta 18-Dec-1996 /R. Rennie MY 250. Benomyl: resistant (2 ppm) // thermotolerant: growth @ 37C but NG @ 42C // culture conditions: produced Scedosporium and Graphium states but no ascomata // molecular systematics: Blast match 100% ITS similarity to *Pseudallescheria boydii* AY877350 = CBS 101.22 = UAMH 3982 T (fide UAMH 2012) // pigment: yellow.
- 8897 fresh faeces of beef cattle Lethbridge, Alta R.G. Bell Jan 1975 /DAOM 148868 [=DAOM 148868]. Cycloheximide: resistant (MYC) // benomyl: resistant (2 ppm).
- 9018 atypical isolate, right lung, female Ontario 03-Oct-1996 /R.C. Summerbell FR 3309. Culture conditions: produced ascomata, Scedosporium and Graphium states.
- 10037 shed mid-dorsal skin ex Madagascar tree boa (*Sanzinia madagascariensis*), female 14yr Albuquerque Biological Park, Albuquerque, NM J. Pare Mar 2001 /J. Pare UW099A-C. Culture conditions: produced ascomata, Scedosporium and Graphium states // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10591 unknown specimen, male 28 yr Moncton, N.B. 23-Jun-05 /R. Rennie MY 5253 [=OMH FR 800]. Cycloheximide: slightly sensitive // thermotolerant: grows better @ 35C than @ 30C // culture conditions: produced Scedosporium and Graphium states but no ascomata // molecular systematics: Blast match 100% ITS similarity to *Pseudallescheria boydii* AY877350 = CBS 101.22 = UAMH 3982 T (fide UAMH 2012) // pigment: yellow.
- 11524 ex mitral valve, female 37 yr with endocarditis and history of cystic fibrosis, lung transplant and airway colonization; direct microscopy of valve vegetation + for hyphae & conidia Nantes University Hospital, France F. Morio 18-Nov-2008 /F. Morio 70005847 [=GenBank GU180100 ITS =GenBank GU213264 beta-tubulin =GenBank GU192441 calmodulin =GenBank GU186106 D1D2]. Human/animal pathogen: disseminated infection after double-lung transplantation in patient with cystic fibrosis (Morio F, Horeau-Langlard D, Gay-Andrieu F, Talarmin J-P, et al, J Clin Microbiol 48:1978-1982, 2010) // culture conditions: ascomata not observed by Morio et al. or at UAMH.
- 11616 sputum ex female 27 yr, with cystic fibrosis; several colony types isolated Saint John Regional Hospital, St. John, NB /R. Rennie MY 8164. Molecular systematics: Blast match 100% ITS similarity to *Pseudallescheria boydii* AY877350 = CBS 101.22 = UAMH 3982 T (fide UAMH 2011) // culture conditions: initial isolate from patient dysgonic, more typical forms produced in subculture // benomyl: tolerant // cycloheximide: tolerant.
- Pseudallescheria desertorum*** (v. Arx & Moustafa)
McGinnis et al. (syn. *Petriellidium desertorum*; morph *Scedosporium an. Pseudallescheria desertorum*)
3993 (T *Petriellidium desertorum*) salt marsh soil Kuwait A.F. Moustafa (44) /CBS 489.72 [=GenBank EF151328 LSU =GenBank AY879798 ITS =GenBank EF151404 EF1a =GenBank AM409117 btub =GenBank AM409106 btub =GenBank AM409101 calmodulin]. Cellulolytic // molecular systematics: molecular variability in *Pseudallescheria*; phylogeny of Scedosporium, *Pseudallescheria* and *Petriella* (Lu Q, Gerrits van den Ende AH, Bakkers JM, Sun J, Lackner M, Najafzadeh MJ.; Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006) // culture conditions: ascomata produced on OAT cello.
- Pseudallescheria ellipsoidea*** (von Arx & Fassatiouva)
McGinnis, Padhye & Ajello
3987 (T *Petriellidium ellipsoideum*) soil Tadzhikistan, USSR O. Fassatiouva (T11) /CBS 418.73 [=GenBank U43911 =GenBank AJ889595 =GenBank AJ890211 =GenBank AJ888426 =GenBank AJ890124 =GenBank AY878940 (ITS) =GenBank AF027671 (LSU)]. Cellulolytic // molecular systematics: phylogeny of Microascaceae (Issakainen et al., J. Med. Vet. Mycol. 35:389-398, 1997); PCR-based identification (Wedde et al., J. Med. Vet. Mycol. 36:61-67, 1998); molecular variability in *Pseudallescheria boydii*; molecular phylogeny supports species distinction from *Pseudallescheria boydii* (Gilgado F, Cano J, Gene J, Guarro J, J Clin Microbiol 43:4930-4942, 2005); phylogeny of Scedosporium, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006; Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008) // culture conditions: ascomata produced on OAT.
- 9386 (T *Thielavia pallidospora*) sandy soil Ukraine VKM F-1923 /CBS 332.75. Benomyl: resistant (2 ppm) // culture conditions: produced ascomata.
- Pseudallescheria fimeti*** see *Lophotrichus fimeti*
- Pseudallescheria fusioidea*** (von Arx) McGinnis, Padhye & Ajello
3997 (T *Petriellidium fusioideum*) soil Panama 1953 /CBS 106.53 [=ATCC 11657 =GenBank AJ889601 =GenBank AJ890131 =GenBank AJ890212 =GenBank AJ888428 =GenBank AY878941 (ITS) =GenBank AF027673 (LSU)]. Cellulolytic // molecular systematics: molecular variability in *Pseudallescheria boydii* (Rainier et al., J. Clin. Microbiol. 38:3267-3273, 2000); molecular phylogeny supports species distinction from *Pseudallescheria boydii* (Gilgado F, Cano J, Gene J, Guarro J, J Clin Microbiol 43:4930-4942, 2005); phylogeny of Scedosporium, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006; Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008) // culture conditions: ascomata produced.
- Pseudeurotium ovale*** Stolk (morph *Teberdinia an. Pseudeurotium ovale*)
5825 D. Malloch.
- Pseudeurotium ovale* var. *milkoii*** Beljakova (morph *Teberdinia an. Pseudeurotium ovale* var. *milkoii*)
6426 cave soil Grotte de Ramioul, St. Severin, Liege, Belgium (C) J.-M. Hubart Oct 1985 /R. Khan TRTC 51046 [=CBS 247.89].
- Pseudeurotium zonatum*** van Beyma (morph *Teberdinia an. Pseudeurotium zonatum*)
2640 soil ex cedar swamp Aberfoyle, Ont. Jul 1964 /G.L. Barron 10360 [=ATCC 16072]. Cellulolytic.
2753 C. Alexopoulos QM 8030.
2908 organic soil ex cedar bog Aberfoyle, Ont. G.C. Bhatt Sep 1964 /G.C. Bhatt GCB 1714. Cellulolytic.
5617 soil Rojals, Catalonia, Spain J. Guarro 20 Jun 1986 /J. Guarro FMR 993 [=CBS 297.86].
6119 lake core sediment Jack Lake nr. Apsley, Ont. K. Millar Mar 1988 /K. Millar.
6297 soil Edmonton, Alta. N. Manji 22 Sep 1988 /N. Manji.
8577 soil Singapore J. Guarro Mar 1994 /J. Guarro FMR 5552.
- Pseudoamauroascus australiensis*** Cano, M. Solé & Guarro (morph *Malbranchea an. of Pseudoamauroascus australiensis*)
8392 (T *Pseudoamauroascus australiensis*) soil, Mount Lofty

Australia J. Guarro Mar 1994 /J. Guarro FMR 5482
[=GenBank AJ131788 SSU =GenBank KP691522 IGS
=GenBank AJ131787 ITS]. Systematics/taxonomy: description
(Cano J, Sole M, Pitarch LB, Guarro J, Stud Mycol
47:173-179, 2002) // cycloheximide: resistant (MYC) // culture
conditions: no ascospores on deposit; arthroconidia (fide
UAMH 2011) // molecular systematics: specificity of TaqMan
real-time PCR for detection of *Ophidiomyces ophiodicola*, the
agent of snake fungal disease (Bohuski E, Lorch JM, Griffin
KM, Bleher DS, BMC Vet Res 11:95, 2015 Apr 15, doi:
10.1186/s12917-015-0407-8).

Pseudoarachniotus echinulatus see ***Mallochia echinulata***

Pseudoarachniotus hyalinusporus see ***Gymnascella
hyalinuspora***

Pseudoarachniotus marginosporus see ***Gymnascella
marginospora***

Pseudoarachniotus orissi see ***Aphanoascus orissae***

Pseudoarachniotus punctatus see ***Gymnascella punctata***

Pseudoarachniotus trochleosporus see
Kraurogymnocarpa trochleospora

Pseudogymnoascus alpinus see ***Gymnostellatospora
alpina***

Pseudogymnoascus appendiculatus Rice & Currah (morph
Geomyces an. Pseudogymnoascus appendiculatus)

10509 (T *Pseudogymnoascus appendiculatus*) ex brown-rotted wood
bait block, Sphagnum-Picea mariana bog Perryvale, Alta. A.
Rice (3SMC4-3) 09-02 /R.S. Currah 3SMC4-3. Psychrophilic
// culture conditions: produced ascospores at time of isolation
but not at time of deposit // pigment: yellow.

10510 ex brown-rotted wood bait block, Sphagnum-Picea mariana
bog Perryvale, Alta. A. Rice (3SMC1-3) 09-02 /R.S. Currah
3SMC1-3 [=GenBank DQ117437 ITS]. Molecular systematics:
phylogeny of *Pseudogymnoascus* and *Gymnostellatospora*
(Rice AV, Currah RS, Mycologia 98:307-318, 2006) // psychrophilic // culture conditions:
produced ascospores at time of isolation but not at time of
deposit.

10511 ex brown-rotted wood bait block, Sphagnum-Picea mariana
bog Perryvale, Alta. A. Rice (3SMC5-2) 09-02 /R.S. Currah
3SMC5-2 [=GenBank DQ117438]. Molecular systematics:
phylogeny of *Pseudogymnoascus* and *Gymnostellatospora*
(Rice AV, Currah RS, Mycologia 98:307-318, 2006) //
psychrophilic // culture conditions: produced ascospores at time
of isolation but not at time of deposit.

10512 ex brown-rotted wood bait block, Sphagnum-Picea mariana
bog Perryvale, Alta. A. Rice (2JnM5-1) 06-02 /R.S. Currah
2JnM5-1 [=GenBank DQ117439]. Molecular systematics:
phylogeny of *Pseudogymnoascus* and *Gymnostellatospora*
(Rice AV, Currah RS, Mycologia 98:307-318, 2006) //
psychrophilic // culture conditions: produced ascospores at time
of isolation but not at time of deposit.

Pseudogymnoascus roseus Raillo (morph *Geomyces
vinaceus*)

1644 larch wood as *Pseudogymnoascus vinaceus* Torino, Italy G.
Dal Vesco /H.H. Kuehn 2 [=UAMH 1736 =CBS 319.62].
Cellulolytic.

1658 Ghillini (587) /G.F. Orr O-2513 [=DAOM 198937 =GenBank
AF081431]. Mycorrhizae: ericoid mycorrhiza with *Vaccinium
angustifolium* seedlings (Dalpe, New Phytol. 113:523-527,

1989); with salal (Xiao & Berch, Mycologia 87:467-470,
1995) // cellulolytic: on Czapek cellulose agar (Dalpe, 1989) //
molecular systematics: diversity of ericoid mycorrhizae
(Monreal et al., Can. J. Bot. 77:1580-1594, 1999); phylogeny
of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV,
Currah RS, Mycologia 98:307-318, 2006).

1736 larch wood as *Pseudogymnoascus vinaceus* Torino, Italy G.
Dal Vesco /G.F. Orr [=UAMH 1644 =CBS 319.62].
Cellulolytic.

1990 soil Wisconsin /G.F. Orr [=QM 6969]. Cellulolytic.

2005 soil Japan Udagawa? /G.F. Orr [=NHL 2284]. Cellulolytic.

2879 soil under *Pinus contorta* Kananaskis, Alta. P. Widden Nov
1967 /G.C. Bhatt 70 [=ATCC 22479 =CBS 387.69 =GenBank
DQ117445]. Cellulolytic // molecular systematics: phylogeny
of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV,
Currah RS, Mycologia 98:307-318, 2006).

3001 R. Morrall RM 2509, SSF 176. Cellulolytic.

3002 R. Morrall RM 2167. Cellulolytic.

3166 mouse dung Evey Canyon, Claremont, Calif. R.K. Benjamin
(D1310-13) 2 May 1965 /R.K. Benjamin RSA 1558.
Cellulolytic.

3337 (T *Gymnoascus rhouxiogongylinus*) forest soil Parry Sound,
Ont. H.M. Wener 18 Jul 1967 /R.F. Cain TRTC 45536 [=CBS
722.69 =ATCC 18970]. Cellulolytic.

3875 porcupine dung Alberta /G.F. Orr O-3729.

4055 oil soaked soil Norman Wells, NWT 1972 /D. Westlake NWF
78.

4705 soil Beltsville, MD M. Dunn 1982 /M.T. Dunn MTD 383-12.
Cellulolytic.

4706 soil ex sunnyside plot Beltsville, MD M. Dunn 1982 /M.T.
Dunn MTD 408-17. Cellulolytic.

4707 soil ex sunnyside plot Beltsville, MD M. Dunn 1982 /M.T.
Dunn MTD 674-5. Cellulolytic.

4712 sclerotia of *Sclerotinia minor* buried in soil with 10% sludge
compost added Beltsville, MD M. Dunn 1982 /M.T. Dunn
MTD 46-1. Cellulolytic.

4714 soil ex sunnyside plot Beltsville, MD M. Dunn 1982 /M.T.
Dunn MTD 238-17. Cellulolytic.

4715 soil ex sunnyside plot Beltsville, MD M. Dunn 1982 /M.T.
Dunn. Cellulolytic.

5391 trunk lesion, human Texas /J. Harris BY6 1355.

8834 soil, bottom layer of ungrazed grassland Grasslands National
Park, Saskatchewan S.P. Abbott (SA-M169) 16-Dec-1996
/S.P. Abbott (SA-M169). Cycloheximide: resistant (MYC).

8835 soil, aspen (*Populus tremuloides*) forest under alder (*Alnus
crispa*) Gregoire Lake Provincial Park, AB L. Abbott
(SA-M170) 1-Oct-1996 /L. Abbott (SA-M170).
Cycloheximide: resistant (MYC).

9163 mycorrhizal roots of *Abies lasiocarpa* Cadomin, Alta. A.
Fernando /R.S. Currah Am 6 [=GenBank DQ117451 ITS
=GenBank AF062819 ITS]. Psychrophilic: opt. 18C //

molecular systematics: phylogenetic relationships in
Oidiodendron and *Myxotrichaceae* (Hambleton et al.,
Mycologia 90:854-869, 1998); phylogenetic relationships in
Oidiodendron (Lacourt, Girlanda, Perotto et al, New Phytol.
149:565-576, 2001); phylogeny of *Pseudogymnoascus* and
Gymnostellatospora (Rice AV, Currah RS, Mycologia
98:307-318, 2006).

9222 extremely well decayed wood (stage 5 decay), white spruce
log (*Picea glauca*), 29 yr post-fire site Mariana Lake, Alta.
3-7A) T. Lumley (F681-03-S1E 7 Mar 1997 /R.S. Currah TCL
035 [=GenBank DQ117452 ITS]. Pigment: red-brown //
biodiversity: rotting wood (Lumley et al., Mycotaxon
74:395-414, 2000) // molecular systematics: phylogeny of
Pseudogymnoascus and *Gymnostellatospora* (Rice AV, Currah
RS, Mycologia 98:307-318, 2006).

10942 (T *Geomyces vinaceus*) agricultural soil Torino, Italy G. Dal
Vesco /CBS 320.62 [=IFO 31790].

10943 (T Neotype *Pseudogymnoascus roseus*) alluvial swamp soil
near Attenborough, Trent Valley, Nottinghamshire, UK A.E.

- Apinis 1959 /CBS 395.65 [=IMI 114651 =IFO 31791 =BDUN 266]. Culture conditions: good sporulation on OATC at 18C; degenerate poorly sporulating at deposit.
- 11243 swab ex skin of a female little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 98 C.2. Pigment: pinky-brown on OAT // culture conditions: no ascospores produced on OATC at 18C // biodiversity: mycobiota of bat caves // mesophilic: grows better @ 18 C than at 22 C (fide UAMH) // molecular systematics: Blast match 99% ITS similarity to *Pseudogymnoascus roseus* AF062819 (fide UAMH 2010); ITS sequences identical for UAMH 11243, 11245, 11246, 11247.
- 11245 swab ex skin of a male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 100 C.3. Pigment: pinky-brown on OAT // molecular systematics: ITS sequences identical for UAMH 11243, 11245, 11246, 11247 (fide UAMH 2010) // biodiversity: mycobiota of bat caves // mesophilic: grows better @ 18 C than at 22 C // culture conditions: ascospores not produced on OATC after 6 mo at 18C.
- 11246 swab ex fur of a male little brown bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 96 C.3. Pigment: pinky-brown on OAT // molecular systematics: ITS sequences identical for UAMH 11243, 11245, 11246, 11247 (fide UAMH 2010) // culture conditions: no ascospores produced on OATC at 18C // biodiversity: mycobiota of bat caves // mesophilic: grows better @ 18 C than at 22 C.
- 11247 swab ex skin of a male little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 59 C.2. Pigment: pinky-brown on OAT // molecular systematics: ITS sequences identical for UAMH 11243, 11245, 11246, 11247 (fide UAMH 2010) // culture conditions: no ascospores produced on OATC at 18C // biodiversity: mycobiota of bat caves // mesophilic: grows better @ 18 C than at 22 C.
- 11427 swab ex fur/skin of living Northern long-eared myotis bat (*Myotis septentrionalis*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 17 C.2. Culture conditions: ascospores produced on OATC at 18C // biodiversity: mycobiota of bat caves.
- Pseudogymnoascus verrucosus*** Rice & Currah (morph *Geomyces* an. *Pseudogymnoascus verrucosus*)
- 10579 (T *Pseudogymnoascus verrucosus*) ex brown-rotted wood bait block, Sphagnum fuscum-Picea mariana bog Perryvale, Alta. A. Rice (4JyM1-2) 07-02 /R.S. Currah 4JyM1-2 [=GenBank DQ117440]. Molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006) // culture conditions: no ascospores produced in subcultures from holotype; produced ascospores at time of isolation but not at time of deposit // pigment: yellow.
- 10580 ex brown-rotted wood bait block, Sphagnum fuscum-Picea mariana bog Perryvale, Alta. A. Rice (4JyM4-1) 07-02 /R.S. Currah 4JyM4-1 [=GenBank DQ117441]. Cycloheximide: slightly sensitive (growth slower on MYC than PYE) // molecular systematics: phylogeny of *Pseudogymnoascus* and *Gymnostellatospora* (Rice AV, Currah RS, Mycologia 98:307-318, 2006) // culture conditions: no ascospores produced in subcultures from paratype; produced ascospores at time of isolation but not at time of deposit // pigment: red-brown.
- Pseudohalonectria phialidica*** Shearer
- 7238 base of overwintering stalk of *Asclepias* sp. (milkweed) East Luther Twp., Wellington County, Ont. W. Untereiner 20 Jun 1992 /W. Untereiner 100.
- Pseudomicrodochium fusarioides* see *Cyphellophora*
- fusarioides***
- Pseudomicrodochium suttonii* see *Cyphellophora suttonii*
- Pseudophacidium garmanii*** Funk (morph *Myxofusicoccum* an. *Pseudophacidium garmanii*)
- 4560 bark of *Abies lasiocarpa* infested with *Dryocoetes confusus* Smithers, B.C. L. Linarez Feb 1982 /H.S. Whitney.
- Pseudorobillarda asparagis*** Vujanovic, Hamel, Jabaji-Hare & St-Arnaud
- 10196 (T *Pseudorobillarda asparagis*) decomposing leaf of unidentified plant in asparagus field Joliette, PQ V. Vujanovic 16-10-01 /V. Vujanovic MT-A35. Pigment: tan.
- Pseudotaeniolina globosa*** De Leo, Urzi & de Hoog
- 11589 carpet dust ex bedroom of apartment Albany, CA S.P. Abbott 20-Apr-2010 /S.P. Abbott SA1499. Biodiversity: indoor fungi // molecular systematics: Blast match 99% ITS-D1D2 similarity to *Pseudotaeniolina globosa* AY128700 (CBS 109889 T) (fide UAMH 2012).
- Pseudovalsaria ferruginea*** (Nitschke) Rappaz (syn. *Pseudovalsaria foedans*)
- 11490 mass ascospore isolate ex rotting, decorticated branch of *Populus* sp.. Black Creek Road, Queens County, PEI (C) A. Carter; (I) W. Untereiner 9-May-2009 /W. Untereiner WUC 678 [=GenBank JX460988 ITS =GenBank JX460993 LSU]. Culture conditions: does not sporulate in culture (fide W. Untereiner) // molecular systematics: systematics of *Apiorhynchostoma*, *Endoxyla* and *Pseudovalsaria* in the *Boliniales* (Untereiner WA, Bogale W, Carter A, Platt HW, Hanson S-A, T Laessoe, Stepanek V, Reblova M, Mycologia 105:564-588, 2013).
- Pseudovalsaria foedans* see *Pseudovalsaria ferruginea*
- Pseudozyma antarctica*** (Goto, J. Sugiyama & Iizuka)
- Boekhout (syn. *Sporobolomyces antarcticus*, *Trichosporon oryzae*, *Candida antarctica*, *Vanrija antarctica*)
- 7072 pollen ex *Megachile* rotundata (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 721) Aug 1990 /D. Inglis (MR 721).
- Pseudozyma flocculosa*** (Traquair, L.A. Shaw & Jarvis)
- Boekhout & Traquair (syn. *Stephanoascus flocculosus*, *Sporothrix flocculosa*)
- 4488 mosquito eggs, *Culex pipiens quinquefasciatus* /D. Howard [=CBS 168.88].
- 5524 dead spider mites on cucumber Sherwood Park, Alta. D. Budd 28 Oct 1986 /M. Steiner AEC 24 [=CBS 169.88].
- 5743 (T *Stephanoascus flocculosus*) mildewed (*Erysiphe polygoni*) red clover leaves Harrow, Ont. L.A. Shaw Aug 1986 /J. Traquair LAS-012 [=CBS 167.88 =DAOM 196992]. Biocontrol: inhibitory to *Erysiphe polygoni* & *Sphaerotheca fuliginea* (Jarvis et al, Mycol. Res. 92:162-165, 1989) // systematics/taxonomy: placed in *Ustilaginales* by: DBB-, urease +, utilize myo-inositol & D-glucuronate, extracellular starch-like compound -.
- Pseudozyma rugulosa*** (Traquair, L.A. Shaw & Jarvis)
- Boekhout (syn. *Stephanoascus rugulosus*, *Sporothrix rugulosa*)
- 5594 ripening wheat & barley Harpenden, U.K. J. Lacey /J. Lacey C2657 [=CBS 171.88].
- 5595 ripening wheat & barley Harpenden, U.K. J. Lacey /J. Lacey C2658 [=CBS 172.88].

5742 (T *Stephanosorus rugulosus*) senescent moldy corn leaves Harrow, Ont. L.A. Shaw Aug 1986 /J. Traquair LAS-016 [=CBS 170.88 =DAOM 196993 =GenBank AB089371 26S =GenBank AB089370 ITS =GenBank AF294721 18S =GenBank AF294707 LSU =GenBank AF294697 ITS =GenBank AJ235300 26S]. Biocontrol: antagonistic to *Sphaerotheca fuliginea* (Jarvis et al, Mycol. Res. 92:612-165, 1989) // systematics/taxonomy: placed in Ustilaginales by: DBB-, urease +, utilize myo-inositol & D-glucuronate, extracellular starch-like compound -.

***Pseudozyma* sp.**

822 IMUR 1245.
1838 decaying leaves Edmonton, Alta. J.W. Carmichael 21 Oct 1963 /J.W. Carmichael.
2784 spinal fluid Ohio State U. Hosp. R. Tewari Jan 1967 /R.P. Tewari R-2.
3583 fridge door CFB Namao, Edmonton, Alta. L. Sigler Mar 1973 /L. Sigler.
3595 Russia /CDC 40-73-48553.
3596 Russia /CDC 40-73-48555.
3602 Russia /CDC 40-73-48554.
4390 M. McGinnis NCMH 1250.
4476 skin scraping ex spayed adult female canine Whitehorse, Yukon Terr. 8 Jun 1981 /B. Murray 4076.
4502 contaminant ex clinical lab. UCLA School of Medicine /D. Howard.
4682 mosquito larva Edmonton, Alta. L. Sigler Oct 1982 /M. Goettel.
5976 contaminant ex ARSEF 877 (*Hirsutella guyana*) UAMH Jan 1988 /R. Humber.
6760 penta-treated southern pine pole Binghamton, NY /C.J.K. Wang P-1387 [=ATCC 66690].
6782 penta-treated southern pine pole eastern USA C.J.K. Wang /C.J.K. Wang P-1405. Benomyl: sensitive.
7333 skin, female 41 yr Alberta Provincial Laboratory for Southern Alberta Feb 1993 /R. Rennie MY 886.
7393 blood, male 74 yr Edmonton, Alta. 2 Jul 1993 /R. Rennie MY 2769.
7417 indoor air ex RCS strip Red Deer, Alta. S.P. Abbott (RD-1-1A) 14 Jul 1993 /D. Bourque 1.
7511 peritoneal fluid Greenville, NC. 1993 /M.G. Rinaldi UTHSC 93-1786.
8291 bronchial washing, DE- British Columbia /P. Kibsey RJH 72875. Cycloheximide: sensitive // mesophilic: does not grow at 37C.
8441 eye tissue ex damaged cornea, male 53 yr Vancouver, BC Mycology BC Provincial Laboratory Mar 1996 /R. Rennie MY 1414.
9159 palm, female 35 yr Alberta Prov. Lab for Southern Alberta 1997 /R. Rennie MY 4545.
9872 skin scraping, rt forearm, male 76 yr Westlock, AB Sep 2000 /R. Rennie My 6418.
11439 swab ex skin of living female little brown bat (*Myotis lucifugus*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 75 C.2 . Biodiversity: mycobiota of bat caves.

Psilocybe coprophila see ***Deconica coprophila***

Psilocybe montana see ***Deconica montana***

Ptychogaster alveolatus Boudier

3802 *Ulmus* sp. Montreal /WFPL 170U.

Ptychogaster rubescens Boudier

3773 wood Transvaal Chamber of Mines S. Africa 1938 /CBS 259.38.
3774 unidentified fruit body (? polypore) ex wood Bareilly India

J.N. Kapoor 1971 /CBS 407.72.

3806 pole Lumby B.C. R.S. Smith /WFPL 170AE.
3807 conidial moss Alexandria, VA /WFPL 170Q [=USFPL H-507].
3808 *Pinus* sp. pole Eastern U.S.A. /WFPL 170D [=EFPL B-529].
5757 Ponderosa pine stakes Westham Is., B.C. 18 Jun 1986 /DAOM 195425.

***Ptychogaster* sp.**

3809 *Pinus banksiana* post Chalk River Ont. /WFPL 170A [=EFPL B257].

Pulchromyces fimicola (V. Dring) Hennebert

10836 running water within a cave St. Joseph, MO (C) J. Knadler /J. Herrera TSU-pf120.

Punctularia strigoso-zonata (Schw.) Talbot

5826 ex dead trunks & branches *Populus tremuloides* Kingston, N.S. G. Thorn 7 Sep 1986 /G. Thorn T-344 [=DAOM 212342 =RGT 860907/02 =TRTC 51222]. Pigment: blue // mycorrhizae: ericoid (Xiao & Berch, Mycologia 87:467-470, 1995).
6726 ex dead branches & trunk *Populus tremuloides* Lake of Two Rivers Airfield, Canisbay Twp., Algonquin Prov. Park, Ont. M. Yurcan (32) 18 Oct 1986 /G. Thorn T-389 [=DAOM 212393 (voucher) =DAOM 212575 =TRTC 51228].
6727 ex dead *Populus balsamifera* standing in wet woods Cookstown, Ont. G. Thorn 28 Jun 1987 /G. Thorn T-445 [=DAOM 212422 =RGT 870628/01].
7145 *Populus tremuloides* wood (aspen poplar) nr Hinton, Alta. L. Hutchison 28 Sep 1990 /L. Hutchison NOF 1503. Pigment: purple.

Pycnidiella resiniae (Ehrenb. ex Fr.) Hohn. (morph *Sarea resiniae*)

4300 A. Tsuneda.

Pycnidiophora multispora (Saito & Minoura) Thompson & Backus (syn. *Westerdykella multispora*)

1509 (T *Anixiopsis multispora*) Kominami (NI 2003) 1960 /IMI 83848 [=CBS 391.51]. Cellulolytic.
1515 soil India J.N. Rai 1961 /IMI 86823. Cellulolytic.
6288 ex soil *Dieffenbachia amoena* in hospital Toronto, Ont. 15 Apr 1988 /R.C. Summerbell W 1428.
6311 soil mixed with straw & horse dung Whitened Equine Centre, Edmonton, Alta. J. Galbraith (B) Sep 1988 /J. Galbraith (B). Pigment: purple OAT.

Pycnoporellus alboluteus (Ell. & Ev.) Kotl. & Pouz. (syn. *Polyporus alboluteus*)

8170 *Picea glauca* (white spruce) Alberta M.K. Nobles 07 Aug 1953 /S. Davies FC-175 [=NOF 106].
Biodeteriogen/biodegradation: white rot // pigment: brown.

Pycnoporellus metamorphosus see ***Sporotrichum aureum***

Pycnoporus cinnabarinus (Jacq.:Fries) Karsten

8270 Alberta L.L. Kennedy (B-13) /S. Davies FC-035.
Biodeteriogen/biodegradation: white rot // pigment: brown.

Pyrenochaeta ingrati Udagawa & Toyazaki

10172 (T *Pyrenochaeta ingrati*) spoilt commercial apple juice Yokohama, Japan S. Udagawa 17-4-00 /S.-I. Udagawa SUM 3166. Mesophilic: opt. 25C, max. <35 C // biodeteriogen/biodegradation: Aw min 0.88; spoils apple juice but not pathogenic for apples (Udagawa & Toyazaki, Cryptogamic Mycology 23:187-193, 2002).

***Pyrenochaeta romeroi* Borelli**

- 10607 excised ganglion cyst ex right foot, male 68 yr; DE positive for filaments Etobicoke Hospital, Rexdale, ON 08-Aug-2005 /R. Rennie MY 6745 [=OMH FR 1024]. Thermotolerant; grows @ 35 C (fide UAH) // cycloheximide: slightly sensitive // molecular systematics: Blast match 99% ITS similarity to *Pyrenochaeta romeroi* DQ836801 (CBS252.60 type).
- 10841 (T *Pyrenochaeta romeroi*) mycetoma ex man caused by thorn of *Machaonia ottonis* Venezuela D. Borelli (W151) /CBS 252.60 [=GenBank GQ272624 ITS =GenBank GQ290127 RPB2 =GenBank GQ280405 SSU =ATCC 13735 =FMC 151 =UAMH 2892 (herbarium only)]. Culture conditions: grow on cornmeal or cherry decoction agar (CHA) (fide CBS); sporulates on CER in window.

***Pyrenochaeta* sp.**

- 1334 soil & dead vegetation Edmonton, Alta. J.W. Carmichael 23 Jul 1962 /J.W. Carmichael.
- 7293 indoor air of office bldg. ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M253) 18 Nov 1992 /S.P. Abbott (SA-M253).
- 8287 indoor air ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M68) 30-Aug-1995 /S.P. Abbott (SA-M68). Pigment: brown.
- 11413 swab ex fur of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 2-Feb-2010 /K.J. Vanderwolf Bat 40 C.1. Cellulolytic // biodiversity: mycobiota of bat caves // molecular systematics: Blast match ITS highest similarity to *Pyrenochaeta* sp. and Pleosporales (fide UAMH 2011).

Pyrenochaeta terrestris* see *Phoma terrestris***Pyrenochaeta unguis-hominis* Punithalingham & English**

- 6813 tissue antrum right sinus London, Ont. 10 Dec 1990 /R.C. Summerbell FR 2960.

Pyrenophora avenae* see *Drechslera avenae***Pyronema domesticum* (Sowerby ex Gray) Saccardo**

- 7353 mold growth in sterility testing of gauze Scarborough, Ont. K. Fortunato May 1993 /D. McCarthy. Biodeteriogen/biodegradation: ethylene oxide resistant contaminant of medical cottons (Freiherr, Medical Device & Diagnostic Industry April 1994:10-20).

***Pythium insidiosum* de Cock, Mendoza, Padhye, Ajello & Kaufman**

- 9286 corneal ulcer, female 29 yr South India Christian Medical College (ME 250) Microbiology /CDC B 5829. Culture conditions: cold sensitive, store at room temperature // thermotolerant: minimum 10C, optimum 34-36C, maximum 40-45C (De Cock et al., J. Clin. Micro 25:344-349, 1987).

***Pythium* sp.**

- 4011 alfalfa roots with lesions Edmonton, Alta. Cook & Webster Dec 1974 /F. Cooke F6.
- 4020 alfalfa roots with lesions Edmonton, Alta. Cook & Webster Dec 1974 /F. Cooke F9.
- 4028 alfalfa roots with lesions Edmonton, Alta. Cook & Webster Dec 1974 /F. Cooke F16.

***Pyxidiophora* sp.**

- 6556 R.C. Summerbell BB 755.
- 6557 R.C. Summerbell BB 728.

***Quambalaria cyanescens* (de Hoog & G.A. de Vries) Z.W.**

de Beer, Begerow & R. Bauer (syn. *Sporothrix cyanescens*, *Fugomyces cyanescens*)

- 3276 air Rabat, Morocco J. Chabert (5140J) /J. Nicot 96L. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 3277 air Rabat, Morocco J. Chabert (5189) 1964 /J. Nicot 96.O. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 3677 (T *Sporothrix cyanescens*) human skin Groningen, Netherlands T.F. (31285) Visser 1958 /CDC B-1868 [=CBS 357.73 =GenBank DQ317622 ITS =GenBank DQ317615 28S =GenBank DQ119135 ITS]. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 5108 blood culture ex neutropenic patient with malignant lymphoma & pneumonitis, male 64 yr Michigan /I. Weitzman 64. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 5374 blood culture ex female 63 yrs with lymphocytic lymphoma Texas 13 Dec 1985 /J. Harris BY6-1038. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 5972 ex blood cultures, female New York 1987 /M. Kemna M756-87. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6053 blood culture Texas /J. Harris BY8-566. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6054 blood culture Texas /J. Harris BY8-579. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6107 blood culture Connecticut Health Dept., Hartford, USA /CDC B-4620. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6108 blood culture USA /CDC B-4621. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6120 CDC B-4507. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6164 blood culture /CDC B-4683. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6281 blood, male 70 yrs Plattsburgh, N.Y. 11 Dec 1987 /M. Kemna M883-87. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6285 necrotic lesion, right index finger wound, male 72 yrs, greenhouse worker Binghamton, NY 18 Nov 1987 /M. Kemna M70-88. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6326 blood ex child Maine 30 Sep 1987 /M. Kemna M727.87. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6327 blood Virginia State Health Dept (MY122) /CDC B-4509.

- Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6482 blood, male 54 yrs, with bronchiectasis Austin, TX J. Harris 3 Mar 1988 /J. Harris BY8-1203. Pigment: red/blue // cycloheximide: sensitive // benomyl: resistant // human/animal pathogen: non virulent (Sigler et al, J. Clin. Microbiol. 28:1009-1015, 1990).
- 6492 embryo *Prunus persica* v. *nucipersica* (nectarine) UAMH L. Sigler 18 Aug 1989 /L. Sigler. Pigment: red/blue.
- 6540 inflamed mastectomy site Minneapolis, MN /CDC B-4684. Pigment: purple.
- 6749 house dust Senrigaoka, Suita, Osaka Prefecture, Japan N. Toyozaki 16 Feb 1984 /S.-I. Udagawa NHL 2955. Pigment: dark violet // biodiversity: house dust (Iwatsu et al, Trans. mycol. Soc. Japan 28:9-18, 1987).
- 6797 ex *Picea* sp. lumber St. Pamphile, Que. B. Grylls 14 Aug 1990 /B. Grylls. Pigment: blue-violet.
- 6859 sputum, heart transplant patient Edmonton, Alta. R. McWhirter 10 Apr 1991 /P. Kibsey MY 1149. Cycloheximide: sensitive // pigment: none produced // benomyl: resistant // thermotolerant: grows @ 37C.
- 8617 fine needle lung biopsy from nodular lesion, immunosuppressed male, 52 yr with heart transplant rural southern Italy July 1993 /E. Gueho IP 2317.95. Pigment: blue-black // benomyl: resistant // molecular systematics: compared to type by molecular techniques. "Every data were in agreement" // human/animal pathogen: first reported case of visceral isolation in a heart transplant patient, excellent patient response to amphotericin B, no response to intracozazole (Tambini et al. J. Med Vet Mycol 34:195-198, 1996).
- 9048 pit of peach Edmonton, Alta. L. Sigler 18 Aug 1997 /L. Sigler. Pigment: blue-black.
- 9205 air ex RCS strip, inside cab of CAT working on woodchip pile Kamloops, BC S.P. Abbott (SA-M200) 26 Jan 1998 /S.P. Abbott (SA-M200). Pigment: blue-black.
- Quasiconcha reticulata*** Barr & Blackwell
4380 juniper cones in dung ex *Bassariscus astutus* Texas 31 Jan 1967 /M. Blackwell RL 612918. Pigment: wine red.
4400 M. Blackwell RL 612910.
- Radiomyces embreei*** Benjamin
3105 (T *Radiomyces embreei*) dung ex mouse San Bernardino Co., Calif. R.K. Benjamin (RSA 914) 12 Oct 1959 /IMI 81586 [=NRRL 2839 =ATCC 13845 =CBS 254.60].
- Radiomyces spectabilis*** Embree
2749 C. Alexopoulos [=RSA 1620].
- Radulodon americanus*** Ryvardeen
7234 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. P. Crane (6-28-7.8m-3a) Jul 1989 /L. Hutchison NOF 1813.
8160 dikaryon (2n) strain ex *Populus tremuloides* (aspen poplar) British Columbia 25 Aug 1945 /S. Davies FC-155 [=NOF 368].
8161 monokaryon (n) strain ex *Populus tremuloides* (aspen poplar) Alberta M.K. Nobles 1957 /S. Davies FC-156 [=NOF 399].
- Raffaelea* sp.**
6132 oakwood soil at 0 C Rhode Is. M. Carreiro /M. Carreiro NW126.
- Ramaria fenfica*** (Karst.) Ricken
5886 *Picea glauca*, *Pinus contorta* forest Rocky-Clearwater Forest, Alta. (C)A. Smreciu 2 Sep 1987 / (C)A. Smreciu. Mycorrhizae: unconfirmed.
- Ramichloridium anceps*** see ***Rhinochadiella anceps***
- Ramichloridium apiculatum*** (H.J. Mill., Giddens & A.A. Foster) de Hoog
4354 (T *Chloridium apiculatum*) forest soil Georgia USA /M. McGinnis NCMH 1035 [=ATCC 13211 =CBS 156.59 =IMI 100716 =MUCL 7991 =QM 7716 =GenBank EU041848 LSU =GenBank EU041791 ITS]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989).
- Ramichloridium cerophilum*** (Tubaki) de Hoog (syn. *Acrotheca cerophila*)
4379 (T *Acrotheca cerophila*) leaf of *Sasa* sp. Japan K. Tubaki /M. McGinnis NCMH 732 [=CBS 103.59 =GenBank AF050286 ITS]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: members of the Herpotrichiellaceae (Untereiner & Naveau, Mycologia 91:67-83, 1999); *Ramichloridium* and allied genera (Arzaniou M, Groenewald JZ, Gams W, Braun U, Shin H-D, Crous PW, Stud Mycol 58:57-93, 2007).
- Ramichloridium mackenziei*** see ***Rhinochadiella mackenziei***
- Ramichloridium musae*** (Stahel ex M.B. Ellis) de Hoog (syn. *Periconiella musae*, *Veronaea musae*)
4364 (T *Chloridium musae*) leaves *Musa sapientum* Paramaribo Surinam G. Stahel 1936 /M. McGinnis NCMH 1057 [=CBS 365.36 =GenBank EU041801 ITS =JCM 6973 =MUCL 9556 =GenBank EU041858 LSU]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Molecular systematics: *Ramichloridium* and allied genera (Arzaniou M, Groenewald JZ, Gams W, Braun U, Shin H-D, Crous PW, Stud Mycol 58:57-93, 2007).
- Ramichloridium obovoideum*** (Matsushima) De Hoog (syn. *Rhinochadiella obovoidea*)
9166 canine post mortem Tennessee Univ. of Tennessee College of Vet. Medicine 1997 /M.G. Rinaldi UTHSC 97-1504.
- Ramichloridium* sp.**
4654 beetle galleries in alpine fir Hinton, Alberta L. Sigler Sep 1982 /L. Sigler.
8121 ex roots of *Pleurothallis* sp. (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 21 Nov 1991 /R.S. Currah K410f.
- Ramularia deusta* var. *alba*** U. Braun
2572 (T *Hyalodendron album*) living leaf, *Lathyrus odoratus* UK strain Dowson # 552 Aug 1936 /CBS 232.36 [=CBS 232.36 =MUCL 312].
- Ramularia pusilla*** Unger
2693 leaf spots ex *Bromus inermis* (smooth brome) Unity Sask. /J.D. Smith.
2694 leaf spots ex *Bromus inermis* (smooth brome) Unity Sask. /J.D. Smith.
2695 leaf spots ex *Bromus inermis* (smooth brome) Big River Sask. /J.D. Smith.
2697 leaf spots ex *Bromus inermis* (smooth brome) Leask Sask. /J.D. Smith.
- Ramularia* sp.**
10897 ex nasal scraping, dog (shepherd/husky), male, 2 yr with chronic purulent hemorrhagic nasal discharge Atlantic Veterinary Services, Charlottetown, PE AVC C-30071-07 /R. Rennie MY 8659. Mesophilic: NG @ 35C (fide submitting laboratory) // molecular systematics: BLAST match 98% ITS similarity with *Ramularia* species (fide UAMH 2008).

Rasamsonia argillacea (Stolk, Evans & Nilsson) Houbraken & Frisvad (syn. *Geosmithia argillacea*)

- 2231 balsam fir-black spruce pulpwood chips New Brunswick /J.K. Shields 6435-22. Thermotolerant: grows @ 25-47C.
- 4913 peat moss Smokey Lake Alta. L. Sigler Jan 1984 /L. Sigler [=FRR 2842]. Thermotolerant: grows @ 25-45C.
- 5011 (T *Penicillium argillaceum*) mine tip with very high surface temp. Staffordshire, U.K. H.C. Evans 1967 /J.I. Pitt FRR 722 [=NRRL 5177 =CBS 101.69 =IMI 156096 =IBT 31199 =GenBank JF417491 ITS =GenBank JF417456 BenA =GenBank JF417501 cmd]. Thermotolerant // molecular systematics: *Rasamsonia* for thermotolerant *Geosmithia* and *Talaromyces* species (Houbraken, Spierenburg & Frisvad, Ant v Leeuw 101:403-421, 2012).
- 7717 ex bronchial washing, female 28 yr Vancouver, BC BC Prov Lab (R509) 18 Aug 1994 /R. Rennie MY 4419 [=NRRL 35554]. Thermotolerant.
- 8639 bronchial wash, male 63 yr British Columbia BC Prov. Lab. (F1055) July 1996 /R. Rennie MY 4149 [=NRRL 35555]. Thermotolerant: grows @ 37C.
- 9071 fungal ball in pleural wall New Zealand D. Parr 1997 /D. Parr MI 7206 [=NRRL 35556]. Thermotolerant.
- 9714 bronch wash female 30 yr with chronic granulomatous disease; isolated from same patient as UAMH 9833 Brampton, Ont. Jan 2000 /R. Rennie MY 914 [=NRRL 35557 =NRRL 32296 =OMH FR-0115 =see also UAMH 9833]. Thermotolerant: good growth @ 37C // human/animal pathogen: pulmonary infection in patient with chronic granulomatous disease (Sigler L, Summerbell RC, Walsh TJ, Sarabia A, Anderson VL, Holland SM, Abstr. 101 Am Soc. Microbiol. abstr. F-138, 2001).
- 9833 brain abscess, female 30 yr with underlying chronic granulomatous disease; DE + for hyphae Bethesda, MD Mar 2000 /T. Walsh 33-79-78-4 [=see also UAMH 9714 =NRRL 35559 =AMVAH V-00-20]. Thermotolerant: good growth @ 37C // human/animal pathogen: cerebral and pulmonary infection in patient with chronic granulomatous disease (Sigler L, Summerbell RC, Walsh TJ, Sarabia A, Anderson VL, Holland SM, Abstr. 101 Am Soc. Microbiol. abstr. F-138, 2001); Case description (Case #4) (De Ravin SS, Challipalli M, Anderson V, Shea YW, et al, Clin Inf Dis (in press) 2011).
- 9854 bronchial secretions, female 59 yr Quebec 2000 /G. St-Germain MY 54907 [=NRRL 35560].
- 10232 bronch wash upper lobe, female 15 yr with cystic fibrosis Ont. /R. Rennie MY 7338 [=NRRL 35562 =OMH M85068 =OMH FR-0521]. Human/animal pathogen: colonizing cystic fibrosis patient // thermotolerant: grows better @ 35C than @ 30C.
- 10905 abscess in patient with chronic granulomatous disease Bethesda, MD Y. Shea Apr 2008 /Y. Shea B2180471. Human/animal pathogen: Case description (Case 7) (De Ravin SS, Challipalli M, Anderson V, Shea YW, et al, Clin Inf Dis (in press) 2011).
- 10932 ex urine of canine (4 yr old F German Shepherd) with disseminated disease; same dog as UAMH 10933 Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA Feb 2008 /D.A. Sutton UTHSC R-4148 [=UAMH 10933 =GenBank EU862335 ITS =GenBank EU862336 D1D2]. Human/animal pathogen: disseminated infection in canine (Grant DC, Sutton DA, Sandberg CA, Tyler RD Jr, Thompson EH, Romanelli AM, Wickes BL, Med Mycol 47:221-226, 2009); antifungal susceptibility testing shows resistance to amphotericin B & voriconazole, susceptibility to caspofungin, itraconazole & posaconazole (fide Grant et al, 2009) // culture conditions: Colony rugose, elevated but sectors to more typical form.
- 10933 necropsy isolate ex vertebra of canine (4 yr old F German Shepherd); same dog as UAMH 10932 Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA Feb 2008 /D.A. Sutton UTHSC R-4234 [=CBS 128034 =UAMH 10932 =GenBank EU862337 ITS =GenBank

EU862338 D1D2]. Human/animal pathogen: disseminated infection in canine.

- 11537 ex bronchoalveolar lavage, right upper lobe of lung, male 41 yr, lung transplant patient CLS Microbiology Dept., Calgary, AB 27-Jun-2011 /R. Rennie MY 6032 [=UAMH 11538]. Culture conditions: grows better @ 35C than @ 30C (fide UAMH 2012) // human/animal pathogen: two phenotypes isolated from lung transplant patient.
- 11538 ex bronchoalveolar lavage, right upper lobe of lung, male 41 yr, lung transplant patient CLS Microbiology Dept., Calgary, AB 27-Jun-2011 /R. Rennie MY 6033. Human/animal pathogen: two phenotypes isolated from lung transplant patient.
- 11662 bronchoalveolar lavage ex cavitory lung lesion in patient with aortic graft infection (same patient as UAMH 11663); Thoracic Surgery, University of California San Francisco, CA 2011 /D.A. Sutton UTHSC 11-3152 [=UAMH 11663]. Human/animal pathogen: pulmonary and aortic graft infection in an immune competent patient (Doyon JB, Sutton DA, Theodore P, Dhillon G, Jones KD, Thompson EH, Fu J, Wickes BL, et al, J Clin Microbiol Epub Dec 2012).
- 11663 aortic tissue ex lung lesion in same patient as UAMH 11662; Thoracic Surgery, University of California San Francisco, CA 2012 /D.A. Sutton UTHSC 12-238 [=R-4870 =GenBank JX514398 ITS =GenBank JX514401 D1D2 =UAMH 11662]. Human/animal pathogen: pulmonary and aortic graft infection in an immune competent patient (Doyon JB, Sutton DA, Theodore P, Dhillon G, Jones KD, Thompson EH, Fu J, Wickes BL, et al, J Clin Microbiol Epub Dec 2012).

Rasamsonia cylindrospora (G. Smith) Houbraken & Frisvad (syn. *Geosmithia cylindrospora*)

- 5006 (T *Penicillium cylindrosporum*) culture contaminant Hartwell, U.K. J. Robson /J.I. Pitt FRR 2673 [=NRRL 2673 =ATCC 18223 =CBS 275.58 =IMI 71623 =IBT 31292 =GenBank JF417470 ITS =GenBank JF417448 BenA =GenBank JF417493 cmd]. Molecular systematics: *Rasamsonia* for thermotolerant *Geosmithia* and *Talaromyces* species (Houbraken, Spierenburg & Frisvad, Ant v Leeuw 101:403-421, 2012).

Rasamsonia eburnea (Yaguchi, Someya & Udagawa) Houbraken & Frisvad (syn. *Talaromyces eburneus*)

- 8242 (T *Talaromyces eburneus*) soil Taipei, Taiwan T. Yaguchi 1968 /T. Yaguchi PF 1151 [=SUM 3297 ? =CBS 100538 =IBT 17519 =GenBank JF417483 ITS =GenBank JF417426 BenA =GenBank JF417494 cmd]. Thermotolerant: grows @ 37C // pigment: tan on PDA // molecular systematics: *Rasamsonia* for thermotolerant *Geosmithia* and *Talaromyces* species (Houbraken, Spierenburg & Frisvad, Ant v Leeuw 101:403-421, 2012).

Rasamsonia emersonii (Stolk) Houbraken & Frisvad (syn. *Talaromyces emersonii*)

- 5005 (T *Talaromyces emersonii*) compost Italy A.J. van der Plaats-Niterink 1964 /J.I. Pitt FRR 3221 [=IFO 31232 =IMI 116815ii =GenBank FJ389922 ITS =GenBank EU021684 Cal =GenBank EU021666 BetaTub =GenBank EU021634 RPBII =GenBank AB176615 ITS =NRRL 3221 =ATCC 16479 =IMI 116815 =CBS 393.64 =IBT 31218 =IBT 21695 =GenBank JF417478 ITS =GenBank JF417463 BenA =GenBank JF417510 cmd =GenBank AF033387 ITS]. Thermophilic // cellulolytic // molecular systematics: *Rasamsonia* for thermotolerant *Geosmithia* and *Talaromyces* species (Houbraken, Spierenburg & Frisvad, Ant v Leeuw 101:403-421, 2012).
- 6427 cave soil Grotto di Ron, Val Savarouche, Valle D'Aosta, Italy (C) D. Malloch & J.-M. Hubart 14 Jul 1988 /R. Khan TRTC 51108.

Redaellia elegans see *Aspergillus penicilloides***Remersonia thermophila** (Fergus) Seifert & Samson (syn.*Stilbella thermophila*)

- 2028 (T *Stilbella thermophila*) horse manure-wheat straw mushroom compost during peak heating Gossau-Zurich, Switzerland C.L. Fergus Oct 1962 /C.L. Fergus 2 [=ATCC 22073 =CBS 409.63]. Thermophilic: opt. 45C // systematics/taxonomy: morphologic & molecular (Seifert et al., Can. J. Bot. 75:1158-1165, 1997).

Renispora flavissima Sigler, Gaur, Lichtwardt & Carmichael (morph *Chryso sporium an. Renispora flavissima*)

- 4140 (T + mating type *Renispora flavissima*) bat guano & soil ex barn Kansas P.K. Gaur Mar 1977 /R.W. Lichtwardt KS7-17-6 [=ATCC 38503 =CBS 709.79 =IMI 241795 =GenBank AY176719 LSU] + mating type 4188. Molecular systematics: human pathogenic fungi & relatives (Bowman & Taylor, The Fungal Holomorph, (Reynolds & Taylor, eds.), CAB International, 1993; Bowman et al., Mol. Phylogenetics Evolution 6:89-96, 1996); phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002) // systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4141 bat guano & soil ex barn Kansas R.W. Lichtwardt Aug 1976 /R.W. Lichtwardt KS2-3-15-1 +. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4184 soil ex bat-infested barn Kansas R.W. Lichtwardt Mar 1977 /R.W. Lichtwardt KS7-14-2 +. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4185 soil ex bat-infested barn Kansas R.W. Lichtwardt Mar 1977 /R.W. Lichtwardt KS7-13-5 +. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4186 soil ex bat-infested barn Kansas R.W. Lichtwardt Mar 1977 /R.W. Lichtwardt KS7-8-2 +. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4187 soil ex bat-infested barn Kansas R.W. Lichtwardt Mar 1977 /R.W. Lichtwardt KS7-16-4 +. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4188 (T - mating type *Renispora flavissima*) liver & spleen ex mouse injected with soil isolate Kansas P.K. Gaur /R.W. Lichtwardt KS2-3-20-1 [=ATCC 38504 =CBS 708.79 =IMI 241796 =GenBank AB040699 =GenBank AB015784 SSU =GenBank AB040699 LSU] - mating type 4140. Molecular systematics: human pathogenic fungi & relatives (Bowman et al., Mol. Phylogenetics Evolution 6:89-96, 1996; Bowman & Taylor, The Fungal Holomorph, (Reynolds & Taylor, eds.), CAB International, 1993); phylogeny of onygenalean fungi (Sugiyama, Ohara & Mikawa, Mycoscience 40:251-258, 1999; Sugiyama & Mikawa, Mycoscience 42:413-421, 2001); ITS sequence (fide UAMH 2011) // systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4189 soil isol. re-isolated ex mice Kansas R.W. Lichtwardt Aug 1976 /R.W. Lichtwardt KS2-3-3B-1 +. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4190 tissue ex mice injected with soil isol. Kansas R.W. Lichtwardt Aug 1976 /R.W. Lichtwardt KS2-1-2 +. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon

10:133-141, 1979).

- 4191 soil ex bat infested barn Kansas R.W. Lichtwardt Mar 1977 /R.W. Lichtwardt KS7-15-7 -. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4209 monascospore isol. ex cross UAMH 4140 x 4188 UAMH, Edmonton L. Sigler Feb 1979 /L. Sigler -. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4210 monascospore isol. ex cross UAMH 4140 x 4188 UAMH, Edmonton L. Sigler Feb 1979 /L. Sigler -. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).
- 4211 monascospore isol. ex cross UAMH 4140 x 4188 UAMH, Edmonton L. Sigler Feb 1979 /L. Sigler -. Systematics/taxonomy: description and mating data (Sigler L, Gaur PK, Lichtwardt RW, Carmichael JW, Mycotaxon 10:133-141, 1979).

Retinocyclus abietis (Crouan) Groves & Wells

- 1439 *Pinus contorta* Alberta R.J. Bouchier May 1957 /DAOM 59796 [=CBS 379.59].

Retroconis fusiformis (Reddy & Bilgrami) de Hoog &Batenburg-Van der Vegte (syn. *Hyalodendron fusiforme*)

- 6625 ex human skin Jabalpur, India J. David /CBS 540.88 [=IMI 320880]. Pigment: brown.

Rhexothecium globosum Samson & Mouchacca

- 2742 internal organs, small mammal India /H.C. Gugnani R 347.
- 5518 soil Mt. Kenya, Timau Track, Kenya R. Khan 14 Jul 1966 /D. Malloch 66-620 [=TRTC 66.620d =CBS 370.87]. Cycloheximide: resistant.

Rhino cladiella anceps (Sacc. & Ellis) S. Hughes (syn.*Ramichloridium anceps*)

- 1414 soil cedar woods Campbellville Ont. Barron (9005) 1961 /DAOM 84422 [=MUCL 8233 =ATCC 18655 =GenBank EU041862 LSU =IMI 134453 =GenBank EU041805 ITS]. Molecular systematics: *Ramichloridium* and allied genera (Arzaniou M, Groenewald JZ, Gams W, Braun U, Shin H-D, Crous PW, Stud Mycol 58:57-93, 2007).
- 8461 stem of *Fagus sylvatica* France F. Mangelot 1953 /W. Untereiner CBS 157.54 [=MUCL 1081 =MUCL 15756 =MUCL 7992 =CBS 157.54 =ATCC 15680 =GenBank AF050285 =GenBank EU041861 LSU =GenBank EU041804 ITS]. Molecular systematics: *Herpotrichiellaceae* (Untereiner & Naveau, Mycologia 91:67-83, 1999); *Ramichloridium* and allied genera (Arzaniou M, Groenewald JZ, Gams W, Braun U, Shin H-D, Crous PW, Stud Mycol 58:57-93, 2007).

Rhino cladiella aquaspersa (Borelli) Schell & al. (syn.*Acrotheca aquaspersa*)

- 4359 (T *Acrotheca aquaspersa*) man chromomycosis Venezuela Borelli /M. McGinnis NCMH 76 [=CDC B-1918 =FMC 241 =CBS 313.73 =ATCC 24410 =GenBank U20512 SSU]. Molecular systematics: phylogeny of black yeasts (De Hoog, Vicente, Caligiorme, Kantarcioglu et al., J. Clin. Microbiol. 41:4767-4778, 2003).
- 9342 darkly pigmented skin lesion present on left ear for 5 yr, urban male 60 yr, DE+ with sclerotic cells Medellin, Columbia, South America 1991 /A. Restrepo 325. Human/animal pathogen: unusual case of chromoblastomycosis.

Rhino cladiella atrovirens Nannf.

- 1398 *Larix siberica* Irkutsk Siberia Bjorkman (as 7-a) /DAOM 75654.

- 2508 soil New York? Kuehn (K350) 1962 /G.F. Orr.
 4352 (T *Rhinochloidiella atrovirens*) pine wood Uppland Sweden E. Melin /M. McGinnis NCMH 799 [=CBS 317.33 =GenBank AB363798 LSU =GenBank AB025899 cytb]. Coenzyme Q-10 (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989).
 4622 galleries *Dendroctonus ponderosae* ex alpine fir Hinton Alta. L. Sigler Sep 1982 /Y. Hiratsuka.
 4717 ex litter & dead caterpillar on filter paper L. Sigler Nov 1982 /L. Sigler.
 4822 poplar on rose-bengal medium (with nematodes) UAMH L. Sigler Aug 1983 /L. Kennedy.
 4922 mountain pine beetle galleries Waterton Alta. A. Tsuneda /P. Muruyama NFRC C-858.
 8044 indoor air ex RCS strip from *Apis mellifera* (honeybee) overwintering facility Fairview, Alta. S.P. Abbott (OHS 276) 22 Mar 1994 /S.P. Abbott (OHS 276).
 8462 *Pinus contorta* Strachan, Alberta, Canada R.J. Bouchier May 1957 /W. Untereiner CBS 380.59 [=DAOM 59759 =MUCL 1061 =CBS 380.59].
 8463 coniferous wood Spray Valley, Banff National Park, Alberta S.J. Hughes 1960 /W. Untereiner CBS 685.76 [=DAOM 71331 =CBS 685.76 =CCFC 9319].
 8939 sputum, male 66 yr Edmonton, Alta. C. Sand 21 May 1997 /R. Rennie MY 2453. Cycloheximide: resistant.
 9114 needle biopsy, female 75 yr with suspected osteomyelitis of the Rt. pubis Australia A. Woodgyer 1997 /A. Woodgyer 9719201.

Rhinochloidiella basitona (de Hoog) Arzanlou & Crous

- 7017 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 341) Aug 1990.

Rhinochloidiella mackenziei (C.K. Campb. & Al-Hedaithy)

- Arzanlou & Crous (syn. *Ramichloridium mackenziei*)
 8666 unilateral brain abscess following surgery, female, 60 yr Israel 1989 /C.K. Campbell NCPF 2738. Cycloheximide: resistant // thermophilic: poor growth @ 25C, grows @ 42C // human/animal pathogen: cerebral phaeohyphomycosis.
 8667 (T *Ramichloridium mackenziei*) fatal brain abscess, female, 55 yr, DE branching septate hyphae, unsuccessful therapy with amphotericin B, 5-fluorocytosine & ketoconazole Riyadh, Saudi Arabia S.A. Al-Hedaithy (653) 1983 /C.K. Campbell NCPF 2808 [=CBS 650.93 =GenBank AF050288 =MUCL 40057]. Cycloheximide: resistant // thermophilic: poor growth @ 25C, grows @ 42C // molecular systematics: *Ramichloridium* and allied genera (Arzanlou M, Groenewald JZ, Gams W, Braun U, Shin H-D, Crous PW, Stud Mycol 58:57-93, 2007); *Herpotrichiellaceae* (Untereiner & Naveau, Mycologia 91:67-83, 1999) // human/animal pathogen: cerebral phaeohyphomycosis.
 8668 brain abscess Saudi Arabia M.K. Moawad Hanna 1994 /C.K. Campbell NCPF 7123. Cycloheximide: resistant // thermophilic: poor growth @ 25C, grows @ 42C // human/animal pathogen: cerebral phaeohyphomycosis.
 9926 brain abscess, male originally from Somalia, 60 yr, DE+ Toronto, ON 2000 /R. Rennie MY 103. Human/animal pathogen: cerebral phaeohyphomycosis // thermotolerant: grows @ 37C.
 10954 ex fatal brain abscess, patient expired 64 da after diagnosis & therapy with amphotericin B, voriconazole and posaconazole Quatar S.J. Taj-Aldeen 2008 /D.A. Sutton UTHSC R-4156 [=UTHSC R-4155 (susceptibility number)]. Human/animal pathogen: cerebral phaeohyphomycosis (Taj-Aldeen et al in prep) // molecular systematics: Blast match 99% ITS similarity to *Rhinochloidiella mackenziei* (fide D.A. Sutton); Blast match 100% D1D2 similarity to *Rhinochloidiella mackenziei* (fide D.A. Sutton) // thermotolerant: grows better @ 35C than @ 30C.

Rhinochloidiella obovoidea see ***Ramichloridium obovoideum***

Rhinochloidiella lesnei see ***Parascedosporium putredinis***

Rhinotrichum lanosum Cooke

- 3194 plaster & wall-paper London England Hinton & Blafour-Browne 1941 /IMI 51266 (b).

Rhizoctonia anaticula see ***Epulorhiza anaticula***

Rhizoctonia anomala see ***Moniliopsis anomala***

Rhizoctonia goodyerae-repentis see ***Ceratorhiza goodyerae-repentis***

Rhizoctonia lanuginosa Bernard

- 5744 (T *Rhizoctonia lanuginosa*) ex orchid *Odontoglossum* sp. France N. Bernard 1908 /CBS 125.08 [=ATCC 11875]. Odor: musty // mycorrhizae: endophyte orchid *Odontoglossum* sp..

Rhizoctonia mucoroides Bernard

- 5745 (T *Rhizoctonia mucoroides*) ex *Viola tricolor* N. Bernard 1908 /CBS 126.08 [=ATCC 24974].

Rhizoctonia repens see ***Epulorhiza repens***

Rhizoctonia solani J.G. Kühn (syn. *Moniliopsis solani*; morph *Thanatephorus cucumeris*)

- 7160 ex roots of epiphytic orchid *Oncidium stenotis* growing on *Pterocarpus officinalis* La Selva, Heredia Prov., Costa Rica K. Richardson 9 Oct 1991 /R.S. Currah K353a. Pigment: brown // mycorrhizae: orchid endophyte *Oncidium stenotis* (Richardson et al, Lindleyana 8:127-137, 1993).

***Rhizoctonia* sp.**

- 5657 endophyte of fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (RC23a) 19 Jun 1985. Mycorrhizae: endophyte of orchid *Calypso bulbosa*.
 5658 endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC30b4) 19 Jun 1985. Mycorrhizae: endophyte of orchid *Goodyera oblongifolia*.
 5659 endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC44a) 20 Jun 1985. Mycorrhizae: endophyte of orchid *Goodyera oblongifolia*.
 5660 endophyte of orchid *Orchis rotundifolia* Wagner Bog, Alta. R. Currah (RC77a) 10 Jul 1985. Mycorrhizae: endophyte of orchid *Orchis rotundifolia*.
 5661 endophyte of orchid *Orchis rotundifolia* Wagner Bog, Alta. R. Currah (RC80ra) 10 Jul 1985. Pigment: gold // mycorrhizae: endophyte of orchid *Orchis rotundifolia*.
 5679 endophyte of long-bracted green orchid *Coeloglossum viride* UADBG, Alta. R. Currah (RC16a) 10 Jun 1985. Mycorrhizae: endophyte of orchid *Coeloglossum viride*.
 5680 endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC34a4) 19 Jun 1985. Mycorrhizae: endophyte of orchid *Goodyera oblongifolia*.
 5681 endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC39b4) 19 Jun 1985. Mycorrhizae: endophyte of orchid *Goodyera oblongifolia*.
 5682 endophyte of fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (RC49a4) 20 Jun 1985. Mycorrhizae: endophyte of orchid *Calypso bulbosa*.
 5683 endophyte of white bog orchid *Platanthera dilatata* Castle River, Alta. R. Currah (RC57a) 20 Jun 1985. Mycorrhizae: endophyte of orchid *Platanthera dilatata*.
 5684 endophyte of northern green orchid *Platanthera hyperborea* UADBG, Alta. R. Currah (RC58a4) 25 Jun 1985.

- Mycorrhizae: endophyte of orchid *Platanthera hyperborea*.
 5685 endophyte of round-leaved orchid *Platanthera orbiculata* Edson Forest, Alta. R. Currah (RC94rRb) 24 Jul 1985.
 Mycorrhizae: endophyte of orchid *Platanthera orbiculata*.
 5686 endophyte of round-leaved orchid *Platanthera orbiculata* Edson Forest, Alta. R. Currah (RC95a) 24 Jul 1985.
 Mycorrhizae: endophyte of orchid *Platanthera orbiculata*.
 5687 endophyte of blunt-leaved orchid *Platanthera obtusata* Edson Forest, Alta. R. Currah (RC97a) 24 Jul 1985. Mycorrhizae: endophyte of orchid *Platanthera obtusata*.
 5688 ex root of small round-leaf orchid *Amerorchis rotundifolia* Edson Forest, Alta. R. Currah (RC99ra) 24 Jul 1985. Mycorrhizae: endophyte of orchid *Amerorchis rotundifolia*.
- Rhizomucor pusillus* (Lindt) Schipper (syn. *Mucor pusillus*)**
 2170 air sac lung Whistling swan at autopsy Vet. Lab. Edmonton C. Davidson 1964 [=NRRL A-13486].
 7444 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M254) 3 Dec 1993 /S.P. Abbott (SA-M254) - mates with UAMH 8344.
 7603 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Camp Creek, Alta. S.P. Abbott (OHS 243) 21 Jan 1994 /S.P. Abbott (OHS 243). Thermotolerant: growth @ 37-42C.
 8243 post mortem lung, male 55 yr with chronic lymphocytic leukemia, treated with fludarabine & prednisone for autoimmune hemolytic anemia Galveston, TX 1993 /I. Weitzman McG - mates with UAMH 8244, Weitzman et al., JCM 33:781-783, 1995. Human/animal pathogen: disseminated disease, isolate confirmed by compatibility.
 8244 horse dung Pyramid Lake, Nevada D.G. Cooney (8) 1 Dec 1959 /I. Weitzman NRRL 3470 [=NRRL 3470 =NRRL A-9674 =ATCC 16459 =CBS 184.67] + mates with UAMH 8243, Weitzman et al., JCM 33:781-783, 1995. Sillucin (Dev. Ind. Microbiol. 20:661-672, 1979); lipase. Thermophilic: grows @ 45C (Cooney, D.G., Emerson, R. Thermophilic fungi. San Francisco. W.H. Freeman & Co., 1964, pp.17-27).
 8347 outside air (-30 C) ex RCS strip near Devon, Alta S.P. Abbott (SA-M58) 30-Jan-1996 /S.P. Abbott (SA-M58).
 8635 environmental isolate 1996 /R. Rennie MY 1020. Thermotolerant: grows @ 37C.
 10076 biopsy of sphenoid mucosal lining, male 62 yr cancer patient on chemotherapy, histopathology non-septate hyphae Nebraska 2001 /P. Iwen SP01-3255 [=ATCC MYA-2881 =GenBank AF461764] + mates with 8243 (-). Thermophilic: good growth @ 37C, poor growth @ 30C // molecular systematics: BLAST match >99% ITS similarity with *Rhizomucor pusillus* // human/animal pathogen: invasive sinusitis in patient with acute myelogenous leukemia (Iwen PC, Freifeld AG, Sigler L, Tarantolo SR, J. Clin. Microbiol. 43:5819-5821, 2005) // culture conditions: zygospores abundant in mating with 8243 on TAK cello at 30 C.
- Rhizopogon rubescens* Tul.**
 5188 mixed *Pinus* & *Picea glauca* woods Slave Lake Forest, Alta. UAMH 5 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
 5189 mixed *Pinus* & *Picea glauca* woods Slave Lake Forest, Alta. UAMH 5 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
 5190 mixed *Pinus* & *Picea glauca* woods Slave Lake Forest, Alta. UAMH 5 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
 5509 soil Alberta R. Danielson (RMD 2425) 29 Sep 1976 /DAOM 176601 [=UAMH 8996 =DAOM 176606 =CCFC 3653]. Mycorrhizae.
 6157 under 12 yr old *Pinus banksiana* in plantation on sandy site Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) E. Schwartzel Aug 1983 /L. Hutchison MB1 [=TRTC MB1]. Pigment: yellow // mycorrhizae.
 6183 *Pinus contorta* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988 /(C) S.P. Abbott. Pigment: yellow // mycorrhizae:
 poorly salt tolerant (Kernaghan, Hambling, Fung & Khasa, Restoration Ecology 10:43-51, 2002).
 6185 *Pinus contorta* woods Bow-Crow Forest, Alta (C) S.P. Abbott 12 Jul 1988 /(C) S.P. Abbott. Pigment: yellow // mycorrhizae.
 6186 *Pinus contorta* woods Bow Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988 /(C) S.P. Abbott. Mycorrhizae.
 6188 *Pinus contorta* woods Bow Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988. Mycorrhizae.
 6189 *Pinus contorta* woods Bow Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988 /(C) S.P. Abbott. Pigment: brown // mycorrhizae.
 6224 *Pinus contorta* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988 /(C) S.P. Abbott. Mycorrhizae.
 8995 R.M. Danielson (RMD 2463) /R.M. Danielson RMD 2463. Pigment: brown // mycorrhizae.
 8996 soil Alberta R.M. Danielson (RMD 2425) 29 Sep 1976 /R.M. Danielson RMD 2425 [=UAMH 5509 =DAOM 176606 =CCFC 3653]. Pigment: brown // mycorrhizae.
- Rhizopogon* sp.**
 6226 *Pinus contorta* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 16 Aug 1988 /(C) S.P. Abbott. Mycorrhizae.
 9058 R.M. Danielson (RMD 2804) /R.M. Danielson RMD 2804. Pigment: brown // mycorrhizae.
- Rhizopogon subgelatinosus* Smith**
 6187 *Pinus contorta* woods Bow Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988 /(C) S.P. Abbott. Mycorrhizae.
- Rhizopogon subsalmonius* Smith**
 5448 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.
 5858 mixed *Picea*, *Pinus contorta* Rocky-Clearwater Forest (C) A. Smreciu 27 Jul 1987 /(C) A. Smreciu. Pigment: yellow // mycorrhizae.
 6222 *Pinus contorta* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 12 Jul 1988 /(C) S.P. Abbott. Pigment: brown // mycorrhizae.
 6225 *Picea engelmannii* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 19 Jul 1988 /(C) S.P. Abbott. Mycorrhizae.
- Rhizopogon vinicolor* A.H. Smith**
 6200 under *Pseudotsuga menziesii* & *Tsuga heterophylla* Benton Co., Oregon (C) R. Molina & J. Trappe 1975 /L. Hutchison J37. Pigment: brown // mycorrhizae: effects of fertilization levels on growth & mycorrhizal colonization of container-grown conifer seedlings (Khasa, Sigler, Chakravarty, Dancik, et al., New Forests 22:179-197, 2001); persistence of introduced ectomycorrhizal fungi in outplanted seedlings (Gagne A, Jany J-L, Bousquet J, Khasa PD, Can J For Res 36:1684-1694, 2006); assessment of mycorrhizal inoculation in aspen and balsam poplar in the nursery (Qureshi AM, Khasa DP, Biomass and Bioenergy 32:381-391, 2008).
- Rhizopogon vulgaris* (Vitt.) M. Lange**
 6201 under *Pinus radiata* S. Africa 1982 /L. Hutchison J338. Mycorrhizae.
- Rhizopus arrhizus* see ***Rhizopus oryzae***
- Rhizopus azygosporus* Yuan & Jong**
 10311 human skin, Japanese female /S.-I. Udagawa SUM 3250. Culture conditions: produces azygospores on MEA at 37 C (fide Udagawa) // human/animal pathogen: cutaneous infection.
- Rhizopus microsporus* var. *microsporus* Van Tieghem**
 2706 stomach ex bovine foetus Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
 11833 sputum ex male 61 yr with chronic obstructive pulmonary

disease and untreated diabetes Worcester, MA 2014 /D.A. Sutton D114-206 [=GenBank KM103772 ITS =GenBank KM103773 D1D2]. Human/animal pathogen: multifocal lung infection following brush clearing (Tsyrukunou AV, Ellison RT 3rd, Akalin A, Wiederhold N, Sutton DA, Lindner J, Fan H, Levitz SM, Zivna I, Med Mycol Case Rep. 8;6:14-7, 2014).

Rhizopus microsporus var. oligosporus (Saito) Schipper & Stalpers (syn. *Rhizopus oligosporus*)

- 7999 ex tempeh fermentation Indonesia /S. Davies FC-306 [=NRRL 2710 =CBS 338.62 =ATCC 22959 =IMI 174457 =IFO 8631 =UAMH 8000]. Acid protease (Can. J. Microbiol. 11:727-732, 1965; App. Microbiol. 27:906-911, 1974); oncom & degradation of phytic acid (J. Food Sci. 46:523-525, 1981); ergostadietriols useful in lowering serum cholesterols (US Patent 4,234,577); extracellular lipase (J. Gen Microbiol. 134:227-233, 1988); lipase (J. Ferment. Bioeng. 70:85-89, 1990). Application: tempeh fermentation; food production (tempeh) (Soybean Dig. Nov. p.14-15, 1961; Sourcebook of experiments for the teaching of microbiology, Primrose et al., eds. Academic Press, 1982, p. 597-602).
- 8000 ex tempeh fermentation Indonesia /S. Davies FC-411 [=NRRL 2710 =UAMH 7999 =CBS 338.62 =IMI 174457 =IFO 8631 =GenBank AF543523 ITS =GenBank AF157212 28S =GenBank AB097389 ITS =GenBank DQ990323 18S =GenBank AY138788 btub =GenBank AY138787 atub =GenBank AY138789 atub =GenBank DQ990328 ITS =GenBank DQ990327 28S-18S IGS =GenBank AB016015 18S =GenBank DQ990327 18S =GenBank AB512238 actin =GenBank AF157288 EF1 =GenBank AB512261 EF1 =GenBank AF162064 btub =GenBank AF162066 btub]. Acid protease (Can. J. Microbiol. 11:727-732, 1965; App. Microbiol. 27:906-911, 1974); oncom & degradation of phytic acid (J. Food Sci. 46:523-525, 1981); ergostadietriols useful in lowering serum cholesterols (US Patent 4,234,577); extracellular lipase (J. Gen Microbiol. 134:227-233, 1988); lipase (J. Ferment. Bioeng. 70:85-89, 1990). Application: tempeh fermentation; food production (tempeh) (Soybean Dig. Nov. p.14-15, 1961; Sourcebook of experiments for the teaching of microbiology, Primrose et al., eds. Academic Press, 1982, p. 597-602).
- 8001 ex commercial tempei /S. Davies FC-412. Application: tempeh fermentation; food production.

Rhizopus microsporus var. rhizopodiformis (Cohn)

Schipper & Stalpers (syn. *Rhizopus rhizopodiformis*)

- 7639 ex lung, male 15 yr with acute lymphocytic leukemia Edmonton, Alta. C. Sand 6 Jul 1994 /R. Rennie MY 2957.
- 11643 swab ex ostomy site with necrotic tissue, male 55 yr; calcofluor negative but hyphae seen in histopathology University of Alberta Hospitals, Edmonton, Alta. 22-Feb-2012 /J. Fuller MY 1592. Thermotolerant: grows at 50, NG at 55C (fide submitting lab) // molecular systematics: identified as *Rhizopus microsporus var. rhizopodiformis* based on D1D2 blast result and on phenotypic characteristics (fide UAMH 2012) // culture conditions: short sporangiophores, finely roughened spores, well developed rhizoids and high temperature tolerance.

Rhizopus nigricans see *Rhizopus stolonifer*

Rhizopus nodosus Namyslowski

1567 C.L. Kramer K12.

Rhizopus oligosporus see *Rhizopus microsporus var. oligosporus*

Rhizopus oryzae Went & Prins. Geerl. (syn. *Rhizopus arrhizus*)

- 260 skin ex trunk & leg Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
- 594 skin ex cheek Edmonton, Alta. J.W. Carmichael Nov 1957 /J.W. Carmichael.
- 2665 D. Westlake [=PRL 2265].
- 4339 dust & grain ex bin, workers contracted hypersensitivity pneumonitis Alberta L. Sigler Oct 1982 /L. Sigler. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 7018 provisions for Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 49) Aug 1990 /D. Inglis (MR 49). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (Megachile rotundata) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7019 gut contents ex Megachile rotundata (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 51) Aug 1990 /D. Inglis (HD 51). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (Megachile rotundata) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- 7604 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 60) 13 Dec 1993 /S.P. Abbott (OHS 60). Thermotolerant: growth @ 37C.
- 7640 ex tissue from nose, female 15 yr with acute lymphocytic leukemia Edmonton, Alta. C. Sand 27 Jul 1994 /R. Rennie MY 3248.
- 8119 unknown source /S. Davies FC-366 [=NRRL 2582]. Molecular systematics: Blast match ITS 99-100% similarity with *Rhizopus oryzae* and *Amylomyces rouxii* (fide UAMH 2011); ITS 100% match to tempeh starter strains EU484229 (CBS 285.55) and EU484219 (CBS 329.47).
- 8721 This strain has been cited in a US or other patent & should not be used to infringe patent claims. USA RH 176) H.C. Murray (Upjohn Co. /ATCC 11145 [=CBS 381.52 =IMI 90340 =IFO 5780 =ATCC 11145 =CECT 2339 =DSM 906 =Upjohn Co. RH 176 =GenBank AB281571 IdHB gene =GenBank AB281513 actin =GenBank AB181315 ITS]. 16-hydroxyverrucarin A & B by transformation of verrucarins A & B (Appl. Environ. Microbiol. 46:480-483, 1983); 16-hydroxyverrucarin A & B by transformation of imipramine (J. Pharm. Sci. 70:151-155, 1981); 3 prime-hydroxyverrucarin A by transformation of verrucarins (Appl. Environ. Microbiol. 46:480-483, 1983); 3 prime-hydroxyverrucarin A by transformation of imipramine (J. Pharm. Sci. 70:151-155, 1981). Application: degrades insect moulting hormones (J. Chem. Soc. Chem. Commun. 1974:656-657, 1974); hydroxylation of steroids (Can. J. Chem. 57:436-440 & 1585-1587, 1979; Can. J. Chem. 59:1651-1655, 1981; Can. J. Chem. 63:1127-1131, 1985; Peppler, H.J., ed. Microbial technology. New York: Reinhold Publishing Corporation; 1967:p. 288-297; U.S. Pat. 2,646,370); transformation of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979); transformation of prostanoids (Can. J. Chem. 68:282-293, 1990); transformation of stemodin (J. Nat. Prod. (Lloydia) 54:1543-1552, 1991); transformation of isopinocampheol (Z. Naturforsch. 49C:553-560, 1994); reduction of 2-cyano-1-tetralones to cyanoalcohols (Tetrahedron Lett. 36:6461-6462, 1995); transformation of verrucarins A & B (Appl. Environ. Microbiol. 46:480-483, 1983); transformation of imipramine (J. Pharm. Sci. 70:151-155, 1981) // molecular systematics: Blast match ITS 100% similarity with *Rhizopus oryzae* (fide UAMH 2011).
- 9736 swab ex nose, female 56 Y with facial swelling Brampton, ON 2000 /R. Rennie MY 910/00. Thermotolerant: grows @ 42C but not @ 56C // molecular systematics: ITS 1 bp difference from UAMH 8721; Blast match ITS 100% similarity with *Rhizopus oryzae* (fide UAMH 2011).

10862 ex heavy growth of mixed molds on steam line covering in greenhouse tunnel Univ Alberta campus, Edmonton, Alta. (I) L. Sigler (C) N. Dhanani /N. Dhanani #3. Biodiversity: heavy growth of mixed molds (*Rhizopus*, *Aspergillus* and *Trichoderma*) on steamline covering (fide Environmental Health & Safety, U of A) // culture conditions: mixed originally with *Aspergillus niger* UAMH 10846.

Rhizopus rhizopodiformis see *Rhizopus microsporus* var. *rhizopodiformis*

Rhizopus stolonifer (Ehren.) Vuillemin (syn. *Rhizopus nigricans*)

- 110 plate contaminant, skin ex forearm Edmonton, Alta. J.W. Carmichael 30 Nov 1954 /J.W. Carmichael.
 159 Florida? /Cutter QM 778 or 779?
 198 contaminant Edmonton, Alta. J.W. Carmichael 12 Jul 1949 /J.W. Carmichael.
 240 skin ex abdomen Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
 290 Dr. Munroe.
 379 skin ex feet Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
 411 skin ex axilla Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
 1282 plate contaminant Edmonton, Alta. J.W. Carmichael Jun 1962 /J.W. Carmichael.
 1947 skin scrapings ex bovine Edmonton, Alta. 11 Mar 1964 /J.W. Carmichael.
 9188 This material is cited in a U.S. and/or other Patent and may not be used to infringe the patent claims. Listed in ATCC as *R. stolonifer* and in CBS as *R. oryzae*. A.F. Blakeslee (C-25B) /ATCC 6227b [=CBS 382.52 =IMI 57762 =IFO 5781 =IFO 6154 =IFO 6300 =VKM F-401 =NRRL 12939 =ATCC 6227b =GenBank AF188289 Hsp70 protein 2 =GenBank AF188288 Hsp70 =GenBank AF543526 SSU-ITS] - Mates with CBS 346.36 fide Schipper 1984 (in ATCC as plus mating strain). Application: production of steroids (U.S. Pat. 3,053,858; J. Biol. Chem. 247: 686-691, 1972); production of chiral alcohols (Can. J. Chem. 63:1287-1291, 1985); production of 11alpha-hydroxylase (J. Steroid Biochem. 28: 197-201, 1987; J. Steroid Biochem. 35: 749-751, 1990); production of 17beta-hydroxysteroid dehydrogenase (FEMS Microbiol. Lett. 99: 49-52, 1992); transformation of sesquiterpene lactone costunolide (J. Chem. Soc. Perkin Trans. 1979:3022-3028, 1979); hydroxylation of 17 alpha-ethynyl steroids (FEMS Microbiol. Lett. 33: 117-120, 1986); reduction of 3-methoxy-8(14)-seco-1,3,5(10),9(11)-estratetraene-14,17-dione (U.S. Pat. 3,562,112) // systematics/taxonomy: identified by Schipper as *R. oryzae* (Schipper, Stud. Mycol. 25:12-13, 1984) // molecular systematics: Blast match 100% to *Rhizopus stolonifer* AF543526 strain ATCC 6227b = CBS 382.52.

Rhizoscyphus ericae (D.J. Read) W.Y. Zhuang & Korf (syn. *Hymenoscyphus ericae*; morph *Scytalidium vaccinii*)

- 5828 (T *Scytalidium vaccinii*) root cells of mature *Vaccinium angustifolium* (ericoid mycorrhizae) Washington Co., Maine W. (FB) Litten /DAOM 196925 [=CBS 652.89 =GenBank L06325 =GenBank AF081439 =GenBank AJ243562 =ARON 2777.S =GenBank AJ319077]. Mycorrhizae: ericoid with *Vaccinium angustifolium*; with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, Mycologia 85:219-230, 1993); RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Fossheim & Schumacher, New Phytol.

145:549-563, 2000; Vralstad, Schumacher & Taylor, New Phytol. 153:143-152, 2002; Vralstad, Myhre & Schumacher, New Phytol. 155:131-148, 2002); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // systematics/taxonomy: morphology group 4 (Vralstad, Fossheim & Schumacher, New Phytol. 145:549-563, 2000) // culture conditions: produces arthroconidia (Dalpe, Sigler & Litten, Mycotaxon 35:371-377, 1989).

- 6045 Windsor, Ont. 3 Sep 1987 /R.C. Summerbell FR 1538.87 [=DAOM 198535 =GenBank L06324]. Molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, Mycologia 85:219-230, 1993); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
 6513 in roots of Ericaceae Sheffield, England D. Read /DAOM 185550. Mycorrhizae: ericoid (Read, TBMS 63:381-419, 1974) // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, Mycologia 85:219-230, 1993); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: yeast-like arthroconidia observed in 8d (fide UAMH 2011).
 6561 brown hyphal fragments penetrating walls of 2 cortical cells, *Vaccinium angustifolium* Mount Desert Island, Bar Harbour, Maine (C) J. Anderson 9 Jan 1983 /DAOM 195234. Mycorrhizae: ericoid with *Vaccinium angustifolium* // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, Mycologia 85:219-230, 1993); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
 6562 brown hyphal fragments penetrating walls of 2 cortical cells, *Vaccinium angustifolium* Mount Desert Island, Bar Harbour, Maine (C) J. Anderson 9 Jan 1983 /DAOM 195235 [=GenBank U06868]. Mycorrhizae: ericoid with *Vaccinium angustifolium* // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, Mycologia 85:219-230, 1993); structure of group I introns (Egger et al., Biochimica et Biophysica Acta 1261:275-278, 1995); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
 6563 D. Read Read 100 [=Read 100]. Mycorrhizae: with *Caluna vulgaris* (Pearson & Read, New Phytol. 72:371-379, 1973); with salal (Xiao & Berch, Mycologia 87:467-470, 1995) // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, Mycologia 85:219-230, 1993); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
 6598 ex roots *Vaccinium angustifolium* Alma, PQ M. Couture (98b) /DAOM 191322. Pigment: tan // mycorrhizae: ericoid endophyte (Couture et al, New Phytol. 95:375-380, 1983) // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, Mycologia 85:219-230, 1993); diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia

- 78:475-484, 2004) // culture conditions: no arthroconidia.
- 6599 ex roots *Vaccinium angustifolium* Alma, PQ M. Couture (98a) 3 Sep 1981 /DAOM 191323. Pigment: red // mycorrhizae: ericoid endophyte (Couture et al. *New Phytol.* 95:375-380, 1983) // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, *Mycologia* 85:219-230, 1993); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: no arthroconidia.
- 6600 ex roots *Vaccinium angustifolium* Alma, PQ M. Couture (82) 3 Sep 1981 /DAOM 191324 [=GenBank U06869]. Mycorrhizae: ericoid // pigment: brown // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, *Mycologia* 85:219-230, 1993); structure of group I introns (Egger et al., *Biochimica et Biophysica Acta* 1261:275-278, 1995); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: produces arthroconidia.
- 6601 ex roots *Vaccinium angustifolium* M. Couture (20) 17 Jun 1981 /DAOM 191326. Mycorrhizae: ericoid endophyte (Couture et al. *New Phytol.* 95:375-380, 1983) // molecular systematics: affinity to *H. ericae* uncertain (Egger & Sigler, *Mycologia* 85:219-230, 1993); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: no anamorph observed.
- 6663 ex roots *Vaccinium corymbosum* Alma, PQ M. Couture (2) & Y. Dalpe Mar 1982 /DAOM 185115. Molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, *Mycologia* 85:219-230, 1993); diversity of ericoid mycorrhizae (Monreal et al., *Can. J. Bot.* 77:1580-1594, 1999); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // mycorrhizae: ericoid endophyte (Couture et al. *New Phytol.* 95:375-380, 1983) // culture conditions: produces arthroconidia.
- 6735 (*T. Pezizella ericae*) ex roots *Calluna vulgaris* Bolsterstone, UK D. Read 1974 /IMI 182065 [=GenBank L06430 =UAMH 6652 (herb.) =GenBank AF081436 =ARON 2778.S =GenBank AJ319078 =GenBank L06430 (SSU) =GenBank AY762620 (SSU-ITS) =GenBank AF284122 (ITS)]. Mycorrhizae: ericoid (Pearson & Read, *New Phytol.* 72:371-379, 1973; Read, *Can. J. Bot.* 61:985-1004, 1983; Xiao & Berch, *Mycologia* 87:467-470, 1995; Vohnik M, Fendrych M, Albrechtova J, Vosatka M, *Folia Microbiol* 52:407-414, 2007) // molecular systematics: anamorph/teleomorph relationship (Egger & Sigler, *Mycologia* 85:219-230, 1993); RFLP of nuclear rDNA (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997); diversity of ericoid mycorrhizae (Monreal et al., *Can. J. Bot.* 77:1580-1594, 1999); relationship with Piceirhiza bicolorata ectomycorrhizal mycobionts (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000; Vralstad, Schumacher & Taylor, *New Phytol.* 153:143-152, 2002; Vralstad, Myhre & Schumacher, *New Phytol.* 155:131-148, 2002); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // systematics/taxonomy: morphology group 4 (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000) // culture conditions: in vitro study of relationship between *Rhizoscyphus ericae* and testate amoebae (Vohnik M, Burdíkova Z, Albrechtová J, Vosátka M, *Microbial Ecology* 57:203-214, 2009); produces arthroconidia.
- 7357 ericoid isolate U.K. D. Read (101) /M. Monreal Read 101 [=Read 101 =GenBank AF081437]. Mycorrhizae: ericoid with *Calluna vulgaris* (Pearson & Read, *New Phytol.* 72:371-379, 1973); mycorrhizal with salal (Xiao & Berch, *Mycologia* 87:467-470, 1995) // molecular systematics: diversity of ericoid mycorrhizae (Monreal et al., *Can. J. Bot.* 77:1580-1594, 1999); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: fruits regularly fide Read (11-89) but no ascospores seen at UAMH; produces arthroconidia.
- 7933 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 002) Nov 1992 /M. Johansson H-1-1-002-002 [=AAS 1547]. Mycorrhizae: ericoid (Johansson M, *Plant and Soil* 231:225-232, 2001) // systematics/taxonomy: morphotype DS 002 (Johansson M, *Plant and Soil* 231:225-232, 2001) // culture conditions: produces arthroconidia // molecular systematics: *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004).
- 7934 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 003) Nov 1992 /M. Johansson H-1-1-003-008 [=AAS 1559]. Mycorrhizae: ericoid (Johansson M, *Plant and Soil* 231:225-232, 2001) // systematics/taxonomy: morphotype DS 003 (Johansson M, *Plant and Soil* 231:225-232, 2001) // culture conditions: produces arthroconidia // molecular systematics: *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004).
- 7937 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 003) Nov 1992 /M. Johansson H-1-2-003-001 [=AAS 1555]. Mycorrhizae: ericoid (Johansson M, *Plant and Soil* 231:225-232, 2001) // systematics/taxonomy: morphotype DS 003 (Johansson M, *Plant and Soil* 231:225-232, 2001) // culture conditions: produces arthroconidia // molecular systematics: *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004).
- 7938 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 004) Nov 1992 /M. Johansson H-1-2-004-008 [=AAS 1565]. Mycorrhizae: ericoid (Johansson M, *Plant and Soil* 231:225-232, 2001) // systematics/taxonomy: morphotype DS 004 (Johansson M, *Plant and Soil* 231:225-232, 2001) // culture conditions: produces arthroconidia // molecular systematics: *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004).
- 8680 teleomorphic isolate ex roots of *Ledum groenlandicum* (Labrador tea) growing in acidic bog Athabasca, Alta. S. Hambleton (14Bb) 1995 /R.S. Currah 14Bb [=GenBank AY762622 (ITS) =Genbank AY762621 (SSU)]. Culture conditions: fruiting strain (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997; Hambleton et al., *Mycol. Res.* 103:1391-1397, 1999); produces arthroconidia // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // mycorrhizae: ericoid (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997); colonized roots of *Rhododendron groenlandicum* and *Picea mariana* in resynthesis experiments (Piercey M, Thormann MN, Currah RS, *Mycorrhiza* 12:175-180, 2002).
- 8685 single ascospore isolate (homothallic) from apothecia of UAMH 8680 S. Hambleton 8 Aug 1996 /R.S. Currah 14Bb. Culture conditions: fruiting strain (Hambleton & Currah, *Can. J. Bot.* 75:1570-1581, 1997; Hambleton et al., *Mycol. Res.* 103:1391-1397, 1999); produces arthroconidia // molecular

- systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997).
- 8865 roots *Empetrum nigrum* (crowberry) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-87Bb) 31 Aug 1994 /R.S. Currah S-87Bb. Mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
- 8866 roots *Empetrum nigrum* (crowberry) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-85Ac) 31 Aug 1994 /R.S. Currah S-85Ac. Molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // culture conditions: no arthroconidia.
- 8867 roots *Phyllodoce empetriformis* (red heather) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-77Ba) 29 Aug 1994 /R.S. Currah S-77Ba. Mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
- 8868 roots *Phyllodoce empetriformis* (red heather) growing in alpine heathland Outpost Lake, Jasper National Park, Alta. S. Hambleton (S-76Bc) 29 Aug 1994 /R.S. Currah S-76Bc. Mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
- 8869 roots *Vaccinium myrtilloides* (blueberry) growing in open Jack Pine forest on stable sand dune, 1 km east of townsite Slave Lake, Alta. S. Hambleton (S-109Aa) 31 May 1995 /R.S. Currah S-109Aa. Mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
- 8870 roots *Vaccinium vitis-idaea* (bog cranberry) growing open Jack Pine forest on stable sand dune, 1 km east of townsite Slave Lake, Alta. S. Hambleton (S-120a) 2 Jun 1995 /R.S. Currah S-120a. Mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
- 8871 roots *Vaccinium vitis-idaea* (bog cranberry) growing in open Jack Pine forest on stable sand dune, 1 km east of townsite Slave Lake, Alta. S. Hambleton (S-355b) 4 Oct 1995 /R.S. Currah S-355b. Mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: produces arthroconidia.
- 8872 roots *Oxycoccus quadripetalus* (bog cranberry) growing in acidic peatland (bog) southwest of townsite Athabasca, Alta. S. Hambleton (S-24Ab) 16 Oct 1993 /R.S. Currah S-24Ab. Mycorrhizae: ericoid; colonized roots of Rhododendron groenlandicum and *Picea mariana* in resynthesis experiments (Piercey M, Thormann MN, Currah RS, Mycorrhiza 12:175-180, 2002) // molecular systematics: RFLP of nuclear rDNA (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: arthroconidia yeast-like when recovered from freeze-dry; produces arthroconidia.
- 8873 roots *Chamaedaphne calyculata* (leather-leaf) growing in acidic peatland (bog) southwest of townsite Athabasca, Alta. S. Hambleton (S-42b) 4 Aug 1994 /R.S. Currah S-42b [=GenBank AY524847 (SSU)]. Mycorrhizae: ericoid (Hambleton & Currah, Can. J. Bot. 75:1570-1581, 1997) // molecular systematics: RFLP of nuclear rDNA; Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004) // culture conditions: arthroconidia yeast-like when recovered from freeze-dry; produces arthroconidia.
- 9270 roots of *Vaccinium angustifolium* Little Flat mountain, Rothrock State Forest, Centre County, Pennsylvania C. Stevens 20 Jul 1994 /B. Goulart LFE. Culture conditions: produces arthroconidia // mycorrhizae: ericoid endophyte (Stevens CM, Goulart BL, Demchak K, Dalpé Y, Yang WQ, Hancock JF, Acta Hort. 46:411-420, 1996) // molecular systematics: BLAST match >99% ITS similarity with *Rhizoscyphus ericae* (fide UAMH 2008); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004).
- 9448 ex roots of *Vaccinium membranaceum* Priest Lake, Idaho B. McCracken (PL4AcIB) /B. McCracken 12. Mycorrhizae: ericoid (B. McCracken, 9 Apr 1999) // culture conditions: no arthroconidia // molecular systematics: Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang, Y-H & W-Y Zhuang, Nova Hedwigia 78:475-484, 2004).
- 10053 roots of salal (*Gaultheria shallon*) SCHIRP study area, Port McNeill, Vancouver Island, B.C. M. Monreal 10 Jan 1994 /S. Berch UBC M8 [=GenBank AF081435]. Molecular systematics: diversity of ericoid mycorrhizae (Monreal et al., Can. J. Bot. 77:1580-1594, 1999); Rhizoscyphus, a new genus for Ericaceae-associated Hymenoscyphus ericae and H. monotropae (Zhang Y-H, Zhuang W-Y, Nova Hedwigia 78:475-484, 2004) // mycorrhizae: ericoid (Monreal et al., Can. J. Bot. 77:1580-1594, 1999) // culture conditions: produces arthroconidia (fide UAMH).
- 10073 ericoid mycorrhizae ex *Gaultheria shallon* N Vancouver Island, B.C. T.R. Allen /T.R. Allen UBCtra 1271C [=GenBank AF300750 =GenBank AF300735]. Molecular systematics: placed within Hymenoscyphus ericae group based on sequences 5.8S, ITS2, 28S rRNA gene (Berch S, Allen TR, Berbee ML, Plant and Soil 244:55-66, 2002); DNA and

- culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, *New Phytologist* 160:255-272, 2003); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // mycorrhizae: ericoid (fide T.R. Allen) // culture conditions: produces arthroconidia (fide UAMH).
- 10074 ericoid mycorrhizae ex *Gaultheria shallon* N Vancouver Island, B.C. T.R. Allen /T.R. Allen UBCtra 241 [=GenBank AF149068]. Mycorrhizae: ericoid (fide T.R. Allen) // molecular systematics: placed within *Hymenoscyphus ericae* group based on sequences 5.8S, ITS2, 28S rRNA gene (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002); DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, *New Phytologist* 160:255-272, 2003); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Myhre & Schumacher, *New Phytol.* 155:131-148, 2002); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: produces arthroconidia (fide UAMH).
- 10102 ericoid mycorrhizae ex *Gaultheria shallon* N Vancouver Island, B.C. T.R. Allen /T.R. Allen UBCtra 1205 [=GenBank AF300749]. Mycorrhizae: ericoid (fide T.R. Allen) // molecular systematics: placed within *Hymenoscyphus ericae* group based on sequences 5.8S, ITS2, 28S rRNA gene (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002); DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, *New Phytologist* 160:255-272, 2003); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang Y-H, Zhuang W-Y, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: produces arthroconidia (fide UAMH).
- 10130 roots of salal (*Gaultheria shallon*) SCHIRP study area, Port McNeill, Vancouver Island, B.C. M. Monreal 10 Jan 1994 /M. Monreal UBC M20 [=GenBank AF081438]. Molecular systematics: diversity of ericoid mycorrhizae (Monreal et al., *Can. J. Bot.* 77:1580-1594, 1999; Allen TR, Millar T, Berch SM, Berbee ML, *New Phytologist* 160:255-272, 2003); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang Y-H, Zhuang W-Y, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: produces arthroconidia (fide UAMH).
- 10329 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Jan. 1999 /M.L. Berbee UBCtra 1317C [=GenBank AF300748]. Molecular systematics: ericoid mycorrhizal fungi (Berch S, Allen TR, Berbee ML, *Plant and Soil* 244:55-66, 2002); DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, *New Phytologist* 160:255-272, 2003); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang Y-H, Zhuang W-Y, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: produces arthroconidia (fide UAMH).
- 10426 roots of salal (*Gaultheria shallon*) N. Vancouver Is., B.C. T.R. Allen Jan. 1999 /M.L. Berbee UBCtra 1440C. Culture conditions: produces arthroconidia (fide UAMH) // molecular systematics: *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang Y-H, Zhuang W-Y, *Nova Hedwigia* 78:475-484, 2004).
- 10429 culture ex root (27) in wood, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCtra 247. Culture conditions: produces arthroconidia (fide UAMH) // mycorrhizae: experimental (fide T.R. Allen 2003) // molecular systematics: *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang Y-H, Zhuang W-Y, *Nova Hedwigia* 78:475-484, 2004).
- 10433 culture ex root (75) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCtra 466. Mycorrhizae: experimental (fide T.R. Allen 2003) // culture conditions: produces arthroconidia (fide UAMH) // molecular systematics: *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang Y-H, Zhuang W-Y, *Nova Hedwigia* 78:475-484, 2004).
- Rhizoscyphus monotropae*** (Kernan & Finocchio) W.Y. Zhuang (syn. *Hymenoscyphus monotropae*)
6650 (T *Hymenoscyphus monotropae*) ex *Monotropa uniflora* roots New York M. Kernan 1983 /DAOM ex ATCC [=ATCC 52305 =GenBank L06431 =GenBank AF169309]. Molecular systematics: comparison with ericoid fungi (Egger & Sigler, *Mycologia* 85:219-230, 1993); relationship with *Piceirhiza bicolorata* ectomycorrhizal mycobionts (Vralstad, Fossheim & Schumacher, *New Phytol.* 145:549-563, 2000; Vralstad, Myhre & Schumacher, *New Phytol.* 155:131-148, 2002); *Rhizoscyphus*, a new genus for Ericaceae-associated *Hymenoscyphus ericae* and *H. monotropae* (Zhang, Y-H & W-Y Zhuang, *Nova Hedwigia* 78:475-484, 2004) // culture conditions: no anamorph observed.
- Rhodocollybia maculata*** (Fr.) Singer (syn. *Collybia maculata*)
5475 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 / .
- Rhodosporidium diobovatum* see ***Rhodotorula glutinis***
- Rhodosporidium* sp.**
2714 J.W. Fell IMS AR2.
- Rhodosporidium sphaerocarum* see ***Rhodotorula glutinis***
- Rhodosporidium toruloides* see ***Rhodotorula glutinis***
- Rhodotorula glutinis*** (Fresenius) Harrison (morph *Rhodosporidium diobovatum*, *Rhodosporidium sphaerocarum*, *Rhodosporidium toruloides*)
2662 D. Westlake [=PRL 338-63].
6338 shipping door, brewery Calgary, Alta. L. Sigler 6 Feb 1989 /J. Schulz 2382-11. Culture conditions: API profile # 6552273.
7080 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 700) Aug 1990 /D. Inglis (MR 700). Culture conditions: Yeast biochemical card 99% match to *Rhodotorula glutinis*.
- Rhodotorula minuta*** (Saito) Harrison
6754 source unknown /; . Culture conditions: API profile # 6712061 // mesophilic: NG @ 37C.
- Rhodotorula mucilaginosa*** (Jorgensen) Harrison (syn. *Rhodotorula rubra*)
6340 beer sample after pasteurization Calgary, Alta. L. Sigler 3 Feb 1989 /J. Schulz 2382-3. Culture conditions: API profile # 2270033.
- Rhodotorula rubra* see ***Rhodotorula mucilaginosa***
- Rhodotorula* sp.**
328 skin, leg & arms Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
344 well pipe sludge Viking, Alta. J.W. Carmichael /J.W. Carmichael [=UAMH 348].

- 348 well pipe sludge Viking, Alta. J.W. Carmichael /J.W. Carmichael [=UAMH 344].
- 360 skin, right flank Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 495 Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 497 Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 508 urine Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 7081 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 706) Aug 1990. Psychrophilic: NG @ 30C.
- 7169 indoor air of office ex RCS strip Fort McMurray, Alta. S.P. Abbott (SA-M255) 23 Apr 1992 /S.P. Abbott (SA-M255). Culture conditions: API profile # 2640073; API ID 32 C profile # 5461640111 // thermotolerant: grows @ 35 C.
- Rhynchosporium secalis* (Oudem.) J. J. Davis**
- 9470 barley scald, Duke cultivar Edmonton Research Station, Edmonton, Alta. J.P. Tewari Aug 1995 /J.P. Tewari Duke 09-7. Plant pathogen // psychrophilic: opt. 15C // culture conditions: Lima bean agar recommended (fide J.P. Tewari); grows well on CER poorly on PDA (J.P. Tewari).
- 9471 barley scald cultivar Harrington Edmonton, Alta. H. Lee /J.P. Tewari Harrington 07-1-3. Plant pathogen // culture conditions: Lima bean agar recommended (J.P. Tewari); grows well on CER poorly on PDA // psychrophilic: opt. 15C.
- Riessia semiophora* Fresenius**
- 2928 partly decayed wood (*Quercus*?) S. Kingston Rhode Is. R.D. Goos 1966 /ATCC 16963 [=CBS 147.68].
- 6495 *Dendroctonus ponderosae* adult beetle Invermere, B.C. Y. Yamaoka 30 Jul 1988 /Y. Yamaoka NOF 1388. Benomyl: resistant.
- Rigidoporus lineatus* (Pers.) Ryvarden**
- 6498 upper respiratory tract Albany, NY 1989 /D. Dixon M503.89. Benomyl: resistant.
- Rivilata ius* Koblmeier**
- 10285 dead standing leaves of *Typha latifolia* Elk Island National Park, Alta. M. Schulz (MS-20) 27-6-01 /R.S. Currah MS-20. Culture conditions: gelatinolytic, cellulolytic, lignolytic, utilizes starch and tannic acid (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).
- Roigiella lignicola* Castaneda Ruiz**
- 5076 (*T Roigiella lignicola*) litter *Cecropia peltata* Santiago de Las Vegas, Havana, Cuba R.F. Castaneda 13 Jul 1983 /R. Castaneda C83/69. Pigment: tan.
- Root associated fungus** (syn. *Ericoid mycorrhiza*, *Hemlock mycorrhiza*, *Dark septate endophyte*, *Dark sterile fungi*, *Mycelium radialis atrovirens alpha*, *Mycelium radialis atrovirens*)
- 5442 ex fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (24a4) 19 Jun 1986 /R. Currah (24a4). Mycorrhizae: orchid endophyte.
- 6530 ex roots *Lycopodium selago* (club moss) Penstock Creek, Jasper National Park, Alta. R. Currah 25 Aug 1989. Pigment: pink/brown // benomyl: sensitive.
- 7935 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 004) Nov 1992 /M. Johansson H-1-1-004-004 [=AAS 1562]. Mycorrhizae: ericoid (Johansson M, Plant and Soil 231:225-232, 2001) // systematics/taxonomy: morphotype DS 004 (Johansson M, Plant and Soil 231:225-232, 2001).
- 7936 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 001) Nov 1992 /M. Johansson H-1-2-001-008. Mycorrhizae: synthesis not established with
- Calluna* (Johansson M, Plant and Soil 231:225-232, 2001) // systematics/taxonomy: morphotype DS 001 (Johansson M, Plant and Soil 231:225-232, 2001) // culture conditions: produces copious mucoid exudate.
- 7939 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 005) Nov 1992 /M. Johansson H-1-2-005-002 [=AAS 1572]. Mycorrhizae: ericoid (Johansson M, Plant and Soil 231:225-232, 2001) // systematics/taxonomy: morphotype DS 005 (Johansson M, Plant and Soil 231:225-232, 2001).
- 7940 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 001) Nov 1992 /M. Johansson H-1-3-001-009. Mycorrhizae: synthesis not established with *Calluna* (Johansson M, Plant and Soil 231:225-232, 2001) // odor: sweet // systematics/taxonomy: morphotype DS 001 (Johansson M, Plant and Soil 231:225-232, 2001) // culture conditions: produces copious mucoid exudate.
- 7941 roots of *Calluna vulgaris* (heather) Hjelm Hede, Denmark M. Johansson (morphotype DS 005) Nov 1992 /M. Johansson H-1-4-005-001 [=AAS 1571]. Cycloheximide: sensitive // mycorrhizae: ericoid (Johansson M, Plant and Soil 231:225-232, 2001) // systematics/taxonomy: morphotype DS 005 (Johansson M, Plant and Soil 231:225-232, 2001) // culture conditions: no arthroconidia.
- 9264 roots of *Vaccinium angustifolium* Little Flat mountain, Rothrock State Forest, Centre County, Pennsylvania C. Stevens 20 Jul 1994 /B. Goulart LFA. Application: extracellular proteases (Yang WQ, Tien M, Goulart BL, ISHS Acta Horticulturae 715: VIII International Symposium on *Vaccinium* Culture) // biodiversity: ericoid endophyte (Stevens CM, Goulart BL, Demchak K, Dalpé Y, Yang WQ, Hancock JF, Acta Hort. 46:411-420, 1996); some endophytic root colonization of *Vaccinium corymbosum* in resynthesis trials after 3 mo, but not typical for ericoid mycorrhizae (fide J. Sadowsky Michigan State University 2010) // molecular systematics: ITS sequence similarity 99-100% with unnamed root endophytes.
- 9546 roots, *Picea glauca* growing in a nursery Smokey Lake, Alta. G. Kernaghan 1999 /G. Kernaghan [=GenBank AY219840 (ITS)]. Benomyl: sensitive // mycorrhizae: identification of root associated fungi from containerized *Picea glauca* seedlings (Kernaghan, Sigler & Khasa, Microbial Ecology 45:128-136, 2003) // molecular systematics: Blast match to unclassified Helotiales.
- 10103 ericoid root associated fungus ex *Gaultheria shallon* N Vancouver Island, BC T.R. Allen /T.R. Allen UBCtra 300 [=GenBank AF149079]. Mycorrhizae: ericoid endophyte (salal) (fide T.R. Allen) // odor: astringent // cellulolytic // molecular systematics: placed within Leotiales based on sequences 5.8S, ITS1/2, 18S, 28S rRNA gene (Berch S, Allen TR, Berbee ML, Plant and Soil 244:55-66, 2002); DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, New Phytologist 160:255-272, 2003).
- 10105 ericoid root associate of *Gaultheria shallon* (salal) N Vancouver Island, BC T.R. Allen /T.R. Allen UBCtra 1181 [=GenBank AF300735]. Mycorrhizae: ericoid endophyte (salal) // molecular systematics: DNA and culture-based detection of ericoid mycorrhizal fungi (Allen TR, Millar T, Berch SM, Berbee ML, New Phytologist 160:255-272, 2003); Herpotrichiaceae.
- 10383 *Tsuga heterophylla* N. Vancouver Is., BC P. Kroeger /M.L. Berbee pkc24 [=GenBank AY394893 ITS]. Molecular systematics: sequence AY394893 closest match is to *Cadophora finlandica* (*Phialophora finlandica*) (fide M. Berbee).
- 10430 culture ex root (8) in soil, Meter Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen May 6, 1998 /M.L. Berbee UBCtra 148. Molecular systematics: BLAST match *Phialophora*/uncultured RFLP (fide M. Berbee) // culture

- conditions: produces copious mucoid exudate.
- 10434 culture ex root (1262) , Culture versus Cloning Trial SCHIRP Installation, N Vancouver Is., B.C. T.R. Allen Jan 28, 1999 /M.L. Berbee UBCtra 1254C [=GenBank AF300745]. Mycorrhizae: experimental (fide T.R. Allen 2003) // molecular systematics: Leotiomyces?, near Unknown 1 group / S9 (fide M. Berbee).
- 10448 ex salal (*Gaultheria shallon*) Canada Xiao 1994 /M.L. Berbee S246 [=Unknown 2 =GenBank AF081443]. Mycorrhizae: with salal (Berch S, Allen TR, Berbee ML, Plant and Soil 244:55-66, 2002) // molecular systematics: diversity of ericoid mycorrhizae (Berch S, Allen TR, Berbee ML, Plant and Soil 244:55-66, 2002) // culture conditions: no anamorph observed.
- Rosellinia aquila** (Fries) de Notaris
1832 Nyack Village, Rockland Co., N.Y. P. Martin Jul 1963 /P. Martin 1625. Cellulolytic.
- Rosellinia limoniispora** Ell. & Ev. (syn. *Hypoxylon limoniisporum*)
5830 house dust Senrigaoka, Suita-shi, Osaka, Japan N. Toyazaki 11 Oct 1983 /S.-I. Udagawa NHL 2922. Cycloheximide: resistant.
- Rosulomyces arthrosporioides** Marchand & Cabral
4254 (T *Rosulomyces arthrosporioides*) forest soil under Nothofagus antarctica Puerto Harberton Argentina A.M. Godeas /CBS 506.76 [=ATCC 38215 =BAFC 2659 =IMI 184606].
- Roumegueriella pulchella** Udagawa, Uchiyama & Kamiya
8329 (T *Roumegueriella pulchella*) soil in sugarcane field Iheya Island, Iheya-mura, Shimajiri-gun, Okinawa-ken, Japan S. Uchiyama & S. Kamiya 14 Sep 1993 /S.-I. Udagawa BF 46827. Pigment: brown // systematics/taxonomy: description (Shun-ichi Udagawa S-I, Uchiyama S, Kamiya S, Mycoscience 35:409-412, 1994).
- Roumegueriella rufula** (Berk. & Br.) Malloch & Cain (morph *Gliocladium an. Roumegueriella rufula*)
3170 cow dung & hair ex cattle feeder lot Ontario, Calif. J.W. Carmichael 5 Feb 1969 /J.W. Carmichael. Cellulolytic.
3220 cow hair & dung ex cattle feeder lot Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael. Cellulolytic.
3221 cow hair & dung ex cattle feeder lot Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael. Cellulolytic.
3222 cow hair & dung ex cattle feeder lot Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael. Cellulolytic.
3466 deer dung San Francisco Zoo, Calif. S. Stribling 1958 /CBS 276.59 [=IMI 73837]. Cellulolytic.
- Rozites caperata** (Pers. ex Fr.) Karst.
5854 *Picea glauca*, *Populus*, *Salix* forest entering Rocky-Clearwater For. (C) A. Smreciu 16 Jul 1987 / (C) A. Smreciu. Mycorrhizae.
- Russula velenovskyi** Melzer & Zvara
6277 under *Betula papyrifera* & *Picea glauca* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie Aug 1980 /L. Hutchison DM 290 [=DM 290]. Mycorrhizae // culture conditions: very slow growing & difficult to grow in culture.
- Saccharomyces cerevisiae** Meyen ex E.C. Hansen (morph *Candida robusta*)
196 high alcohol wine yeast /Mr. Lamb. Culture conditions: API Profile # 2040030.
199 source unknown /U. California. Culture conditions: API Profile # 2040030.
2229 vaginal swab, patient 32 yr Edmonton, Alta. J.W. Carmichael /J.W. Carmichael.
- 6336 beer inoculum Calgary, Alta. L. Sigler 25 Jan 1989 /J. Schulz 2382-2.
7599 ex abscess-like inflamed nodule on arm, female 37 yr Saskatoon, Sask. Royal University Hospital (RUH 018741) 1994 /R. Rennie MY 2496.
8107 fruit wine yeast, Montrachet strain R. Kunkee (UCD Enology 522) /S. Davies FC-315 [=ATCC 36026]. Alcohol fermentation (Appl. Environ. Microbiol. 32: 666-670, 1976; Mycopathologia 69: 63-65, 1979; Am. J. Enol. Viticult. 30: 81-87, 1979); sO2 resistance (J. Food Prot. 44: 92-97, 1981). Application: food production.
10407 distillery yeast /ATCC 9763. Application: Preceptrol culture, control strain for microbiological assays.
- Saccharomyces sp.**
618 sputum Edmonton, Alta. J.W. Carmichael Nov 1959 /J.W. Carmichael.
- Saccharomycopsis capsularis** Schionning
53 (T *Endomycopsis capsularis*) /S. Windisch 35 [=CBS 2519 =NRRL Y-1481 =GenBank AF170970 (Btubulin)].
7899 indoor air ex RCS strip, from Apis mellifera (honeybee) equipment cleaning facility Winfield, Alta. S.P. Abbott (OHS 265) 21 Apr 1994 /S.P. Abbott (OHS 265). Odor: yeast-like.
- Sagenoma sp.**
8410 scalp, male 5 yr with tinea capitis Quebec G. St-Germain /G. St-Germain MY 7138. Pigment: brown // mesophilic: NG @ 37C // crystals.
- Sagenomella chlamydospora** see **Phialosimplex chlamydosporus**
- Sagenomella diversispora** (van Beyma) Gams (syn. *Paecilomyces variabilis*)
929 (T *Scopulariopsis diversispora*) soil under *Buxus sempervirens*, strain van Beyma Netherlands Bouwens /CBS 354.36 [=GenBank GQ169318 ITS =GenBank AB024589 SSU =MUCL 9029]. Mesophilic: NG @ 35C // cycloheximide: sensitive (MYC) // molecular systematics: relationship to *Phialosimplex* within the *Trichocomaceae* (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010) // odor: fruity.
1419 (T *Paecilomyces variabilis*) peat soil cedar-birch bog Aberfoyle, Southern Ontario G.L. Barron (10503) Nov 1961 /DAOM 87662 [=IMI 92744 =GenBank GQ169319 ITS =CBS 430.67 =GenBank AB024588 SSU]. Odor: fruity // cycloheximide: sensitive (MYC) // mesophilic: NG @ 35C // molecular systematics: relationship to *Phialosimplex* within the *Trichocomaceae* (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).
2873 white pine soil C horizon St. Williams Ont. G.C. Bhatt Jul 1966 /G.C. Bhatt UW215 [=GenBank GQ169321 ITS]. Odor: fruity // cycloheximide: sensitive (MYC) // mesophilic: NG @ 35C // molecular systematics: relationship to *Phialosimplex* within the *Trichocomaceae* (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).
11509 swab ex fur of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Markhamville Mine, New Brunswick K.J. Vanderwolf 9-Feb-2010 /K.J. Vanderwolf Bat 49 C.4b. Biodiversity: mycobiota of bat caves.
- Sagenomella griseoviridis** (Onions & G.L. Barron) W. Gams
1655 contaminant /M.A. Gordon 991 [=GenBank GQ1693120 ITS]. Cycloheximide: sensitive (MYC) // mesophilic: NG @ 35C // molecular systematics: relationship to *Phialosimplex* within the *Trichocomaceae* (Sigler L, Sutton DA, Gibas CF,

Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010); >99% ITS similarity with DQ093702 *S. griseoviridis* (480/481 bp).

- 4873 lodgepole pine near Princeton, B.C. L. Sigler Oct 1983 /H.S. Whitney [=GenBank GQ169324 ITS]. Odor: fruity // cycloheximide: sensitive (MYC) // mesophilic: NG @ 35C // molecular systematics: relationship to Phialosimplex within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010); 99% ITS similarity with DQ093702 *Sagenomella griseoviridis* (477/481 bp).

Sagenomella humicola (Onions & Barron) Gams (syn.)

Paecilomyces humicola

- 2890 (T Isotype *Paecilomyces humicola*) soil under white cedar (*Thuja occidentalis*) Ont. G.C. Bhatt /G.C. Bhatt GCB1250 [=IMI 113166 =ATCC 18506 =CBS 427.67 =GenBank GQ169322 SSU =GenBank GQ169323 ITS]. Odor: fruity // cycloheximide: slightly sensitive (growth slower on MYC than PYE) // mesophilic: NG @ 35C // molecular systematics: relationship to Phialosimplex within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).

Sagenomella keratitis Wei L. Chen, Y.M. Ju, H.M. Hsieh, H.Y. Lin & F.R. Hu

- 11757 (T *Sagenomella keratitis*) ex corneal scraping, contact lens and storage solution, female 35 yr, with keratitis, isolated multiple times Taiwan Sung-Yaon Hsieh /K. Seifert CBS132921 [=BCRC 34221 =GenBank EU140821 ITS =GenBank EU140822 SSU =GenBank EU140823 LSU =GenBank EU140824 Btub2]. Human/animal pathogen: human keratitis (Hsieh, H.M.; Ju, Y.M.; Hsueh, P.R.; Lin, H.Y.; Hu, F.R.; Chen, W.L. Botanical Studies 50(3):331-336, 2009).

***Sagenomella* sp.**

- 7292 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M262) 18 Nov 1992 [=CBS 113281].
- 9571 ex roots of *Vaccinium membranaceum* Priest Lake, Idaho B. McCracken (PL1DdiE) /B. McCracken 2 [=GenBank GQ169325 ITS =CBS 113280]. Odor: sour // cycloheximide: sensitive (MYC) // mesophilic: NG @ 35C // molecular systematics: relationship to Phialosimplex within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010); ITS phylogenetic analysis groups with *Talaromyces ocoit* (*Sagenomella* anamorph).

Sagenomella striatispora (Onions & Barron) Gams (syn.)

Paecilomyces striatisporus

- 2888 permanent pasture soil Milton Ont. G.C. Bhatt Jul 1967 /G.C. Bhatt UW796 [=GenBank GQ169327 ITS =CBS 394.69 =IMI 148005]. Odor: fruity // cycloheximide: sensitive (MYC) // mesophilic: NG @ 35C // molecular systematics: relationship to Phialosimplex within the Trichocomaceae (Sigler L, Sutton DA, Gibas CF, Summerbell RC, Noel RK, Iwen PC, Med Mycol 48:335-345, 2010).

Saksenaia erythrospora Alvarez, Cano, Stchigel,

Garcia-Hermosa & Guarro

- 11526 ex blood, male 26 yr, with extensive burns following IED war wound (Middle East); histopathology + for broad hyphae San Antonio Military Medical Center, San Antonio, TX /D.A. Sutton UTHSC 05-3543 [=GenBank FR687331 ITS =GenBank HM776683 D1D2 =GenBank HM776694 Ef-1a =UTHSC 06-576 (repeat culture)]. Human/animal pathogen: war wound (Alvarez E, Garcia-Hermosa D, Sutton DA, et al, J Clin Microbiol 48:4410-4416, 2010); invasive mucormycosis

in war wound patient (Hospenthal DR, Chung KK, Laitet K, Thompson EH, Guarro J, Renz EM, Sutton DA, J Clin Microbiol, 49:3707-3709, 2011) // culture conditions: good sporulation on Czapek agar at 30-35C (fide submitting lab & UAMH) // thermotolerant: opt. 25C; grows at 42C; NG at 50C (fide submitting lab).

Saksenaia vasiformis Saksena

- 7186 ex patient with subcutaneous zygomycosis India /CDC 92-021193. Human/animal pathogen: first case (Padhye et al., Diagn. Microbiol. Infect. Dis. 9:69-77, 1988) // culture conditions: produces sporangia in water with yeast extract at 37C (fide Padhye et al.); sporulates well on Czapek agar @ 35C (fide UAMH).

Saprochaete clavata see *Geotrichum clavatum*

Sarcinomyces crustaceus Lindner

- 1553 air /C.L. Kramer S-56.
- 4286 ex gall *Endocronartium harknessii* on *Pinus contorta* Jasper Alta. L. Sigler 12 Oct 1978 /A. Tsuneda [=IMI 254606 =CBS 156.81]. Coenzyme Q-10(H2) (Yamada et al., Antonie van Leeuwenhoek 56:349-356, 1989). Psychrophilic: grow at 18C; NG @ 25C.
- 4667 contaminant on plate Edmonton, Alta. 12 Oct 1982 /; .
- 4798 ex litter Devonian Bot. Garden, Alta. L. Linarez 1983 /R.S. Currah.

Sarcinomyces petricola Wollenzien, U. & de Hoog

- 8970 (T *Sarcinomyces petricola*) Carrara marble, outdoor angel statue in museum garden Messina, Italy U. Wollenzien (UW H13) /CBS 726.95.

***Sarcinomyces* sp.**

- 4549 rock with lichen Deem Hills, Phoenix, Arizona L. Sigler Mar 1982 /F. Palmer. Molecular systematics: Blast match 94% ITS similarity with *Sarcinomyces petricola* & *Phaeococcomyces chersonesos* (fide Uamh) // cycloheximide: resistant (MYC) // culture conditions: grows @ 30 C but not @ 35 C.
- 6641 indoor air ex RCS strip Edmonton, Alta. L. Sigler (4C) Feb 1990 /S. Poznanski 4. Culture conditions: mucoid, white.
- 9011 environmental isolate from hospital Alberta Provincial Lab of Southern Alberta 1997 /R. Rennie MY 2777.

Sarcinosporon inkin see *Trichosporon inkin*

Sarcodon imbricatus (L.: Fr.) Karst. (syn. *Hydnum imbricatum*)

- 9084 on spruce Brown Lowery Park, Alta. R.M. Danielson (RMD 2737) /R.M. Danielson RMD 2737 [=DAOM 176583 =CCFC 3642]. Pigment: brown // mycorrhizae.

***Sarcodon* sp.**

- 9088 R.M. Danielson (RMD 3009) /R.M. Danielson RMD 3009. Pigment: brown // crystals // mycorrhizae.

Sarea resinae see *Pycnidiaella resinae*

Satchmopsis sacciformis R.F. Castaneda Ruiz

- 5996 (T *Satchmopsis sacciformis*) fallen leaves of *Guazuma ulmifolia* San Miguel de los Banos, Matanzas, Cuba R. Castaneda 23 Jan 1987 /R. Castaneda INIFAT C87/53-1 [=CBS 116.88].

Scedosporium* an. *Pseudallescheria africana see *Pseudallescheria africana*

Scedosporium* an. *Pseudallescheria desertorum see

*Pseudallescheria desertorum**Scedosporium apiospermum* (Saccardo) Castellani & Chalmers (morph *Graphium synanamorph*, See also *Pseudallescheria boydii*)

- 800 strain Ciferri /CBS. Cellulolytic // culture conditions: produced *Scedosporium* anamorph only.
- 1099 mycetoma California /G.F. Orr UCLAB-M-55. Cellulolytic // human/animal pathogen // culture conditions: produced *Scedosporium* anamorph only // pigment: yellow.
- 2507 Orr 1963 /G.F. Orr O-3024. Culture conditions: produced *Scedosporium* anamorph only.
- 2975 bronchial washing Edmonton, Alta. J.W. Carmichael 2 Jul 1968 /J.W. Carmichael. Cellulolytic // culture conditions: produced *Scedosporium* and *Graphium* states.
- 3230 surface litter ex turkey corrals Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael. Cellulolytic // culture conditions: produced *Scedosporium* anamorph only // pigment: light yellow.
- 3746 fresh manure ex beef feedlot Lethbridge, Alta. Sep 1974 /R.G. Bell 25M. Culture conditions: produced *Scedosporium* and *Graphium* states // pigment: yellow/orange.
- 3749 manure Lethbridge, Alta. 28 Oct 1974 /R.G. Bell TM. Pigment: black; yellow on PDA // cellulolytic // culture conditions: produced *Scedosporium* and *Graphium* states; ascospores not produced.
- 3750 manure Lethbridge, Alta. 16 Sep 1974 /R.G. Bell M37. Pigment: black // cellulolytic // culture conditions: produced *Scedosporium* and *Graphium* states; ascospores not produced.
- 3904 fungus ball ex male 56 yr with prior history of T.B. ; DE + for septate mycelium University of Chicago, Chicago, IL J.W. Rippon 1975 /J.W. Rippon. Cellulolytic // human/animal pathogen: fungus ball (fungoma) (Rippon JW, Carmichael JW, *Mycopathologia* 58:117-124, 1976) // culture conditions: produced *Scedosporium* anamorph only // serology: precipitin bands in immunodiffusion test (Rippon JW, Carmichael JW, *Mycopathologia* 58:117-124, 1976).
- 3905 sputum ex patient with history of rheumatic arthritis; DE + for hyphae University of Chicago, Chicago, IL J.W. Rippon 1975 /J.W. Rippon. Cellulolytic // human/animal pathogen: colonization of bronchial lumen (Rippon JW, Carmichael JW, *Mycopathologia* 58:117-124, 1976) // culture conditions: produced *Scedosporium* and *Graphium* states // serology: precipitin bands in immunodiffusion test (Rippon JW, Carmichael JW, *Mycopathologia* 58:117-124, 1976).
- 3981 ex man /CBS 316.54. Cellulolytic // culture conditions: produced *Scedosporium* anamorph only.
- 3990 (T *Acremonium suis*) nasal cavity ex swine Kiev, Ukraine A.A. Milko /CBS 695.70 [=GenBank AY877353 =GenBank AM492780]. Cellulolytic // human/animal pathogen // culture conditions: produced *Scedosporium* and *Graphium* states // molecular systematics: phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, *Mycol Res* 110:151-160, 2006; Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, *J Clin Microbiol* 46:766-771, 2008); rapid identification of *Pseudallescheria* and *Scedosporium* (Lackner M, Najafzadeh MJ, Sun J, Lu Q, Hoog GS, *Appl Environ Microbiol* 126-133, 2012).
- 3991 soil; F.A. Wolf et al., No. 366, 1950 D. Muecke (Deposited in CBS) /CBS 114.59. Cellulolytic // culture conditions: produced *Scedosporium* anamorph only.
- 3995 savannah soil Abidjan, Ivory Coast, Africa J.L. Renard /CBS 254.66. Cellulolytic // culture conditions: produced *Scedosporium* anamorph only; illustrated with *Graphium* and *Pseudallescheria* states (De Hoog GS, Guarro J, *Atlas of Clinical Fungi* Vol 1, 1995).
- 4218 eye & chest wall biopsy, female 16 yr Chicago, IL J.W. Rippon 1979 /J.W. Rippon. Cellulolytic // human/animal pathogen // culture conditions: produced *Scedosporium* anamorph only.
- 4301 sputum /J. Kane OMH-1. Cellulolytic // culture conditions: produced *Scedosporium* anamorph only.
- 4310 ear sample /J. Kane FR 806-80. Cellulolytic // culture conditions: produced *Scedosporium* and *Graphium* states.
- 4409 farm soil Sunnyside, Alta. V. Mann 25 May 1980 /V. Mann. Culture conditions: produced *Scedosporium* and *Graphium* states.
- 4410 farm soil Sunnyside, Alta. V. Mann 25 May 1980 /V. Mann. Culture conditions: produced *Scedosporium* and *Graphium* states.
- 4604 tracheal suction spec. ex male 67 yr Chicago, Ill. May 1982 /J.W. Rippon E28182. Cellulolytic // human/animal pathogen // culture conditions: produced *Scedosporium* and *Graphium* states.
- 4855 anaerobically digested sewage sludge /K. Ulfing 8. Cellulolytic.
- 4947 sputum /S. Hnatko 45613, F5. Cellulolytic // culture conditions: produced *Scedosporium* and *Graphium* states.
- 5326 exudate & debris in nasal lesions, thoroughbred horse Japan K. Takatori Aug 1985 /K. Takatori M1008-11. Human/animal pathogen: nasal lesions in horse.
- 5707 bovine fetus aborted ex Hereford 5 yrs Consort, Alta. H. Sissons 3 Feb 1987 /H. Sissons CM87-750-DB. Culture conditions: produced *Scedosporium* and *Graphium* states.
- 5862 bronchial washings Saskatchewan H. Congly 1987 /H. Congly 1821M. Molecular systematics: see ref. (Berbee & Taylor, *Molec. Phyl. Evol.* 1:59-71, 1992).
- 7904 ex large chronic wound secondary to severe tear from rose thorn, female 70 yr DE+ New Zealand A. Woodgyer 1994 /A. Woodgyer 94.447. Cycloheximide: resistant // culture conditions: produced *Scedosporium* and *Graphium* states.
- 8598 [This strain has been cited in a US or other patent & should not be used to infringe patent claims] raw sewage London, Ontario J.E. Zajic 1969 /ATCC 58400 [=NRRL 3915 =QM 9375 =UWO 27 =CBS 116421]. Application: production of single-cell protein from gaseous hydrocarbons (US Pat. 4,028,182); growth on natural gas (Zajic et al. 1969. *CJM* 15: 1231-1236.) // benomyl: resistant (2 ppm) // biodeteriogen/biodegradation: degradation of hydrocarbons in crude oil (April et al., *Can. J. Microbiol.* 44:270-278, 1998) // systematics/taxonomy: morphologic & molecular comparison of isolates from oil-soaked soils or sewage (April et al., *Can. J. Microbiol.* 44:270-278, 1998) // culture conditions: produced *Scedosporium* and *Graphium* states.
- 8791 hydrocarbon contaminated flare-pit soil showing visible mold growth Willesden Green northeast of Rocky Mountain House, Alta C. Zelmer 13-Apr-1994 /R.S. Currah [=CBS 116422]. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // systematics/taxonomy: morphologic & molecular comparison of isolates from oil-soaked soils or sewage (April et al., *Can. J. Microbiol.* 44:270-278, 1998) // culture conditions: produced *Scedosporium* and *Graphium* states.
- 8792 hydrocarbon contaminated flare-pit soil showing visible mold growth Willesden Green northeast of Rocky Mountain House, Alta T. April (18-FP4) 16-Aug-1995 /R.S. Currah [=CBS 116423]. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // biodeteriogen/biodegradation: degradation of hydrocarbons in crude oil (April et al., *Can. J. Microbiol.* 44:270-278, 1998) // systematics/taxonomy: morphologic & molecular comparison of isolates from oil-soaked soils or sewage (April et al., *Can. J. Microbiol.* 44:270-278, 1998) // culture conditions: produced *Scedosporium* and *Graphium* states.
- 8793 hydrocarbon contaminated flare-pit soil Cynthia west of Drayton Valley, Alta T. April (DV-4-2A) 16-Aug-1995 /R.S. Currah [=CBS 116424]. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC) // biodeteriogen/biodegradation: degradation of hydrocarbons in crude oil (April et al., *Can. J. Microbiol.* 44:270-278, 1998) // systematics/taxonomy: morphologic & molecular comparison

- of isolates from oil-soaked soils or sewage (April et al., Can. J. Microbiol. 44:270-278, 1998) // culture conditions: produced *Scedosporium* and *Graphium* states.
- 9285 synovial fluid, R knee, immunocompetent male 17 yr, after fall from trail bike into dirt Victoria, BC Greater Victoria Hospital 22 May 1998 /P. Kibsey 26570. Human/animal pathogen: wound infection // pigment: black // cycloheximide: resistant // culture conditions: produced *Scedosporium* and *Graphium* states.
- 10207 isol from 2 blood cultures ex female 60 yr who died of endophthalmitis Thessaloniki, Greece E. Bibashi 05-02 /E. Bibashi. Cycloheximide: sensitive, overcomes sensitivity after several weeks // human/animal pathogen: biopsy of skin nodule positive for hyphae, culture not done // benomyl: tolerant @ 2 ppm // thermotolerant: grows @ 35 C // culture conditions: synnemata not produced; *Scedosporium* state atypical // molecular systematics: ITS sequence comparison (fide S. de Hoog, CBS).
- 10602 sputum, ex female with cystic fibrosis Saint John Regional Hospital, N.B. 01-11-2005 /R. Rennie MY 7610. Thermotolerant // cycloheximide: resistant (MYC) // benomyl: resistant (2 ppm) // culture conditions: produced *Scedosporium* and *Graphium* states.

Scedosporium inflatum see *Scedosporium prolificans*

Scedosporium prolificans (Hennebert & Desai) Gueho & de Hoog (syn. *Lomentospora prolificans*, *Scedosporium inflatum*)

- 4238 ex immunosuppressed patient UCLA Med. School D. Howard May 1979 /D. Howard 8373. Cellulolytic // human/animal pathogen // thermotolerant: grows @ 40C.
- 4248 ex patient with widespread disseminated disease Los Angeles, Calif. D. Howard /D. Howard 3382. Cellulolytic // human/animal pathogen // thermotolerant: grows @ 40C.
- 4421 ex boy 9 yrs, with acute knee arthritis, injured in Paris forest region (isol. 5 times) Paris, France E. Drouhet /E. Drouhet 1307 IP. Cellulolytic // human/animal pathogen: knee arthritis (Drouhet et al., J. Mycol. Med. 118:16-20, 1991).
- 5517 (T *Scedosporium inflatum*) human bone biopsy specimen ex male, 6 yr Farmington, ME Sep 1981 /D. Malloch CC222 [=CBS 114.90 =GenBank U43910 =GenBank AY882369 (ITS) =GenBank AF027679 (LSU)]. Thermotolerant: grows @ 37C // human/animal pathogen: molecular taxonomy (Gueho & de Hoog, J. Mycol. Med. 118:3-9, 1991) // molecular systematics: phylogeny of Microascaceae (Issakainen et al., J. Med. Vet. Mycol. 35:389-398, 1997); phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006).
- 5735 soil of potted *Schefflera* Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell RCS-W1801.
- 5736 soil of potted *Schefflera* Toronto, Ont. R.C. Summerbell 15 Sep 1986 /R.C. Summerbell RCS-W1802.
- 5819 foot wound boy 6 yr, stepped on nail New York I. Salkin (M134-87) 1987 /D. Malloch. Human/animal pathogen.
- 7149 (T *Lomentospora prolificans*) greenhouse soil prepared from mixed forest litter Heverlee, Belgium G. Hennebert /CBS 467.74 [=MUCL 18141 =GenBank U43909 =CBS 467.74 =GenBank AY882370 (ITS) =GenBank AF027679 (LSU)]. Cycloheximide: sensitive // molecular systematics: phylogeny of Microascaceae (Issakainen et al., J. Med. Vet. Mycol. 35:389-398, 1997); PCR-based identification (Wedde et al., J. Med. Vet. Mycol. 36:61-67, 1998); phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Rainier J, de Hoog GS, Mycol Res 110:151-160, 2006); rapid identification of *Pseudallescheria* and *Scedosporium* (Lackner M, Najafzadeh MJ, Sun J, Lu Q, Hoog GS, Appl Environ Microbiol 126-133, 2012).
- 8524 corneal scraping, male 40 yr with corneal ulcer after debris

- flew in eye following "weed eater" accident Victoria, BC Royal Jubilee Hospital Jun 1996 /P. Kibsey RJH 38754. Human/animal pathogen: eye infection after injury.
- 9404 bronchial wash, LUL, male 76 yr with lung cavity, DE - Victoria, BC Victoria General Hospital 21 Sep 1998 /P. Kibsey 96227. Cycloheximide: sensitive.
- 11331 cubital joint following surgical repair of fracture, American Saddlebred gelding, 15 yr Texas A&M University College of Veterinary Medicine, College Station, TX /D.A. Sutton R-4618. Human/animal pathogen: fatal intra-articular infection in equine (Lawhon SD, Sutton DA, Halbert ND, Watkins JP, Journal of Equine Veterinary Science 31:696-699, 2011).

Scedosporium sp.

- 291 rec'd as *Indiella americana* /Dr. Munroe. Pigment: yellow on PDA // thermotolerant: good growth @ 35 C // molecular systematics: phylogeny of *Scedosporium*, *Pseudallescheria* and *Petriella* (Gilgado F, Cano J, Gene J, Sutton DA, Guarro J, J Clin Microbiol 46:766-771, 2008); *Indiella americana* reference strain placed outside the *Pseudallescheria* clade (Gilgado et al, 2008).
- 9532 clinical isolate CDC, Atlanta L.D. Haley (1-8222) 1 Aug 1985 /NRRL A-26514. Benomyl: resistant (2 ppm).

Scheffersomyces stipitis (Pignat) Kurtzman & M. Suzuki 2010 (syn. *Pichia stipitis*)

- 7442 *Populus tremuloides* Fort Nelson, B.C. L. Hutchison (CCMC-2-1) 1 Nov 1991 /L. Hutchison NOF 1958. Culture conditions: physiological reactions (Hutchison & Hiratsuka, Mycologia 86:386-391, 1994).

Schizophyllum commune Fries

- 5860 nose ex patient with spheruloiditis Perth W. Australia R. McAleer 1986 /R. McAleer 86/1209. Odor: unpleasant // thermotolerant: good growth @ 37C // culture conditions: no clamps, spicules, colony cottony, strong odor; monokaryon; spicules present when regrown in 2003.
- 6328 heavy growth on hay Calgary, Alta. A. Flis /J. Schulz. Biodeteriogen/biodegradation // culture conditions: produces clamps, spicules and basidiocarps.
- 7287 monokaryon ex fungus ball in Rt upper lobe lung ex diabetic female, 53 yr, DE+, hyphae in section of lung UCLA, Orange, California G. Tan 1992 /G. Tan [=CBS 405.96 =GenBank AF350925 =GenBank U21483] compatible (formed clamps) with UAMH 7693, 7694, 7695. Cycloheximide: sensitive // benomyl: resistant @ 2 & 10 ppm // thermotolerant: good growth @ 42C // human/animal pathogen: fungus ball in lung (Sigler et al, J. Clin. Microbiol. 33:1979-1983, 1995); PCR-RFLP analysis (Buzina et al., J. Clin. Microbiol. 39:2391-2396, 2001) // odor: strong & unpleasant // culture conditions: no clamps or spicules in original isolate.
- 7472 polys in nasal mucosa Shreveport, LA Louisiana State University Medical Center (F33398) /M.G. Rinaldi UTHSC 93-2262. Human/animal pathogen: sinusitis // culture conditions: produces clamps, spicules and basidiocarps.
- 7692 single basidiospore isolate (monokaryon) /H. Burdsall 7599 ss-1 compatible (formed clamps) with UAMH 7287, 7694 & 7695. Odor: strong & unpleasant // thermotolerant: grows @ 37C // culture conditions: no clamps or spicules in original isolate.
- 7693 single basidiospore isolate (monokaryon) /H. Burdsall 7599 ss-7 compatible (formed clamps) with UAMH 7287, 7694, 7695. Odor: strong & unpleasant // thermotolerant: grows @ 37C // culture conditions: no clamps or spicules in original isolate.
- 7694 single basidiospore isolate (monokaryon) /H. Burdsall FP-74612 ss-2 [=GenBank U21484] compatible (forms clamps) with UAMH 7287, 7693 not 7695. Odor: strong & unpleasant // thermotolerant: grows @ 37C // culture

- conditions: no clamps or spicules in original isolate.
- 7695 single basidiospore isolate (monokaryon) /H. Burdsall FP-74612 ss-3 [=GenBank U21485 SSU ITS] compatible (forms clamps) with UAMH 7287, 7693 not 7694. Odor: strong & unpleasant // thermotolerant: grows @ 37C // culture conditions: no clamps or spicules in original isolate.
- 7796 ex brain abscess, male 58 yr, with chronic obstructive pulmonary disease, also isolated from lungs; histopathology + for clamped hyphae Pittsburgh, PA Aug 1994 /CDC B-5575. Odor: strong & unpleasant // human/animal pathogen: pulmonary infection disseminating to brain in patient on corticosteroid therapy (Rihs et al., J. Clin. Microbiol. 34:1628-1632, 1996) // culture conditions: produces clamps, spicules and basidiocarps.
- 8142 Alberta L.L. Kennedy (T-528A) /S. Davies FC-319. Biodeteriogen/biodegradation: white rot // culture conditions: produces clamps, spicules and basidiocarps.
- 8365 monokaryon isolate ex biopsy of nasal mucosa, female with chronic rhinitis Medellin, Columbia A. Restrepo Nov 1995 /M.G. Rinaldi R-2871 compatible (forms clamps) with UAMH 7694 & 7695. Odor: strong // pigment: brown // human/animal pathogen: sinusitis in atopic female (Sigler et al., J. Med. Vet. Mycol. 35: 365-370, 1997) // culture conditions: no clamps or spicules in original isolate; produced clamps and aberrant basidiocarps in mated culture.
- 8657 right lung mass, deceased Harbour seal Texas 1996 /M.G. Rinaldi UTHSC 96-1253 compatible with (produces clamps) UAMH 7693, 7694 & 7695. Benomyl: resistant // culture conditions: no clamps or spicules in original isolate.
- 8729 ex ethmoid sinus, female 64 yr with 4 mo history of discomfort in left frontal and maxillary sinuses; DE positive for hyaline branched hyphae New Zealand D. Parr 1996 /D. Parr original isolate monokaryotic & lacked clamps; subsequently dikaryotized & developed clamps and mature fruiting bodies. Odor: strong & unpleasant // human/animal pathogen: maxillary sinusitis caused by a medusoid form of *Schizophyllum commune* (Parr, D.H. et al., ISHAM Abstr. P346, 1997; Sigler L, Bartley JR, Parr DH, Morris AJ, Clin J Microbiol 37:3395-3398, 1999) // culture conditions: produced spicules but no clamps in original culture; produced sterile medusoid structures from nonclamped mycelia; produced typical basidiocarps following spontaneous dikaryotization.
- 8803 thoracic lymph node, deceased Harbour seal, monokaryon Texas 1996 /M.G. Rinaldi UTHSC 96-1252 compatible (formed clamps) with UAMH 8804. Culture conditions: produced spicules but no clamps in original culture.
- 8804 left lung mass, deceased Harbour seal Texas 1996 /M.G. Rinaldi UTHSC 96-1254 compatible (formed clamps) with UAMH 7693, 7694 & 8803. Odor: strong // culture conditions: produced spicules but no clamps in original culture.
- 9034 log of aspen (*Populus tremuloides*) Elk Island National Park, Alta S.P. Abbott (SA 1255) 18 Aug 1997 /S.P. Abbott (SA 1255). Biodeteriogen/biodegradation: white rot // culture conditions: produces clamps, spicules and basidiocarps.
- 9226 maxillary sinus, female 36 yr, patient refused treatment A.A. Padhye 1998 /CDC 98-000837. Odor: strong & unpleasant // culture conditions: produces clamps, spicules and basidiocarps.
- 10914 one of multiple positive cultures from sphenoid and ethmoid sinuses of male 23 yr; DE + for hyphae with eosinophilic debris consistent with fungus ball Univ. Nebraska Medical Center, Omaha, NE 2007 /P. Iwen UNMC S07-28039 compatible (formed clamps and spicules) with UAMH 7692. Culture conditions: no clamps or spicules in original isolate; cottony, somewhat degenerate // odor: strong & unpleasant // benomyl: tolerant @ 2 ppm // human/animal pathogen: chronic rhinosinusitis (fide P. Iwen).
- Schizosaccharomyces octosporus*** Beijerinck
297 Dr. Munroe.
- Scleroacleista thaxteri*** Subram. (syn. *Neosartorya citrispora*; morph *Aspergillus citrisporus*)
6644 Raper & Fennell WB 4735, ex peat, Wisconsin, from M. Christensen, 05-62 /M. Christensen WB 4735.
- Scleroacleista thaxteri* see *Aspergillus citrisporus*
- Scleroconidioma sphagnicola*** Tsuneda, Currah & Thormann
9731 (T *Scleroconidioma sphagnicola*) lesions on thalli of *Sphagnum fuscum* Perryvale, Alta. A. Tsuneda 20 Sep 1999 /A. Tsuneda [=GenBank AY220610 (ITS)]. Plant pathogen: necrotic disease of *Sphagnum* (Tsuneda, Chen & Currah, Can. J. Bot. 79:1217-1224, 2001; Tsuneda, Thormann & Currah, Can. J. Bot. 78:1294-1298, 2000, Can. J. Bot. 78:1294-1298, 2000; Tsuneda, Thormann & Currah, Can. J. Bot. 78:1294-1298, 2000); cohabitant with *Caponobotryella renispora* (UAMH 9870) and green alga (UAMH 9871) (Tsuneda, Hambleton & Currah, Rep. Tottori Mycol. Inst. 41:1-12, 2003) // systematics/taxonomy: morphogenesis (Tsuneda, Chen & Currah, Mycologia 93:1164-1173, 2001) // molecular systematics: phylogenetic placement in Dothioraceae (Hambleton, Tsuneda & Currah, Mycologia 95:959-975, 2003) // biodiversity: endoconidial black meristematic fungus (BMF).
- 10706 ex *Hylocomium splendens* (mountain fern moss) David Thompson Creek, Alta. M.L. Davey 20-Jul-2005 /R.S. Currah Hs5-G. Biodiversity: First report of fungus from moss *Hylocomium splendens* (Davey ML, Diversity, systematics and ecology of bryophilous fungi, University of Alberta Ph.D. thesis, 2009); endoconidial black meristematic fungus (BMF) // molecular systematics: Blast match identical to sequence of ex-type of *Scleroconidioma sphagnicola* (fide M.L. Davey).
- Sclerotinia fuckeliana* see *Botryotinia fuckeliana*
- Sclerotinia sclerotiorum*** (Libert) de Bary (syn. *Whetzelinia sclerotiorum*; morph *Myrioconium an. Sclerotinia sclerotiorum*, *Sclerotium varium*)
4514 sclerotium on rapeseed Central Alberta J. Williams 1981 /J. Williams. Cellulolytic // culture conditions: does not survive freeze-drying; produces spermatial state // crystals: yellow on PDA.
6321 soil in potted *Gazania* sp. in greenhouse Devonian Botanic Garden, Edmonton, Alta. L. Sigler; (C) S.P. Abbott 23 Jan 1989. Odor: earthy // culture conditions: sclerotia produced measuring 3-8 um (fide UAMH 2012) // molecular systematics: Blast match 100% ITS similarity to *Sclerotinia sclerotiorum* (fide UAMH 2012).
9192 bean stem Maryland, USA /ATCC 18687 [=ATCC 18687]. Application: production of cellulase, phosphatidase and oxalic acid (Phytopathology 59: 653-657, 1969).
- Sclerotium hydrophilum*** Saccardo
9560 wild rice (*Zizania aquatica*) Manitoba R. McQueen (91-17) 1991 /J. Reid UM 917 [=GenBank L05970 =GenBank L05971]. Molecular systematics: molecular genetic variation among members of the genus *Ceratocystis* (Hausner, Reid & Klassen, Mycol. Res. 97:625-633, 1993); relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, Can. J. Bot. 78:903-916, 2000); relationships among *Ceratocystis* & *Ophiostoma* species based on partial rDNA sequences // culture conditions: thiamine required for induction of sclerotia in vitro (Hausner & Reid, Mycoscience 40:393-400, 1993).
10282 *Typha latifolia* leaves in moist chamber collected from a small permanent pond Site 1, Elk Island National Park, Alta. M. Schulz (M-32) 27-06-001 /R.S. Currah M-32. Culture conditions: gelatinolytic, cellulolytic, lignolytic, utilizes starch and tannic acid // biodeteriogen/biodegradation: decomposition

of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).

Sclerotium rolfsii Sacc. (morph *Athelia rolfsii*)

6819 orchid roots /H. Congly 500M-90. Culture conditions: produces sclerotia.

Sclerotium varium see *Sclerotinia sclerotiorum*

Scolecobasidium arenarium see *Dendryphiella arenaria*

Scolecobasidium constrictum see *Ochroconis constricta*

Scolecobasidium humicola see *Ochroconis humicola*

Scolecobasidium obovatum Matsushima (syn. *Dactylaria obovata*)

3972 soil under asphalt Edmonton, Alta. S. Davies (H-37-F) Feb 1976 /S. Davies H-37-F [=ATCC 38655].
Biodeteriogen/biodegradation: degradation of hydrocarbons in crude oil (Davies & Westlake, Can. J. Microbiol. 25:146-156, 1979).

Scolecobasidium salinum see *Dendryphiella salina*

Scolecobasidium terreum Abbott

1533 peat soil Bradford Marsh Ont. Barron Oct 1960 /G.L. Barron 8817.
8343 tissue ex left knee traumatized on lawn sprinkler, male football player Albuquerque, NM University of New Mexico Hospital 1995 /M.G. Rinaldi UTHSC 95-1840.

Scolecobasidium tshawytschae see *Ochroconis tshawytschae*

Scolecobasidium variabile see *Ochroconis tshawytschae*

Scolecobasidium verruculosum see *Ochroconis verruculosa*

Scolecobasidium cucurbitula (Tode:Fr.) Booth (morph *Zythiostroma pinastri*)

5025 single perithecium on bark of *Pseudotsuga menziesii* Lumby, B.C. A. Funk (PFRC 537) 17 Apr 1984 /W.A. Ayer [=PFRC 537]. 2,5-dimethoxy-3,6-dimethylbenzoquinone & (-)-mellein (Ayer & Shewchuk, J. Natural Products 49:947-948, 1986 (sub N. fückeliana)). Crystals: abundant yellow needle-like crystals.
6960 sheep/antelope dung Colorado, USA /B. Katz 2.

Scopulariopsis acremonium (Del.) Vuillemin

461 skin ex wrist Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
541 soil chicken house Edmonton, Alta. J.W. Carmichael Jul 1956 /J.W. Carmichael [=ATCC 58636].
543 soil chicken house Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
927 received as *Scopulariopsis brevicaulis* var *glabra* strain Thom Thom Apr 1931 /CBS 305.31.
928 (T *Scopulariopsis danica*) skin, horse; received as strain van Beyma Denmark C. Werdelin; source van Beyma /CBS 290.38 [=GenBank AF400875 (CBS 290.38) LSU =PLPH S-541 =MUCL 9028 =IFO 8115 =IMI 86935 =LSHB SC-56]. Systematics/taxonomy: description of *Scopulariopsis danica* (van Beyma F.H., Zentralbl. Bakt. XCIX: 390, 1938).
1157 soil cougar pen Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1317 soil cougar pen Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.

8885 soil Kiel, Kitzberg, Schleswig-Holstein, Germany W. Gams (C-1372) 1966 /W. Untereiner MUCL 8999.

8982 wheat field soil Germany W. Gams (C656) 30 Apr 1980 /NRRL 6517 [=CBS 104.65 =ATCC 16282 =MUCL 8274]. Biodeteriogen/biodegradation: degrades cellulose and xylan.

9251 wheat-field soil Germany K.H. Domsch /CBS 892.68. Benomyl: resistant (2 ppm) // mesophilic: grows better @ 25C than at 30 C; NG @ 35C.

Scopulariopsis an. Kernia pachypleura see *Kernia pachypleura*

Scopulariopsis an. Kernia peruviana see *Kernia peruviana*

Scopulariopsis an. Kernia retardata see *Kernia retardata*

Scopulariopsis an. Microascus caviariformis see *Microascus caviariformis*

Scopulariopsis an. Microascus cinereus see *Microascus cinereus*

Scopulariopsis an. Microascus cirrosus see *Microascus cirrosus*

Scopulariopsis an. Microascus intermedius see *Microascus intermedius*

Scopulariopsis an. Microascus longirostris see *Microascus longirostris*

Scopulariopsis an. Microascus microcordiformis see *Microascus microcordiformis*

Scopulariopsis an. Microascus pyramidus see *Microascus pyramidus*

Scopulariopsis an. Petriella musispora see *Petriella musispora*

Scopulariopsis asperula (Sacc.) Hughes (syn. *Scopulariopsis fusca*, *Scopulariopsis roseola*; morph *Microascus niger*)

216 skin from foot Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael [=LSHB Sc.109].
347 skin ex upper lip Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael [=LSHB Sc.112].
355 skin ex face & chest Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael [=LSHB Sc.113].
440 skin ex foot Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael [=LSHB Sc.115].
460 skin ex neck Edmonton, Alta. J.W. Carmichael 6 Dec 1955 /J.W. Carmichael [=LSHB Sc.116].
917 routine mycology Edmonton, Alta. J.W. Carmichael 1961 /J.W. Carmichael [=LSHB Sc.120].
941 NRRL 1111.
949 moldy packing straw U.K. Smith Feb 1956 /Smith LSHB Sc.16 (BB 315) [=IMI 63214].
950 garden soil Perranporth, U.K. Jun 1952 /Smith LSHB Sc.37.
951 moldy carmine London, U.K. Mar 1937 /Smith LSHB Sc.13 [=IMI 86932].
955 Paris strain Lab. Crypt. /Smith LSHB Sc. 61 [=IMI 86924].
1322 soil cougar pen Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
8682 Marten (Martes martes) dung Valley of the Five Lakes, Jasper National Park, Alta S.P. Abbott (SA-M142) 13-May-1996

- /S.P. Abbott (SA-M142). Benomyl: resistant (2 ppm) // cycloheximide: resistant.
 8706 indoor air of office ex RCS strip Barrhead, Alta S.P. Abbott (SA-M78) 28-Mar-1996 /S.P. Abbott (SA-M78).
 9095 right great toe, M 54 yr Prov. Lab Southern Alberta 18 Aug 1997 /R. Rennie MY 4135.
 9144 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-11D) T. Lumley (EI-09-S3G 11 Feb 1997 /R.S. Currah EI-09-S3G, 2-11D).
 9864 tape sample of mold growth in house Alberta L. Sigler 7 Jul 2000.

Scopulariopsis asperula see *Microascus niger*

Scopulariopsis atra Zach

- 9385 (T *Scopulariopsis atra*) F. Zach /CBS 400.34 [=UAMH 936]. Benomyl: resistant (2 ppm).

Scopulariopsis brevicaulis (Saccardo) Bainier (syn.

Scopulariopsis koningii; morph *Microascus brevicaulis*)

- 76 contaminant ex vaginal swab Edmonton, Alta. J.W. Carmichael 17 Nov 1954 /J.W. Carmichael. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
 200 agar plate exposed in animal autopsy room Edmonton, Alta. J.W. Carmichael Nov 1954 /J.W. Carmichael.
 228 contaminant ex skin crural region Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
 231 contaminant skin ex feet Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
 345 skin from neck Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 351 vaginal swab Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 352 skin Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 384 sputum Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 414 upper lip & nasal passages Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
 415 upper lip & nasal passages Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 437 contaminant Edmonton, Alta. J.W. Carmichael Aug 1955 /J.W. Carmichael.
 827 mouse dung, Edmonton, J.W. Carmichael, 1960 /J.W. Carmichael.
 901 white plaster mold or flour mold /L.R. Kneebone. Application: In vitro susceptibility testing of ciclopirox & terbinafine alone and in combination (Gupta AK, Kohli Y, Br. J. Dermatol. 149:296-305, 2003).
 916 Edmonton, Alta. J.W. Carmichael 1961 /J.W. Carmichael.
 919 Edmonton, Alta. J.W. Carmichael 1961 /J.W. Carmichael.
 920 hair research Edmonton, Alta. J.W. Carmichael 1961 /J.W. Carmichael.
 921 soil under tree Edmonton, Alta. J.W. Carmichael 19 Mar 1961 /J.W. Carmichael.
 922 rodent survey Edmonton, Alta. J.W. Carmichael 1961 /J.W. Carmichael.
 925 strain Roper /CBS.
 926 var alba strain Thom /CBS.
 939 NRRL 1110.
 952 elephant Martin-Scott Nov 1951 /Smith LSHB Sc.8 (BB 269)

- [=CBS 208.61 =IMI 86926]. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC).
 967 Edmonton, Alta. J.W. Carmichael 1961 /J.W. Carmichael.
 1654 nail left great toe Edmonton, Alta. J.W. Carmichael 19 Mar 1963 /J.W. Carmichael.
 2378 white pine inside galvanized fire door Toronto Mar 1965 /J.K. Shields 656-21.
 2903 atypical isolate from thickened toe nail with onycholysis Edmonton, Alta. J.W. Carmichael 15 Mar 1968 /J.W. Carmichael. Culture conditions: slow growing variant.
 3328 contaminant on mannitol salt agar Edmonton, Alta. J.W. Carmichael 11 Feb 1970 /J. Sumner.
 3618 chronic leg granulomas Edmonton, Alta. A. Sekhon Oct 1973 /A.S. Sekhon MY 4280 [=My 4279]. Human/animal pathogen: subcutaneous (Sekhon et al., J. Clin. Path. 27:837, 1974).
 5636 ex equine fetus Saskatchewan H. Congly /H. Congly 180M. Human/animal pathogen.
 6219 reverse of cotton duck canvas & wooden frame, oil painting Edmonton, Alta. L. Sigler 9 Aug 1988 /R. Scott. Biodeteriogen/biodegradation: cotton duck fabric & wood.
 6877 *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 1024) Aug 1990 /D. Inglis (MR 1024).
 7020 frass ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 240) Aug 1990 /D. Inglis (HD 240). Benomyl: resistant (2 ppm) // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
 7473 mitral valve ring Houston, Texas St. Luke's Episcopal Hospital (M7163) /M.G. Rinaldi UTHSC 93-2196.
 7771 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 38) 13 Dec 1993 /S.P. Abbott (OHS 38) [=GenBank AY625065 ITS]. Cellulolytic // application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004).
 7774 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 41) 10 Dec 1993 /S.P. Abbott (OHS 41) [=IFO 33051 =IMI 377810].
 7918 mixed air, plenum, ex bacterial RCS strip @ 35 C Edmonton, Alta. S.P. Abbott (SA-M70) 22 Feb 1995 /S.P. Abbott (SA-M70) [=IMI 377812 =IFO 33052].
 7919 outside air ex RCS strip Red Deer, Alta. S.P. Abbott (SA-M72) 9 Mar 1995 /S.P. Abbott (SA-M72). Cellulolytic.
 8400 rabbit dung Toronto, Ont J. Scott (JS 170) 28-May-1991 /D. Malloch.
 8401 carpet dust from home Wallaceburg, Ont D. Malloch (056-121.1) 24-Feb-1994 /D. Malloch.
 8454 Thaxter (=Thom 480-2) 1905 /NRRL 1096 [=IMI 40026 =LSHB Sc. 1 =IMI 61534 =CBS 467.48 =ATCC 7903]. Application: used for detection of arsenic (Biochem. J. 43: 78. 1948).
 8499 bath towel Florida Weston (FLA IA186) Apr 1946 /NRRL A-1671.
 8500 Biourge (350) 02 May 1924 /NRRL 1112 [=Thom 4733.112.1].
 8629 ex ascocarp of *Peziza vesiculosa* on decayed straw east of Spruce Grove, Alta S.P. Abbott (SA-M139) 11-Jul-1996 /S.P. Abbott (SA-M139).
 8703 atmosphere, cleared site Innisfail, Queensland, Australia J. Upsher 1985 /L. Montelli AMRL 1512.
 8709 outside air ex RCS strip Barrhead, Alta S.P. Abbott (SA-M77) 20-Mar-1996 /S.P. Abbott (SA-M77).
 8737 wine cork Sydney, New South Wales, Australia C. Davis 1980 /A. Hocking FRR 2342.
 8745 freshwater snail shells on lakeshore North Buck Lake, Alta S.P. Abbott (SA-M161) 21-Oct-1996 /S.P. Abbott (SA-M161).
 8746 dung of white-tailed deer (*Oedocoileus virginianus*) in pine/birch (*Pinus banksiana*/ *Betula papyrifera*) woods North

- Buck Lake, Alta S.P. Abbott (SA-M164) 18-Dec-1996 /S.P. Abbott (SA-M164).
- 8747 burnt cones of black spruce (*Picea mariana*) 15 km north of Mariana Lake, Alta S.P. Abbott (SA-M159) 21-Oct-1996 /S.P. Abbott (SA-M159).
- 8748 dung of red squirrel (*Tamiasciurus hudsonicus*) in lodgepole pine (*Pinus contorta*) forest Goldeye Lake near Nordegg, Alta S.P. Abbott (SA-M155) 15-Nov-1996 /S.P. Abbott (SA-M155) [=IFO 33049].
- 8749 soil, lakeshore under white spruce (*Picea glauca*) Fish Lake near Nordegg, Alta S.P. Abbott (SA-M154) 15-Nov-1996 /S.P. Abbott (SA-M154).
- 8750 dung of snowshoe hare (*Lepus americanus*) in spruce (*Picea glauca*) forest Fish Lake near Nordegg, Alta S.P. Abbott (SA-M153) 14-Nov-1996 /S.P. Abbott (SA-M153).
- 8751 old basidiocarps of *Hydnum repandum* in white spruce (*Picea glauca*) forest Fish Lake near Nordegg, Alta S.P. Abbott (SA-M152) 14-Nov-1996 /S.P. Abbott (SA-M152).
- 8786 Vienna, Austria Pribram Feb 1926 /IMI 91946 [=LSHB Sc. 3].
- 8787 air Wanganui, WI, New Zealand F.J. Morton (H74) Dec-1961 /J. Young ICMP 1044.
- 8981 soil Formosa NRRL isolate (13) Jun 1952 /NRRL A-3865. Benomyl: resistant (2 ppm).
- 9038 outside air ex RCS strip Scandia, Alta S.P. Abbott (OHS 109) 13 Dec 1993 /S.P. Abbott (OHS 109).
- 9039 indoor air ex RCS strip, honeybee (*Apis mellifera*) overwintering facility Camp Creek, Alta S.P. Abbott (OHS 339) 24 Mar 1994 /S.P. Abbott (OHS 339).
- 9041 outside air ex RCS strip Barrhead, Alta S.P. Abbott (SA-M85) 20 Mar 1996 /S.P. Abbott (SA-M85).
- 9140 France O. da Fonseca /CBS 152.22 [=IMI 86928 =LSHB Sc. 62 =MUCL 9044]. Benomyl: resistant (2 ppm).
- 9145 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-02-S1C-4-15B) 15 Apr 1997 /R.S. Currah EI-02-S1C, 4-15B [=DAOM 225611].
- 9253 twig of aspen (*Populus tremuloides*) Gregoire Lake Provincial Park, Alta S.P. Abbott (SA-M229) 2 Mar 1998 /S.P. Abbott (SA-M229) [=DAOM 225612].
- 9320 decayed wood (2x4) in basement of home Sherwood Park, Alta S.P. Abbott (SA-M238) 24 Jul 1998 /S.P. Abbott (SA-M238). Cycloheximide: resistant (MYC) // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 10377 inside tissue of American dog tick (*Dermacentor variabilis*) Illinois K. Piskin 2002 /L. Zettler. Biocontrol: experimental mortality in American dog tick (*Dermacentor variabilis*) (Yoder, Hanson, Zettler, Benoit, Ghisays & Piskin, Appl. Env. Microbiol. 69:4994-4996, 2003); endosymbiotic fungus within American dog tick protects against *Metarhizium anisopliae* (Yoder JA, Benoit JB, Denlinger DL, Tank JL, Zettler LW, J Inv Pathol 97:119-127, 2008).
- 10915 skin biopsy of cutaneous lesion ex male 26 yr with non-Hodgkin's lymphoma who underwent unrelated bone marrow transplant; histopathology + for numerous fungal hyphae in deep dermis Univ. Nebraska Medical Center, Omaha, NE 2008 /P. Iwen UNMC S08-9845. Human/animal pathogen: invasive cutaneous infection in patient with non-Hodgkin's lymphoma (Iwen PC, Schutte SD, Florescu DE, Noel-Hurst RK, Sigler L, Med Mycol 2012 Epub Apr 23; fide P. Iwen).
- 11666 ex frozen skin lesion of coastal bearded dragon (*Pogona barbata*) Ti Point Reptile Park, Warkworth, Auckland, New Zealand (C) I. Borich (I) S. McLoughlin Jun-2012 /R. Clough W12-01030.
- Scopulariopsis brumptii*** Salvanet-Duval (syn. *Scopulariopsis melanospora*)
- 946 soil under tree Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
- 1415 culture contaminant Iowa Orr (771) /DAOM 84429.
- 1454 spleen Richardson's ground squirrel (*Spermophilus richardsonii*) Alberta J.W. Carmichael 3 Oct 1962 /J.W. Carmichael.
- 1477 (T *Scopulariopsis melanospora*) milled rice USA S.I. Udagawa 1955 /IMI 78256 [=CBS 272.60 =Herb. NHL 6045]. Cycloheximide: resistant.
- 7881 indoor air from basement of home ex RCS strip Calgary, Alta. S.P. Abbott (SA-M27) 10 Jan 1995 /S.P. Abbott (SA-M27).
- 7920 outside air ex RCS strip Red Deer, Alta. S.P. Abbott (SA-M71) 9 Mar 1995 /S.P. Abbott (SA-M71).
- 8065 ex BAL, female 49 yr Alberta Provincial Laboratory for Southern Alberta 3 May 1995 /R. Rennie MY 1865.
- 8202 BAL fluid ex Lt. lingular lobe, female 49 yr Alberta Provincial Laboratory of Southern Alberta May 1995 /R. Rennie MY 2290.
- 8402 contaminant ex agaric basidiocarp Creighton Mine, Sudbury Co., Ont D. Malloch (DM 308) 20-Sep-1981 /D. Malloch.
- 8619 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 1-29A) T. Lumley (EI-13-S2C 29 Jan 1996 /R.S. Currah EI-13-S2C, 1-29A).
- 8699 bronchial wash, male 70 yr Alberta Prov Lab Southern Alberta 11-Apr-1996 /R. Rennie MY 1635. Cycloheximide: very slightly resistant // benomyl: resistant // mesophilic: NG @ 37C.
- 8707 indoor air of pulp and paper woodroom ex RCS strip Prince Albert, Saskatchewan S.P. Abbott (SA-M50) 13-Dec-1996 /S.P. Abbott (SA-M50).
- 8738 hay, toxic to animals Australia I.G. Pascoe 1983 /A. Hocking FRR 2578.
- 8743 birch (*Betula papyrifera*) leaf litter North Buck Lake, Alta S.P. Abbott (SA-M165) 20-Dec-1996 /S.P. Abbott (SA-M165) [=IFO 33050].
- 8744 freshwater snail shells on lakeshore North Buck Lake, Alta S.P. Abbott (SA-M160) 21-Oct-1996 /S.P. Abbott (SA-M160).
- 8846 wheat field soil Germany K. Domsch 1968 /T. Ito IFO 31245 [=ATCC 16279 =CBS 897.68 =MUCL 8993]. Cycloheximide: resistant (MYC) // biodeteriogen/biodegradation: degrades lignin and xylan.
- 8856 (T *Masonia grisea*) culture contaminant London, England, UK G. Smith (BB 211) /T. Ito IFO 6795 [=IMI 49908 =LSHB Sc. 144 =CBS 295.52]. Cycloheximide: resistant (MYC).
- 8874 lung, northern flying squirrel (*Glaucomys sabrina*) Lac La Biche, Alta. J. Csotonyi 08-Feb-1997 /R.S. Currah F5/107-1BT/1M.
- 8983 kangaroo rat burrow Arizona D.T. Wicklow (546) 14 Feb 1983 /NRRL A-27019. Benomyl: resistant (2 ppm).
- 9173 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 11-19C) T. Lumley (EI-02-S1H 19 Nov 1996 /R.S. Currah EI-02-S1H, 11-19C).
- 9289 bronchial wash, RLL Male 51Y Edmonton, Alta C. Sand 8 Mar 1998 /R. Rennie MY 1467. Benomyl: resistant (2 ppm) // cycloheximide: resistant (MYC).
- 9321 decayed wood (2x4) in basement of home Sherwood Park, Alta S.P. Abbott (SA-M239) 24-Jul-1998 /S.P. Abbott (SA-M239). Cycloheximide: resistant (MYC).
- 9460 indoor air of arena dressing room ex RCS strip Edmonton, Alta S.P. Abbott (SA-M284) 17 Dec 1998 /S.P. Abbott (SA-M284).
- 9462 sputum, male 51 yr Edmonton, Alta. C. Sand 6 Nov 1998 /R. Rennie MY 6605.

Scopulariopsis brevicaulis see *Microascus brevicaulis*

Scopulariopsis canadensis Morton & Smith

- 8498 (T *Scopulariopsis canadensis*) seed of beet (*Beta vulgaris*) Agassiz, BC S.J. Hughes Jan 1958 /NRRL 2991 [=UAMH 956 =LSHB Sc. 15 =DAOM 56303 =CBS 204.61 =IMI 86398].

Scopulariopsis candida (Gueguen) Vuillemin (morph *Microascus manginii*)

- 937 Biourge (372) 1924 /NRRL 1106 [=LSHB Sc.103].
 940 France L. Mangin 1927 /NRRL 2157 [=LSHB Sc.107].
 944 NRRL 1107 [=LSHB Sc.104].
 945 NRRL 1108 [=LSHB Sc.105].
 957 toenail U.K. Feb 1959 /Smith LSHB Sc.33.
 958 human lesion Nov 1959 /Smith LSHB Sc.36 [=IMI 73030].
 959 Smith LSHB Sc.55.
 1242 cedar cooling tower Toronto, Ontario J.W. Carmichael 1962 /J.W. Carmichael.
 2044 soil Italy Varsavsky /G.F. Orr EV I-7(2).
 2470 rash ex neck Edmonton, Alta. J.W. Carmichael 9 Apr 1965 /J.W. Carmichael.
 4065 spruce lumber Edmonton, Alta. A. Jobson /A. Jobson.
 4367 lymphatic lesions on horse /CDC B-3390 [=CDC 81-003005].
 4975 aerobically digested sewage sludge Katowice, Poland K. Ulfig 1984 /K. Ulfig 14.
 7882 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 173) 30 Jan 1994 /S.P. Abbott (OHS 173).
 7902 ex Lt great toenail, female 74 yr, DE+ New Zealand /D. Parr 268.
 7930 ex nail, male 72 yr Edmonton, Alta 8 Feb 1995 /J. Fielding F5188.
 8359 carpet dust from home Wallaceburg, Ont. D. Malloch (128-121.2) 13-Apr-1994 /D. Malloch.
 8360 carpet dust from home Wallaceburg, Ont. D. Malloch (322-120.2) 16-Jun-1994 /D. Malloch.
 8361 swab from home Ottawa, Ont. D. Malloch (M22-2C) Dec-1995 /D. Malloch.
 8405 carpet dust from home Wallaceburg, Ont D. Malloch (139-121.2) 14-Apr-1994 /D. Malloch. Application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
 8683 ammoniated corn NRRL isolate, USA R.J. Boothast 16-Jun-1976 /NRRL A-22796. Cycloheximide: resistant.
 8708 indoor air ex RCS strip Winnipeg, Manitoba S.P. Abbott (SA-M37) 31-Aug-1995 /S.P. Abbott (SA-M37).
 8798 (T *Chrysosporium keratinophilum* v *denticola*) France C. Moreau 1969 /IMI 139629.
 8944 lung, northern flying squirrel (*Glaucomys sabrina*) Lac La Biche, Alta. J. Csotonyi 24 Apr 1997 /R.S. Currah A24/107/1MT/1c.
 9146 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 6-26H) T. Lumley (EI-13-S5C 26 Jun 1996 /R.S. Currah EI-13-S5C, 6-26H.
 9293 sputum, M 50Y Alberta Provincial Laboratory for Southern Alberta Jun 1998 /R. Rennie MY 3408.98.

Scopulariopsis candida see *Microascus manginii*

Scopulariopsis capsici see *Leuconeurospora capsici*

Scopulariopsis carbonaria Morton & G. Smith

- 948 dust Canary Islands R.R. Davis Mar 1958 /G. Smith LSHB Sc.14 (BB 368) [=IMI 86940 =UAMH 8985 =Smith LSHB Sc. 14].
 8355 carpet dust from home Wallaceburg, Ont. D. Malloch (153-120.1) 16-Jun-1994 /D. Malloch. Cycloheximide: very slightly resistant // benomyl: resistant // mesophilic: NG @ 37C.
 8356 carpet dust from home Wallaceburg, Ont. D. Malloch

- (029-220.1) 17-Feb-1994 /D. Malloch.
 8357 carpet dust from home Wallaceburg, Ont. D. Malloch (128-221.1) 11-Apr-1994 /D. Malloch.
 8358 carpet dust from home Wallaceburg, Ont. D. Malloch (178-211.1) 20-Apr-1994 /D. Malloch.
 8403 clay soil of termite mound associated with chimpanzees Mahale Mountains, Tanzania D. Malloch (#4 clay) Dec-1995 /D. Malloch. Cycloheximide: slightly resistant // benomyl: resistant // mesophilic: NG @ 37C.
 8406 carpet dust from home Wallaceburg, Ont D. Malloch (029-221.1) 17-Feb-1994 /D. Malloch. Benomyl: resistant (2 ppm) // cycloheximide: slightly resistant // mesophilic: NG @ 37C.
 8896 soil Kiel, Kitzberg, Schleswig-Holstein, Germany W. Gams (C-1372) 1966 /W. Untereiner MUCL 8992.
 8985 (T *Scopulariopsis carbonaria*) soil Panama B. Coghill (H4) Jun 1942 /NRRL 1860 [=IMI 86941 =LSHB Sc. 66 =ATCC 46517 =UAMH 948]. Benomyl: resistant (2 ppm).
 8986 soil C.W. Emmons (6568) Feb 1950 /NRRL A-3013. Benomyl: resistant (2 ppm).
 8987 soil Florida D. Fennell Nov 1954 /NRRL A-5852. Benomyl: resistant (2 ppm).
 8988 soil Formosa NRRL isolate (49) Jun 1952 /NRRL A-3884. Benomyl: resistant (2 ppm).
 8989 soil Gold Coast, Africa NRRL isolate May 1950 /NRRL A-3166. Benomyl: resistant (2 ppm).
 9461 decaying mushroom (*Pholiota squarrosa*) at base of Manitoba maple (*Acer negundo*) in rural shelterbelt 10 km S of Leduc, Alta S.P. Abbott (SA-M285) 11 Jan 1999 /S.P. Abbott (SA-M285). Benomyl: resistant (2 ppm).
 9485 bark of aspen (*Populus tremuloides*) Gregoire Lake Provincial Park, Alta S.P. Abbott (SA-M296) 17 Feb 1999 /S.P. Abbott (SA-M296). Benomyl: resistant (2 ppm).
 10556 ex brown dog tick, *Rhipicephalus sanguineus* Butler County, OH J.B. Benoit /J. Yoder #2. Biocontrol: caused mortality when reapplied to ticks (fide J. Yoder).

Scopulariopsis chartarum (Smith) Morton & Smith

- 1479 (T *Masoniella chartarum*) wall-paper London, UK G. Smith K. Maunsell 1950 /IMI 49909 [=CBS 294.52 =LSHB Sc.146 (BB 256)].

Scopulariopsis croci van Beyma

- 933 (T *Scopulariopsis croci*) *Crocus* sp. van Beyma /CBS 158.44 [=IMI 78261].
 8886 (T *Masoniella tertia*) air Recife, Brazil A.C. Batista (IMUR 1550) 1952 /W. Untereiner MUCL 9005 [=IMI 109550 =CBS 296.61].

Scopulariopsis fimicola (Cost. & Matr.) Vuillemin

- 954 white plaster mold Mushroom Growers Assoc. C.A. la Touche (BB212) Jul 1946 /Smith LSHB Sc.9 [=IMI 86944 =CBS 206.61].
 1017 lung, Richardson's ground squirrel Daysland, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.

Scopulariopsis flava (Sopp) F.J. Morton & G. Smith

- 831 (T *Glenospora lanuginosa*) ex man, strain Castellani of *Glenospora lanuginosa* /CBS [=CBS 187.33]. Benomyl: resistant (2 ppm) // cycloheximide: slightly resistant // systematics/taxonomy: may be a pale variant of *Scopulariopsis brevicaulis* (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).
 8895 cheese United Dairies, England, UK G. Smith (LSHB BB230) 1948 /W. Untereiner MUCL 9031 [=IMI 86921 =LSHB Sc. 7 =CBS 207.61 =MUCL 9031]. Systematics/taxonomy: listed as *Scopulariopsis flava* by Morton & Smith, but may be a pale *Scopulariopsis brevicaulis* (Abbott, Lumley & Sigler, *Mycologia* 94:362-369, 2002).

Scopulariopsis fusca see *Scopulariopsis asperula*

Scopulariopsis gracilis Samson

- 9536 (T *Paecilomyces fuscatus*) wheat flour Japan N. Inagaki Aug 1959 /NRRL 5822 [=CBS 369.70 =IFO 7561].
Cycloheximide: resistant (MYC).

Scopulariopsis halophilica see *Basipetospora halophila*

Scopulariopsis hibernica Mangan

- 2643 (T *Scopulariopsis hibernica*) strain Mangan /G.L. Barron 10465 [=ATCC 16690].

Scopulariopsis koningii see *Scopulariopsis brevicaulis*

Scopulariopsis melanospora see *Scopulariopsis brumptii*

Scopulariopsis murina Samson & Klopotek

- 9537 (T *Scopulariopsis murina*) domestic refuse compound Baden-Baden, Germany A. von Klopotek (P-27) 1970 /NRRL 5823 [=CBS 830.70 =IMI 161540]. Cycloheximide: resistant (MYC).

Scopulariopsis parva (Brown & Smith) Samson (syn.

Paecilomyces parvus, *Scopulariopsis parvula*)

- 743 soil under tree frequented by sparrows Edmonton, Alta. J.W. Carmichael 19 Mar 1959 /J.W. Carmichael.
918 (T *Scopulariopsis parvula*) soil under tree frequented by sparrows J.W. Carmichael 19 Mar 1959 /J.W. Carmichael [=ATCC 58635 =CBS 209.61 =IMI 86943].
1146 soil & quills porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1151 soil & quills porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1159 soil & quills porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1195 soil & quills porcupine paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1196 sandy soil badger paddock Alberta Game Farm, Edmonton J.W. Carmichael 8 Nov 1961 /J.W. Carmichael.
1329 sandy soil badger paddock Alberta Game Farm, Edmonton J.W. Carmichael 7 Jul 1962 /J.W. Carmichael.
1657 woodchuck (*Marmota monax*) Slave Lake, Alta. J.W. Carmichael 9 Aug 1960 /J.W. Carmichael.
9154 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 4-23D) T. Lumley (EI-02-S1E 23-Apr-1997 /R.S. Currah EI-02-S1E, 4-23D. Benomyl: resistant (2 ppm).
9384 (T *Paecilomyces parvus*) skin infection ex man A. Stuhmer /CBS 245.31. Benomyl: resistant (2 ppm).

Scopulariopsis parvula see *Scopulariopsis parva*

Scopulariopsis proteophila see *Microascus albonigrescens*

Scopulariopsis roseola see *Scopulariopsis asperula*

Scopulariopsis soppii see *Microascus soppii*

Scopulariopsis sphaerospora Zach

- 932 (T *Scopulariopsis sphaerospora*) /CBS [=UAMH 5964 =CBS 402.34].
5964 (T *Scopulariopsis sphaerospora*) Austria F. Zach /CBS 402.34 [=MUCL 9045 =UAMH 932].
8883 greenhouse soil Heverlee, Belgium B.G. Desai Sep 1971 /W. Untereiner MUCL 18261.
9383 from G. Smith (P. 10) 1955 /CBS 210.61 [=LSHB Sc. 134

=IMI 86939]. Benomyl: resistant (2 ppm).

Scopulariopsis trigonospora see *Microascus trigonosporus*

Scorias spongiosa (Schw.) Fries (morph *Polychaeton*)

- 4777 M. Pickard [=DAOM 167394 =GenBank AF006726].
Pigment: wine red.

Scutellinia heterosculpturata Kullman & Raitviir

- 10286 near base of brown Typha plant in a small permanent pond Site 1, Elk Island National Park, Alta. M. Schulz (MS-22) 27-6-01 /R.S. Currah MS-22. Pigment: brown // culture conditions: non sporulating on deposit; gelatinolytic, cellulolytic, utilizes tannic acid // biodeteriogen/biodegradation: decomposition of Typha latifolia and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).

Scytalidium acidophilum see *Acidomyces acidophilus*

Scytalidium album Beyer & Klingstrom

- 3611 (T *Scytalidium album*) Norway spruce Garpenberg, Sweden Klingstrom & Beyer (FF28) 1963 /CBS 372.65 [=ATCC 22476 =CBS 372.65 =MUCL 14529 =MUCL 9547].
Antagonistic to *Fomes annosus*; inhibitory to *Endocronartium harknesii* (Fairburn & al, Can. J. Bot. 61:2147-2152, 1983).
Chemotaxonomy: antagonistic to *Fomes annosus* (Klingstrom A, Beyer L, Sven Bot Tidskr 59, 30-36, 1965).
3620 Douglas fir heartwood poles Western Oregon Ricard & Bollen 1968 /C.J.K. Wang 1041 [=ATCC 16675 =ATCC 24939].
Hexenophenones (Geigert J, et al., Tetrahedron 29:2343-2345, 1973); scytalidin (Stillwell MA, Wall RE, Strunz GM, Can. J. Microbiol. 19:597-602, 1973; Strunz GM, Kakushima M, Stillwell MA, J Chem Soc 18, 2280-2283, 1972); scytalone (Findlay JA, Kwan D, Can J Chem 51, 1617-1619, 1973).
Application: production and antifungal activity of scytalidin (Stillwell MA, Wall RE, Strunz GM, Can J Microbiol 19:597-602, 1973; Findlay JA, Kwan D, Can J Chem 51, 1617-1619, 1973; Strunz GM, Kakushima M, Stillwell MA, J Chem Soc 18, 2280-2283, 1972) // chemotaxonomy: antagonistic to *Poria carbonica* (Ricard JL, Bollen WB, Can J Bot 46, 643-647, 1968).
6805 rotten heartwood *Picea excelsa* Beho Forest, Ardennes, Belgium H. Maraite Mar 1964 /G.L. Hennebert MUCL 6857. Pigment: tan/black.
6806 wood Hann-Munden, Germany H. Zycha /G.L. Hennebert MUCL 7563. Pigment: tan/black.
6807 *Picea abies* suffering from root-rot Uppsala, Sweden L. Beyer 1963 /G.L. Hennebert MUCL 9548 [=CBS 373.65]. Pigment: tan/black.

Scytalidium aurantiacum Klingstrom & Beyer

- 3612 (T *Scytalidium aurantiacum*) pulpwood *Pinus silvestris* Skinnskatteberg, Sweden Klingstrom & Beyer (FF21) 1962 /CBS 374.65 [=ATCC 22477]. Chemotaxonomy: antagonistic to *Fomes annosus* (Klingstrom A, Beyer L, Sven Bot Tidskr 59, 30-36, 1965).
6808 birch wood-pulp Bjorka Burk, Vasternorrland, Sweden L. Beyer 1963 /G.L. Hennebert MUCL 9550 [=CBS 375.65].
Culture conditions: degenerate.

Scytalidium circinatum Sigler & Wang

- 6377 inner zone of increment core, creosote treated 45 yr old southern yellow pine pole Vestal, Broome Co., NY C.J.K. Wang Aug 1985 /C.J.K. Wang EP-84.
6378 outer zone of increment core, chromated copper arsenate treated 10-yr-old Douglas fir pole (#146) Ithaca, Tompkins Co., NY C.J.K. Wang Aug 1985 /C.J.K. Wang ED-162.

- 6379 inner untreated zone of increment core, CCA treated Douglas fir pole (#146) Ithaca, Tompkins Co., NY C.J.K. Wang Aug 1985 /C.J.K. Wang ED-174 [=ATCC 66463 =CBS 655.89].
- 6380 (T *Scytalidium circinatum*) outer zone of increment core, creosote treated 54 yr old southern yellow pine pole Chester, NY C.J.K. Wang Oct 1985 /C.J.K. Wang P-1013 [=ATCC 66464 =CBS 654.89 =DAOM 211379 =MUCL 31213].
- 6381 outer zone of increment core, creosote treated 54 yr old southern yellow pine pole Chester, NY C.J.K. Wang Aug 1985 /C.J.K. Wang P-1014.
- 6382 outer zone of increment core, creosote treated 54 yr old southern yellow pine pole Chester, NY C.J.K. Wang Aug 1985 /C.J.K. Wang P-1018.
- Scytalidium cuboideum* (Sacc. & Ellis) Sigler & Kang (syn. *Geotrichum microsporium*, *Arthrographis cuboidea*)**
- 676 birch post Chalk River, Ontario K. Shields 1956 /DAOM 64066 [=GenBank GQ272627 ITS =GenBank GQ290131 RPB2 =GenBank GQ280408 SSU]. Pigment: pink // molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 3101 (T *Geotrichum microsporium*) rotten timber Johannesburg, S. Africa G. Smith 1955 /IMI 94091 [=CBS 241.62 =NCMH 352 =UAMH 4040 =GenBank GQ272628 ITS =GenBank GQ290132 RPB2 =GenBank GQ280409 SSU]. Pigment: pink // molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 3792 mushroom Japan M. Komatsu 1964 /K. Tubaki IFO 9190 [=TMI F-17 =GenBank GQ503338 ITS =GenBank GQ280412 SSU]. Pigment: pink // biodeteriogen/biodegradation: decay of wood logs used for cultivation of shiitake mushroom (*Lentinus edodes*) (Uchida et al, Trans. Mycol. Soc. Japan 34:275-281, 1993) // molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 4040 (T *Geotrichum microsporium*) rotten timber Johannesburg, S. Africa G. Smith 1955 /CBS 241.62 [=GenBank GQ503339 ITS =GenBank GQ280413 SSU =UAMH 3101 =IMI 94091 =NCMH 352]. Pigment: pink // molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 4802 pink stain of Na-pentachlorophenate-dipped red oak lumber (*Quercus rubra*) /E. Schmidt MN713 [=GenBank GQ503340 ITS =GenBank GQ280414 SSU =IMI 278529 =?=UAMH 11517]. Biodeteriogen/biodegradation: pink stain in oak (Schmidt & Dietz, Mycologia 77:316-318, 1985); production of red stain for decorative application (Robinson SC, Tudor D, Cooper PA, Can J For Res 41:1277-1728, 2011); promoting fungal pigment formation in wood (Robinson SC, Tudor D, Cooper PA, Wood Science and Technology 2011 Epub 17 Jan.); effects of commercial wood coatings on the deterioration of biological pigments in spalted wood (Robinson SC, Tudor D, Mansourian Y, Cooper PA, Wood Sci Technol Epub Sep 2012); influence of pH on pigment formation by lignicolous fungi (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013) // pigment: pink; red or dark-blue pigmentation influenced by pH of medium (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013); produces red pigment between pH 3.5-6 and dark-blue pigment at pH > 6 (highest intensity at pH 8) fide Tudor et al // crystals: red crystals // molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 5643 sap stain in *Pinus strobus* Mt. Toby Forest, Mass. 8 Aug 1986 /K. Seifert 86-8-10-3 [=GenBank GQ503341 ITS =GenBank GQ280415 SSU]. Molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 6329 advance decay in *Sequoia sempervirens* hot tubs Beecroft, NSW Australia Oct 1988 /J. Simpson A1. Biodeteriogen/biodegradation: *Sequoia sempervirens* // pigment: yellow/blue.
- 6330 advanced decay in *Sequoia sempervirens* hot tubs Beecroft, NSW Australia Oct 1988 /J. Simpson B2. Pigment: yellow/blue // biodeteriogen/biodegradation: *Sequoia sempervirens*.
- 7144 ex lingula specimen, female 58 yr, persistent pulmonary infiltrate, cough, angina & anterior chest pain Albany, NY M. Kemna Feb 1990 /M. Kemna M111-90 [=GenBank AB213427 LSU =GenBank AB213443 ITS]. Molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 8435 bronchial washing, cancer patient, isolated 3 times Springfield IL 1996 /CDC B-5655 [=GenBank AB213428 LSU =GenBank AB213444 ITS]. Benomyl: sensitive // mesophilic: NG @ 37C // pigment: amber // molecular systematics: classification in Leotiomycetes with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 9214 standing aspen Elk Island National Park, Alta. 2-20C) T. Lumley (EI-12-S3A Sep 1995 /R.S. Currah TCL 025. Pigment: blue-black.
- 11517 ex *Quercus* sp. Memphis, TN E.L. Schmidt (ELS-1) /S. C. Robinson ELS-1 [=UAMH 4802]. Pigment: blue-black on CER // biodeteriogen/biodegradation: production of red stain for decorative application (Robinson SC, Tudor D, Cooper PA, Can J For Res 41:1277-1728, 2011); promoting fungal pigment formation in wood (Robinson SC, Tudor D, Cooper PA, Wood Science and Technology 2011 Epub 17 Jan.; Robinson SC, Tudor D, Cooper PA, Appl Microbiol Biotechnol 2011 Epub Sep 20); fungal pigment production for wood spalling applications (Robinson SC, Laks PE, Forest Products Journal 60:490-495, 2011; Robinson SC, Tudor D, Cooper PA, Int Biodeter Biodegrad 65:1145-1149, 2011).
- Scytalidium dimidiatum* see *Neoscytalidium dimidiatum*
- Scytalidium flavo-brunneum* (Miller & al.) Sigler (morph *Monochaetia dimorphospora*)**
- 617 B. Sloan /B. Sloan.
- 3487 (T *Geotrichum flavo-brunneum*) forest soil Clarke Co., GA J.H. Miller (2808) 6 May 1956 /IMI 100715 [=ATCC 13212 =CBS 244.59 =MUCL 11622 =QM 7717].
- 5359 decayed softwood with black sapstain nr. Lanark Ont. K. Seifert 23 Mar 1986 /K. Seifert 654A.
- 8353 soil (This strain has been cited in a US or other patent & should not be used to infringe patent claims.) Wyoming /NRRL 3862 [=ATCC 28804]. Antifungal antibiotic (15-azasterol) A25822 & reddish brown pigment (J. Antibiot. (Tokyo) 28:95-101, 102-111 & 112-117, 1975); antifungal antibiotic A25822B (Z. Naturforsch. Sect. C. Biosci. 45:179-186, 1990); 15-azasterol (Rodriguez & Parks, Antimicrob. Agents Chemother. 18:822-828, 1980). Application: carries plasmid involved in production of secondary metabolite 15-azasterol & reddish brown pigment (Caprioglio & Parks, J. Bacteriol. 171:4876-4880, 1989; Caprioglio & Parks, Plasmid 20:175-181, 1988) // pigment: brown.
- Scytalidium flavo-brunneum* see *Monochaetia dimorphospora*

Scytalidium fulvum Morgan-Jones & Gintis

- 5732 (T *Scytalidium fulvum*) cysts *Heterodera glycines* from soybean field soil Roba, Macon Co., Alabama B. Gintis Feb 1982 /ATCC 52297. Cycloheximide: resistant // thermotolerant: grows @ 37C.

Scytalidium indonesiacum Hedger, Samson & Busaki

- 5733 (T *Scytalidium indonesiacum*) soil Indonesia J. Hedger /CBS 259.81 [=ATCC 46858]. Thermophilic // molecular systematics: ITS sequence for ATCC 46858 shows 99% similarity with *Scytalidium thermophilum* and *Humicola* strains.

Scytalidium infestans Iwatsu, Udagawa & Hatai

- 6719 (T) diseased striped jack fish (*Pseudocaranx dentex*) Kumamoto Pref., Japan K. Hatai 6 Jul 1988 /S.-I. Udagawa NHL 3003 [=ATCC 76310].

Scytalidium japonicum Udagawa, Tominaga & Hamaoka

- 5373 (T *Scytalidium japonicum*) bronchiolus lesion domestic black cow (*Bos taurus* v. *domesticus*) Yamaguchi City, Japan (C) K. Tominaga 2 Jun 1984 /S.-I. Udagawa NHL 2954 [=CBS 494.88]. Human/animal pathogen: phaeohyphomycosis (Takeya & al, Abstr. 99 Ann. Mtg. Jap. Soc. Vet. Sci. 1985.) // pigment: brown // culture conditions: produces Phoma-like synanamorph.

Scytalidium lignicola Pesante

- 1502 (T *Scytalidium lignicola*) *Platanus* wood Italy Pesante & Peyronel 1956 /IMI 62532 [=CBS 233.57 =UAMH 385 =Forintek 197K =KACC 41228 =GenBank GQ428330 RPB2 =GenBank GQ272634 ITS =GenBank GQ280419 SSU =DAOM 231161 =GenBank AY762623 (SSU-ITS) =GenBank AY762623 SSU]. Molecular systematics: classification in *Leotiomyces* with affinity to *Xylogone* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, *Mycologia* 102:1167-1184, 2010) // pigment: yellow-brown.
- 2816 cornfield soil Bright, Ont. G.C. Bhatt Jul 1967 /G.C. Bhatt UW 655 [=Forintek 197L].
- 4831 poplar on rose-bengal medium Edmonton, Alta. L. Sigler Aug 1983 /L. Kennedy [=Forintek 197M].
- 5101 ponderosa pine stake treated with Quaternary copper #1 (QC 1) mean retention 5.8 kg/cu. m. Westham Is., B.C. E. Setliff 22 Nov 1983 /E. Setliff 16-6-6c [=Forintek 197N]. Pigment: black on OAT.
- 5102 Ponderosa pine stake treated with ammoniacal copper arsenate mean retention 2.6 kg/cu.m. Westham Is. B.C. E. Setliff 11 Apr 1983 /E. Setliff 5-1-14C [=Forintek 197O].
- 5103 Ponderosa pine stake treated with (Thiocyanomethyltio) Benzothiazol mean retention 0.7 kg/cu.m. Westham Is. B.C. E. Setliff 7 Dec 1981 /E. Setliff 11-5-22A [=Forintek 197P]. Pigment: black on OAT, yellow on CER.
- 5104 Ponderosa pine stake treated with chromated copper arsenate -type C mean retention 2.7kg/cu.m. Westham Is. B.C. E. Setliff 11 Apr 1983 /E. Setliff 1-1-21A [=Forintek 197Q]. Pigment: black on OAT, yellow on CER.
- 5105 Ponderosa pine stake treated with Boliden P-50 chromated copper phosphate mean retention 4.7 kg/cu.m. Westham Is., B.C. E. Setliff 16 Feb 1985 /E. Setliff 4-2-12B [=Forintek 197R]. Pigment: black on OAT, yellow on CER.
- 5120 Ponderosa pine stake treated with copper arsenate Type C, mean retention 2.7 kg/cu.m Westham Is., B.C. E. Setliff 11 Apr 1983 /E. Setliff 1-1-16B [=Forintek 197S]. Pigment: yellow on PYE.
- 5121 Ponderosa pine stake treated with Anmak Arquad C-33, trimethylcocoammonium chloride, mean retention 10.3 kg/cu.m Westham Is., B.C. E. Setliff 2 Nov 1982 /E. Setliff 22-5-4C [=Forintek 197T]. Pigment: yellow on PYE.
- 5122 Ponderosa pine stake treated with Boliden P-50, chromated

copper phosphate mean retention 2.6 kg/cu. m Westham Is., B.C. E. Setliff 28 Apr 1985 /E. Setliff 4-1-28C [=Forintek 197U]. Pigment: yellow.

- 5123 Ponderosa pine stake treated with Bardac 20, mean retention 2.6 kg/cu. m Westham Is., B.C. E. Setliff 7 Dec 1981 /E. Setliff 15-1-28A [=Forintek 197V]. Pigment: yellow on PYE.
- 5124 Ponderosa pine stake treated with chromated copper fluoride (Basilit CFK), mean retention 4.4 kg/cu. m Westham Is., B.C. E. Setliff 28 Apr 1981 /E. Setliff 3-2-15C [=Forintek 197W]. Pigment: yellow on PYE.
- 5125 Ponderosa pine stake treated with chromated copper fluoride (Basilit CFK), mean retention 4.4 kg/cu. m Westham Is., B.C. E. Setliff 28 Mar 1981 /E. Setliff 3-2-19B [=Forintek 197X]. Pigment: yellow on PYE.
- 5126 plywood stake Agassiz, B.C. E. Setliff 27 Jan 1982 /E. Setliff 800.0.6C [=Forintek 197Y]. Pigment: yellow on PYE.
- 5127 Ponderosa pine control for preservative 5 Westham Is., B.C. E. Setliff 5 Feb 1979 /E. Setliff 5-0-25C [=Forintek 197Z]. Pigment: yellow on PYE.
- 5128 Ponderosa pine stake treated with Boliden P-50, chromated copper phosphate mean retention 10.4 kg/cu. m Westham Is., B.C. E. Setliff 11 Mar 1985 /E. Setliff 4-5-22B [=Forintek 197AA]. Pigment: yellow on PYE.
- 5133 Ponderosa pine stake treated with copper chrome borate (Impralit CKB-new) mean retention 8.1 kg/cu. m Westham Is. B.C. E. Setliff 2 Nov 1982 /E. Setliff 20-3-7A [=Forintek 197AB]. Pigment: yellow.
- 6291 *Pseudotsuga douglasii* utility pole treated with pentachlorophenol, treated sapwood region Howley, Nfld. G. Warren 6 Aug 1986 /G. Warren NUP 21-3. Mesophilic: NG @ 35C.
- 6292 *Pseudotsuga douglasii* utility pole treated with pentachlorophenol, treated sapwood region Howley, Nfld. G. Warren 6 Aug 1986 /G. Warren NUP 21-4. Mesophilic: NG @ 35C.
- 6293 *Pseudotsuga douglasii* utility pole treated with pentachlorophenol, untreated heartwood region Howley, Nfld. G. Warren 6 Aug 1986 /G. Warren NUP 22-1. Mesophilic: NG @ 35C.
- 6294 *Pseudotsuga douglasii* utility pole treated with pentachlorophenol, untreated heartwood region Howley, Nfld. G. Warren 6 Aug 1986 /G. Warren NUP 22-2. Pigment: orange // thermotolerant: slow growth @ 35C.
- 6295 *Pseudotsuga douglasii* utility pole treated with pentachlorophenol, treated sapwood region Howley, Nfld. G. Warren 22 Aug 1986 /G. Warren NUP 23-1. Thermotolerant: slow growth @ 35C.
- 6296 *Pseudotsuga douglasii* utility pole treated with pentachlorophenol, treated sapwood region Howley, Nfld. G. Warren 22 Aug 1986 /G. Warren NUP 23-2. Thermotolerant: slow growth @ 35C.
- 7265 ex bark of fallen *Betula* sp. (birch) Weimar, Germany G. Arnold 27 Mar 1988 /G.R. Arnold A 88/84. Cycloheximide: sensitive // benomyl: sensitive.
- 8349 creosoted *Eucalyptus* poles Argentina S.E. Lopez /S.E. Lopez BAFC 457.
- 9108 toenails New Zealand D. Parr /D. Parr MA 7139.
- 9221 roots of white spruce (*Picea glauca*) seedling on nurse log Elk Island National Park, Alta. 1-29C) T. Lumley (EIS-12-02 29 Jan 1997 /R.S. Currah TCL 071.
- 10599 nail, African male Victoria, Australia 13-Sep-2005 /A. Woodgyer 2005-14832. Thermotolerant: grows @ 35 C.

Scytalidium multiseptatum Holubova-Jechova

- 6686 (T *Scytalidium multiseptatum*) cysts of potato golden nematode (*Globodera rostochiensis*) in agricultural soil Hradek, South Bohemia, Czechoslovakia J. Novotna May 1986 /V. Holubova-Jechova PMR 842841.

***Scytalidium* sp.**

- 3716 surface geothermal soil, pH 1.9 temp.>40C Yellowstone Park Wy. Tansey Jul 1971 /M.R. Tansey 527-1i.
 3717 surface geothermal soil pH 3.1 Yellowstone Pk. Wy. Tansey Jul 1971 /M.R. Tansey 533-7b.
 3718 surface geothermal soil, pH 1.9 temp.>40C Yellowstone Pk. Wy. Tansey Jul 1971 /M.R. Tansey 527-1a.
 3719 surface geothermal soil, pH 1.9 temp.>40C Yellowstone Pak. Wy. Tansey Jul 1971 /M.R. Tansey 527-1c.
 3723 geothermal soil core, pH 3.8, temp. @ 1in. 42C Yellowstone Pk. Wy. Tansey Aug 1970 /M.R. Tansey TY1 (black).
 3724 self-heating coal waste piles R.T. Belly /M.R. Tansey T73-2.
 3725 soil core pH 3.8, temp. @ 1in. 42C Indiana Tansey 1970 /Tansey.
 3726 soil core pH 3.8, temp. @ 1in. 42C Tansey, 1970 /Tansey.
 3727 soil core, pH 3.8, temp. @ 1in. 42C Indiana Tansey 1970 /Tansey.
 3730 geothermal soil core, pH 4.55, temp. @ 1in. 42C Yellowstone Pk. Wy. Tansey 11 Aug 1970 /M.R. Tansey TY2.
 3731 geothermal soil core Yellowstone Pk. Wy. R.T. Belly Jun 1971 /M.R. Tansey 141-7.
 3732 geothermal soil, pH 3.1, temp. variable Yellowstone Pk. Wy. Tansey 21 Jul 1971 /M.R. Tansey 533-7f.
 3734 surface geothermal soil pH 3, temp. 41C Yellowstone Pk. Wy. Tansey 21 Jul 1971 /M.R. Tansey 533-1.
 3738 geothermal soil core, pH 4.55, temp. @ 1in. 42 C Yellowstone Pk. Wy. Tansey 11 Aug 1970 /M.R. Tansey T71-13.
 6322 pinewood pole Sweden Jul 1989 /O. Constantinescu UPSC 1010. Pigment: brown.
 6323 pinewood pole Sweden Jul 1989 /O. Constantinescu UPSC 1017. Pigment: brown.
 6683 foliar endophyte of palm *Euterpe oleracea* Brazilian Amazon K. Rodrigues /K. Rodrigues 89-74. Benomyl: sensitive.
 6684 foliar endophyte of palm *Euterpe oleracea* Brazilian Amazon K. Rodrigues /K. Rodrigues 89-75. Benomyl: sensitive.
 6856 fallen leaf Cuba G. Arnold 3 Feb 1980 /G.R. Arnold A80/35.1.
 7320 soil Iraq S. Abdullah /S.K. Abdullah BSRA 10282. Thermotolerant.

***Scytalidium terminale* Rao & de Hoog**

- 5734 (T *Scytalidium terminale*) wood *Camellia sinensis* G.S. de Hoog /CBS 171.40 [=IFO 6396]. Thermotolerant: grows @ 37C // odor: fruity.

***Scytalidium uredinicola* Kuhlman, Carmichael & Miller**

- 3927 aecia on pine Wake County, N.C. E.G. Kuhlman 1975 /E.G. Kuhlman N-115 (A).
 3928 aecia on pine Wake County, N.C. E.G. Kuhlman 1975 /E.G. Kuhlman N-115 (B).
 3929 aecia *Cronartium fusiforme* ex *Pinus taeda* Wake Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman N-115 (B).
 3930 aecia *Cronartium fusiforme* ex *Pinus taeda* Wake County, N.C. E.G. Kuhlman 1975 /E.G. Kuhlman N-115 (C).
 3931 aecia *Cronartium fusiforme* ex *Pinus taeda* Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-117 (A).
 3932 aecia *Cronartium fusiforme* ex *Pinus taeda* Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-117 (B).
 3934 aecia *Cronartium fusiforme* ex *Pinus taeda* New Hill Wake Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman N-59.
 3935 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-16.
 3936 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T35SS.
 3937 aecia *Cronartium fusiforme* ex *Pinus taeda* Patrick, Chesterfield Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman S-6.
 3940 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-168.
 3941 aecia *Cronartium fusiforme* ex *Pinus taeda* Patrick, Chesterfield Co. S.C. E.G. Kuhlman 1975 /E.G. Kuhlman

S-158.

- 3942 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-58.
 3943 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. 1975 /E.G. Kuhlman T-36.
 3944 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-105 SS.
 3945 (T) aecia *Cronartium fusiforme* ex *Pinus taeda* New Hill, Wake Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman [=ATCC 32382 =CBS 578.75 =MUCL 31212]. Inhibitory to *Endocronartium harknessii* (Fairburn & al., Can. J. Bot. 61:2147-2152, 1983).
 3947 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-178.
 3949 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-120SS.
 3950 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-170 SS.
 3951 aecia *Cronartium fusiforme* ex *Pinus taeda* Tillery, Halifax Co. N.C. E.G. Kuhlman 1975 /E.G. Kuhlman T-170SS.
 4148 gall *Endocronartium harknessii* on *Pinus contorta* Edmonton, Alta. Y. Hiratsuka /Y. Hiratsuka.
 4149 gall *Endocronartium harknessii* on *Pinus contorta* Edmonton, Alta. A. Tsuneda /A. Tsuneda. Maltol (Blenis & al., Can. J. For. Res. 18:1658-1660, 1988; Cunningham & Pickard, Can. J. Microbiol. 31:1051-1055, 1985); scytolide (Ayer et al, Natural Products Letters 2:77-82, 1993).
 4293 gall *Endocronartium harknessii* Devonian Bot. Garden, Alta. A. Tsuneda Jul 1979 /A. Tsuneda NFRC C-695.
 4294 gall *Endocronartium harknessii* Maligne Lake, Alta. A. Tsuneda Jul 1979 /A. Tsuneda NFRC C-696.
 4790 gall *Endocronartium harknessii* Devon, Alta. L. Sigler Jun 1983 /L. Sigler.

Scytalidium vaccinii* see *Rhizoscyphus ericae***Scytinostroma galactinum* (Fr.) Donk (syn. *Corticium galactinum*)**

- 8155 S. Davies FC-091. Biodeteriogen/biodegradation: white rot.

***Sebacina* sp.**

- 11791 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-25. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (96.5%) to uncultured *Sebacina* HQ154302 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU seb1.

***Seimatosporium* an. *Clathridium corticola* (Fuckel)**

- Shoemaker & Muller (morph *Clathridium corticola*)
 4243 inside sorus ex rust gall *Endocronartium harknessii* on lodgepole pine Blue River, Alta. A. Tsuneda Sep 1979 /A. Tsuneda [=DAOM 175628].

***Seimatosporium rosae* Corda**

- 1714 soil ex under bushes Edmonton, Alta. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael.
 4272 sorus of *Cronartium comandrae* ex *Pinus contorta* Barrer Lake, Alta. May 1966 /A. Tsuneda C-583.

Sepedonium* an. *Hypomyces boletiphagus* see *Hypomyces boletiphagus

Sepedonium brunneum Peck emend. G. Arnold & Rogerson
(morph *Peckiella completa*)
4099 mixed forest *Boletinus oxydabilis* Glubokaja, Irkutsk, USSR
Arnold 3 Aug 1977 /G.R. Arnold m 482 (sample 77/144)
[=ATCC 38001]. Hyperparasite // pigment: yellow.

Sepedonium chlorinum see *Hypomyces chlorinigenus*

Sepedonium mycophilum see *Hypomyces chrysospermus*

Sepedonium mycophilum pro parte see *Hypomyces microspermus*

Sepedonium sp.

535 soil Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
4015 coats of wild mice L. Kapica 1976 /L. Kapica 39.

Sepedonium xylogenum Saccardo

1105 soil San Joaquin Aug 1961 /G.F. Orr UCLAB-233.
2010 Benham (3770) 1949 /CDC 165.
2300 C.C. Campbell Y-11.
2306 soil Arizona C.W. Emmons (as #5125) /C.C. Campbell Y-20.
3240 mouse dung San Bernardino Mts., Calif. J.W. Carmichael 15
Mar 1969 /J.W. Carmichael.

Septonema dendryphioides Berkeley & Curtis

1388 *Pseudotsuga menziesii* Vancouver Is., B.C. S.J. Hughes 1957
/DAOM 56088-b [=IMI 96749].

Septonema secedens Corda

1576 C.L. Kramer K7.
4839 ex wood litter Iowa, USA L. Sigler Aug 1983 /L. Sigler.
11423 swab ex skin of living female Northern long-eared myotis bat
(*Myotis septentrionalis*) Underground Lake Cave, New
Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf
Bat 77 C.2. Biodiversity: mycobiota of bat caves.

Septoria sp.

8279 indoor air of home ex RCS strip Sherwood Park, Alta S.P.
Abbott (SA-M60) 14-Jul-1995 /S.P. Abbott (SA-M60).
Pigment: brown.

Shanorella spirotricha Benjamin

1590 racoon dung Tapia Park, S. California G.F. Orr 1957 /G.F. Orr
O-717.
1970 chicken feathers Farina, Fayette Co., Illinois R.K. Benjamin 17
Sep 1950 /G.F. Orr RSA 65 [=RSA 65 =ATCC 12594b].
3062 (T *Shanorella spirotricha*) feathers & leg ex dead bird
Claremont, L.A. Co., Calif. R.K. Benjamin Dec 1953 /R.K.
Benjamin [=ATCC 12594 =CBS 305.56 =NRRL 2555
=GenBank AB040700 =GenBank AY176720 =Genbank
AJ271430 ITS]. Molecular systematics: phylogeny of
onygenalean fungi (Sugiyama & Mikawa, Mycoscience
42:413-421, 2001; Untereiner, Scott, Naveau, Currah &
Bachewich, Stud. Mycol. 47:25-35, 2002).
3116 owl pellet Dugway, Utah R.K. Benjamin 2 May 1963 /R.K.
Benjamin RSA 1424.
3868 soil India Ghosh /G.F. Orr O-1162.
4764 dung *Granlea*, S. Alta. R. Currah (81-118) Feb 1983 /R.
Currah (81-118).
4765 weasel dung Milk River Ridge, S. Alta. R. Currah (82-18) Feb
1983 /R. Currah (82-18).
4772 coyote dung Writing on Stone Park, Alta. R. Currah (82-19)
Apr 1983 /R. Currah (82-19).
5654 ex dung Nevada R. Currah (D-8) Aug 1985 /R. Currah (D-8).
5655 ex dung Nevada R. Currah (D-10) Aug 1985 /R. Currah
(D-10).

Simplicillium lamellicola (F.E.W. Smith) Zare & W. Gams
(syn. *Verticillium lamellicola*)

2055 East Cape, S. Africa P. Martin Mar 1958 /P. Martin 162
[=GenBank AF108489 =GenBank AF108471].
2066 Alexandria Forest E. Cape, S. Africa P. Martin Nov 1960 /P.
Martin 587.
2071 Morgantown, W. Virginia P. Martin 1964 /P. Martin 628.
2076 Klamath, N. Calif. P. Martin Aug 1961 /P. Martin 730.
2077 Klamath, N. Calif. P. Martin Sep 1961 /P. Martin 732.
2078 Klamath, N. Calif. P. Martin Sep 1961 /P. Martin 736.
2094 Arcata, N. Calif. P. Martin Sep 1961 /P. Martin 831.
2227 UCLA, California P. Martin /P. Martin 1343.
4785 decaying *Fomitopsis pinicola* Devonian Botanic Garden,
Devon, Alta. L. Sigler Jun 1983 /R.S. Currah [=GenBank
AF108499 =GenBank AF108480]. Molecular systematics:
BLAST search groups with *Simplicillium lamellicola*; insect
associated fungi (Bidochka MJ, St Leger RJ, Stuart A,
Gowanlock K. Microbiology 145:955-963, 1999).
11339 swab ex fur of living male little brown bat (*Myotis lucifugus*)
White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010
/K.J. Vanderwolf Bat 97 C.5 CC1.

Sirococcus sp.

5398 W.A. Ayer [=Kandler 25b]. Pigment: green.
5401 W.A. Ayer [=Kandler 35b]. Sirosterol & dehydroazirosterol
(Ayer & Ma, J. Chem. 70:1905-1913, 1992). Pigment: green.
5402 W.A. Ayer [=Kandler 20]. Scleroderis blue, sclerodin, lactone
(Ayer et al., Can. J. Chem. 67:2089-2994, 1989). Pigment:
green.

Sirococcus strobilinus Preuss

5394 spruce Black Forest, Germany /W.A. Ayer [=Kandler Stm 8].
Culture conditions: good sporulation on PDA.
5399 W.A. Ayer [=Kandler D]. Scleroquinone, sclerodin,
scleroderolide, scleroderis blue (Ayer et al., Can. J. Chem.
67:2089-2094, 1989). Pigment: green.
5400 W.A. Ayer [=Kandler 33b]. Scleroderis yellow, sclerodin,
scleroderolide, scleroderis blue, tryptelone (Ayer et al.,
Can. J. Chem. 67:2089-2094, 1989). Pigment: green.
5648 ex *Picea* seedlings /W.A. Ayer Siro 3.
5649 ex *Pinus contorta* seedlings /W.A. Ayer [=PFRC 4248].
5650 ex *Picea* seedlings /W.A. Ayer [=PFRC 8643].

Sirodothis populnea (Thum.) Sutton & Funk (morph
Tympanis spermatiospora)

7466 ex *Populus tremuloides* (aspen poplar) Fort Nelson, B.C. L.
Hutchison (CCMC-4-1) 20 Sep 1991 /L. Hutchison NOF
1731.

Sirodothis sp. see *Tympanis sp.*

Sistotrema brinkmannii (Bres.) Eriksson

4624 bark beetle ex alpine fir Hinton, Alta. J.W. Carmichael Sep
1982 /Y. Hiratsuka.
5218 single basidiospore isolate ex culture UAMH 5217 T.
calligatum UAMH L. Sigler 2 Sep 1985 /L. Sigler.
5219 contaminant ex *Hebeloma crustuliniforme*, *Pinus contorta*
woods Grand Prairie Forest, Alta. 9 Sep 1985 /L. Sigler.
5586 contaminant on *Cortinarius sp.* Rocky-Clearwater Forest, Alta.
6 Aug 1986 /L. Sigler.
6434 *Dendroctonus ponderosae* adult beetle Valemout, B. C. Y.
Yamaoka 8 Aug 1988 /Y. Yamaoka NOF 1384 [=CFB 21967].
6455 *Dendroctonus ponderosae* adult beetle Valemout, B. C. Y.
Yamaoka 8 Aug 1989 /Y. Yamaoka NOF 1383 [=CFB 21966].
7467 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. P.
Crane (2-8-7-8m-3a) Jul 1989 /L. Hutchison NOF 1742.
8213 contaminant in IFO 32597 *Stellatospora terricola* UAMH A.
Flis 15 Sep 1995 /T. Ito. Benomyl: resistant @ 2ppm //
cycloheximide: sensitive.

- 9351 lung ex female heart transplant patient with fatal disseminated *Aspergillus* infection Perth, Australia C. Heath 1998 /C. Heath 728440D. Human/animal pathogen: isolated with *A. fumigatus* from BAL & sputum in heart transplant patient // crystals // benomyl: resistant // mesophilic: NG @ 37C.

Sistotrema confluens Pers.:Fr.

- 8957 fruiting in core hole #19 Mildred Lake, Alta. R.M. Danielson (RMD 2955) 20 Sep 1979 /R.M. Danielson RMD 2955 [=CCFC 3655 =DAOM 176608 =CCFC 3656]. Pigment: yellow.

Sistotrema raduloides (P. Karst.) Donk

- 7326 ex indoor air in archives San Juan, Puerto Rico B. Bolanos 1993 /B. Bolanos [=CBS 100157]. Sistodiolyne, sistolynone & sistopyrone, new unstable carbon skeletons which polymerize in presence of air to give black deposits (Amegadzie, Ayer & Sigler, Can. J. Chem. 73:2110-2125, 1995); sistodiolyne, stereoselective construction from a chiral cyclopentenol building block (Sugahara & Ogasawara, Chem. Commun., p 767-768, 1997). Benomyl: resistant // cycloheximide: sensitive (no growth MYC).
- 7395 rot in *Picea mariana* bolt Consolidated Paper Corp. limits, Caousacouta-Vermillion drainage area, Champlain County, Quebec #36) A. McCallum (C420 11 Jan 1941 /DAOM 10281. Pigment: tan.
- 7396 fruiting body on coniferous wood Spawning Lake, Timagami, Ontario R. Cain 15 May 1947 /DAOM 17145 [=ATCC 36737 =CBS 163.65 =TRTC 21171].
- 7397 ex sporophore on *Populus* sp. Nr Plot 5, Barry's Bay, Ont. M.K. Nobles 19 Jul 1948 /DAOM 21163. Pigment: tan.
- 7398 ex fruiting body on *Populus trichocarpa* Cinema, BC M.K. Nobles 8 Apr 1949 /DAOM 22271.
- 7868 indoor air ex RCS strips, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 285) 11 Mar 1994 /S.P. Abbott (OHS 285). Benomyl: resistant.
- 8366 single spore isolate (monokaryon) ex fruiting body HHB-10204 on red maple (*Acer rubrum*) bog nr Cable Cemetery, Blout Co., TN H. Burdsall 06 Jun 1978 /H. Burdsall HHB-10204 (ss-15).
- 8367 dikaryon isolate ex fruiting body HHB-10204 on red maple (*Acer rubrum*) bog nr Cable Cemetery, Blout Co., TN H. Burdsall 06 Jun 1978 /H. Burdsall HHB-10204 (sp).
- 8368 dikaryon isolate ex hardwood E. Huyck Preserve, New York M.J. Larsen 17 Sep 1983 /H. Burdsall FP-135005 (sp).

Sordaria bosensis see ***Areolospora bosensis***

Sordaria brevicollis Olive & Fantini

- 9744 wild type mating strain a ex Scotland /E. Woloshyn Wild Type a A mates with UAMH 9745, 9747.
- 9745 wild type mating strain A /E. Woloshyn Wild Type A A mates with UAMH 9744, 9746. Culture conditions: spermatial conidia.
- 9746 buff-spored mating type a /E. Woloshyn Buff a, SC59.R6a A mates with UAMH 9747, 9745. Culture conditions: spermatial conidia.
- 9747 buff-spored mating type A /E. Woloshyn Buff A, SC59.R1A A mates with UAMH 9744, 9746, 9905. Culture conditions: spermatial conidia.
- 9905 yellow-spored mating type a L.S. Olive (Y10a) /E. Woloshyn ATCC 16100 [=FGSC 1905 =IMI 210763 =MUCL 19097] A mates with 9747. Application: genetics (Stevens, R.B., ed., Mycology guidebook. Seattle: Univ. Washington Press; 1974:pp. 476-483; Am. J. Bot. 48: 124-128, 1961; Genetics 51: 509-517, 1965; Genetics 51: 761-766, 1965) // pigment: black // culture conditions: spermatial conidia.
- 10831 yellow-spored mating type A /J. Parks-Dely 9a A mates with 9905.

Sordaria fimicola (Rob.) Ces. & De Not.

- 4 Seaver.
- 4575 carnivore dung Lesser Slave Lake, Alta. L. Sigler May 1982 /R.S. Currah 81-7. Cellulolytic.
- 9475 living sphagnum moss (*Sphagnum fuscum*) in bog nr Perryvale, AB (54D28'N, 113D16'W) M.N. Thormann Jul 1997 /R.S. Currah MNT 6 [=ALTA 10705]. Biodeteriogen/biodegradation: in vitro decomposition, degrades cellulose weakly (Thormann, Currah & Bayley, Can. J. Microbiol. 48:204-211, 2002); enzymatic abilities (Thormann, Currah & Bayley, The Bryologist 104:548-559, 2001).

Sordaria humana (Fuckel) Winter

- 591 E.S. Keeping Nov 1957 /E.S. Keeping.
- 3241 mouse dung ex cabin cupboard San Bernardino Mts., Calif. J.W. Carmichael 15 Mar 1969 /J.W. Carmichael.
- 3924 soil ex bull pen Edmonton, Alta. B. McDonald Oct 1975 /B. McDonald. Cellulolytic.
- 6418 buffalo dung Lake Amboseli, Kenya H. Griffin & J. Krug (C) R. Cain 18 Aug 1966 /R. Khan 66.1780u.

Sordaria lappae Potebnia

- 6883 ex open soil in Puszta Hortobagyi, Hungary J. Krug 21 Aug 1990 /R. Khan TRTC 51329.

Sordaria superba De Notaris

- 8601 soil in an abandoned orchard of *Mangifera indica* nr Noabad, Karnataka State, Bidar Dist., India R.S. Khan 20 Aug 1987 /J.C. Krug TRTC 51599.

Spegazzinia intermedia Ellis

- 6029 field soil Letti Jogob, Letti Basin, Northern Province, Sudan (C) A. Hollett 3 Nov 1986 /R. Khan TRTC 50995.

Spegazzinia lobulata Thrower apud McLennan, Ducker & Thrower

- 5621 soil Catalonia, Spain F. Fort 1985 /J. Guarro FMR 862 [=CBS 310.86].

Sphaeridium candidum Fuckel

- 1542 soil Guelph, Ont. Barron 1960 /G.L. Barron 11901 [=IMI 92738].

Sphaerobolus stellata Tode:Pers.

- 8060 ex protocorns of *Platanthera orbiculata* Edson, Alta. C. Zelmer 19 Jun 1991 /R.S. Currah.

Sphaerodes fimicola (Hansen) Cannon & Hawksworth

- 7777 ex roots of northern green orchid *Platanthera hyperborea* (Orchidaceae) Alberta C. Zelmer 1994 /R.S. Currah Z13-orf-4a. Pigment: brown.
- 9369 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 2-1B) T. Lumley (EI-01-S2A 1 Feb 1997 /R.S. Currah EI-01-S2A, 2-1B. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Sphaeronaemella fimicola (Marchal) Marchal (morph *Gabarnaudia fimicola*)

- 8839 fresh dung of white-tailed deer (*Oedocoileus virginianus*) in pine/birch (*Pinus banksiana*/*Betula papyrifera*) woods North Buck Lake, Alta S.P. Abbott (SA-M102) 6-Aug-1996 /S.P. Abbott (SA-M102) [=GenBank AY509901]. Benomyl: resistant (2 ppm) // cycloheximide: sensitive (no growth MYC) // molecular systematics: phylogeny of *Cornuvesica*, *Sphaeronaemella* and *Gabarnaudia* (Hausner G, Reid J, Can J Bot 82:752-762, 2004).

- 9967 Monterey pine log (*Pinus radiata*) Prolog Mill Yard, Kaingaroa State Forest, Taupo, New Zealand J. Reid & B. Reid (88-372) 18 Feb 1988 /J. Reid UM 816. Molecular systematics: unique rDNA of *Sphaeronaemella fimicola* (Hausner et al., *Current Genetics* 23:357-359, 1993).
- 9968 Monterey pine log (*Pinus radiata*) Compartment 1212, Kaingaroa State Forest, Taupo, New Zealand J. Reid & B. Reid (88-311) 17 Feb 1988 /J. Reid UM 818 [=GenBank AF148132 =GenBank AY271800]. Molecular systematics: relationships between the genera *Ceratocystis* & *Ophiostoma* (Hausner, Reid & Klassen, *Can. J. Bot.* 71:52-63, 1993); unique rDNA of *Sphaeronaemella fimicola* (Hausner et al., *Current Genetics* 23:357-359, 1993); phylogeny of *Cornuvesca*, *Sphaeronaemella* and *Gabarnaudia* (Hausner G, Reid J, *Can J Bot* 82:752-762, 2004).
- 9969 Monterey pine log (*Pinus radiata*) Compartment 1212, Kaingaroa State Forest, Taupo, New Zealand J. Reid & B. Reid (88-478) 28 Feb 1988 /J. Reid UM 819. Molecular systematics: unique rDNA of *Sphaeronaemella fimicola* (Hausner et al., *Current Genetics* 23:357-359, 1993).

Sphaeropsis sapinea (Fr.) Dyko & Sutton (morph *Botryosphaeria* aff. (teleomorph unknown))

- 9595 red pine (*Pinus resinosa*) French Lake, Quetico Provincial Park, Ontario /J. Reid UM 939 [=SSM 910875]. Pigment: black // systematics/taxonomy: *Sphaeropsis* cultural morphotype A & RFLP phenotype A (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999).
- 9596 black spruce (*Picea mariana*) Morson Seed Orchard, Morson Twp, Ontario /J. Reid UM 940 [=SSM 910843]. Pigment: black // systematics/taxonomy: *Sphaeropsis* cultural morphotype B & RFLP phenotype B (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999).
- 9597 Austrian pine (*Pinus nigra*) Cramahe Twp, Presqu'île Prov. Park, Ontario /J. Reid UM 941 [=SSM 900297]. Pigment: black // systematics/taxonomy: *Sphaeropsis* cultural morphotype A & RFLP phenotype A (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999).
- 9598 white spruce (*Picea glauca*) Montague Twp, Merrickville, Ontario /J. Reid UM 942 [=SSM 920729]. Pigment: black // systematics/taxonomy: *Sphaeropsis* cultural morphotype I (intermediate) & RFLP phenotype I (intermediate) (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999).
- 9599 jack pine (*Pinus banksiana*) Colter Twp, Gerralton, Ontario /J. Reid UM 950 [=SSM 810704]. Pigment: black // systematics/taxonomy: *Sphaeropsis* cultural morphotype I (intermediate) & RFLP phenotype I (intermediate) (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999).
- 9600 jack pine (*Pinus banksiana*) Plantation 9-69, Sandilands Prov. Forest, Manitoba 1991 /J. Reid UM 955. Pigment: black // systematics/taxonomy: *Sphaeropsis* cultural morphotype B & RFLP phenotype B (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999).
- 9725 red pine (*Pinus resinosa*) Plantation 9-56, Sandilands Provincial Forest, Manitoba J. Skuba (24-Rp 18-18TA) 1991 /J. Reid UM 958 [=GenBank AF110815 =GenBank AF148914 =GenBank AF148915]. Systematics/taxonomy: *Sphaeropsis* cultural morphotype B & RFLP phenotype B (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999) // molecular systematics: relationships among *Ceratocystis* & *Ophiostoma* species based on rDNA ITS (Hausner, Reid & Klassen, *Can. J. Bot.* 78:903-916, 2000).
- 9970 jack pine (*Pinus banksiana*) Plantation 9-69, Sandilands Prov. Forest, Manitoba J.S. Skuba 1991 /J. Reid UM 956 [=NRI 3-4]. Systematics/taxonomy: *Sphaeropsis* cultural morphotype B & RFLP phenotype B (Hausner et al., *Can. J. Pl. Path.* 21:256-264, 1999) // pigment: black.

Sphaerosporella brunnea (Alb. & Schw.:Fr.) Svrcek & Kubicka

- 6360 associated with *Pinus banksiana* Alta. R. Danielson (C) 1980 /L. Hutchison J228. Mycorrhizae: ectomycorrhizal with jack pine (*Pinus banksiana*) (fide R. Danielson).
- 7875 single ascospore isolate ex apothecia growing in pot cultures in which *Leptodontidium orchidicola* was being assessed for mycorrhizal activity Edmonton, Alta. A.A. Fernando 1 Jun 1995 /R.S. Currah [=GenBank KJ916124 ITS]. Mycorrhizae: contaminant in mycorrhizal pot culture trial with *Leptodontidium orchidicola* (fide A. Fernando) // molecular systematics.

Sphaerosporium equinum (Desm.) Crane & Schoknecht

- 11516 swab ex skin of living female little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 86 C.2. Mesophilic: grows slightly faster @ 22C than @ 18C // pigment: yellow // benomyl: sensitive // molecular systematics: Blast match 99% ITS similarity to *Sphaerosporium equinum* strain MUCL 49171 Type // biodiversity: mycobiota of bat caves // culture conditions: produces chains of moniliform conidia similarly to *Sphaerosporium* and lacks a teleomorph.

Sphaerostilbella lutea see *Gliocladium aurifilum*

Spilocaea pomi see *Venturia inaequalis*

Spiniger* cf. *Vararia pallescens (Schw.) Rogers & Jackson

- 6438 *Dendroctonus ponderosae* adult beetle caught in a Lindgren Funnel Trap Invermere, B. C. Y. Yamaoka 30 Jul 1988 /Y. Yamaoka NOF 1385 [=CFB 21968]. Pigment: brown.
- 6439 *Dendroctonus ponderosae* adult beetle caught in a Lindgren Funnel Trap Invermere, B. C. Y. Yamaoka 30 Jul 1988 /Y. Yamaoka NOF 1386 [=CFB 21969].

Spiniger meineckellus (A.J. Oslson) Stalpers (morph *Heterobasidium annosum*)

- 8782 sinus aspirate, cancer patient Seattle, WA /M.G. Rinaldi UTHSC 96-1733. Benomyl: resistant.
- 10483 sinus ex male 49 yr with maxillary sinusitis; diabetic on insulin; histopathology GMS & PAS stains - for hyphae Providence Health Centre, Vancouver, B.C. 07-04 /R. Rennie MY 4364. Mesophilic: growth strongly inhibited @ 35 C // human/animal pathogen: sinusitis.
- 10528 bilateral maxillary sinus, female 23 yr St. Paul's Hospital, Vancouver, B.C. J. Zemcov 1-12-04 /R. Rennie MY 7643 [=BC CDC A4MR514]. Mesophilic: NG @ 35C (fide submitting laboratory & UAMH) // benomyl: tolerant @ 2 ppm.
- 10742 ex left maxillary sinus, female 42 yr St. Paul's Hospital, Vancouver, B.C. J. Zemcov Jul-2006 /R. Rennie MY 5558 [=BC CDC 65657]. Mesophilic: NG @ 35C (fide submitting laboratory).
- 10826 bronchial washing ex male 61 yr with cavitary lung lesion in RT apex and LLL post basal segment; smoker with past history of coccidioidomycosis Terrace, BC E. Bryce (Vancouver General Hospital) /R. Rennie MY 3338. Culture conditions: grows @ 30 C but not @ 35 C (fide UAH).

Spiromastix grisea Currah & Locquin-Linard

- 5409 (*T Spiromastix grisea*) ex gazelle dung Draa Souf, Plateau du Tademaït, Africa UAMH 11 Aug 1968 /M. Locquin-Linard [=CBS 128.88 =GenBank AB040677]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001) // culture conditions: poor growth on TWA with hairs; no hair digestion on OAT after 3 mo; produced ascospores with ascospores on OAT but non sporulating.

- 6836 jackel dung Algeria, Africa M. Locquin-Linard /M. Locquin-Linard L-378, S-2556 [=GenBank AY176697 =GenBank AY176721 (LSU) =GenBank AY527404 (ITS)]. Mesophilic: growth strongly inhibited @ 35 C; slow growing @ 25 & 30C // molecular systematics: phylogeny of Ajellomyces and Onygenales (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
- Spiromastix tentaculatum*** Guarro, Gene & de Vroey
7098 (T *Spiromastix tentaculatum*) ex soil Hiran, Somalia, Africa J. Bosmans (C) 14 Mar 1966 /J. Guarro FMR 3842 [=CBS 184.92 =IMI 351264 (holotype) =RV 24167 =GenBank AB040678 =GenBank AY176722]. Molecular systematics: phylogeny of onygenalean fungi (Sugiyama & Mikawa, Mycoscience 42:413-421, 2001); phylogeny of Ajellomyces and Onygenales (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
- Spiromastix warcupii*** Kuehn & Orr
7099 ex soil Kuriange, Burundi, Africa Jun 1968 /J. Guarro FMR 3843 [=RV 24816 =GenBank AY176723 (LSU) =GenBank AY176698 (SSU) =GenBank AY527407 (ITS)]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
7100 ex soil Makassar, Sulawesi, Africa 9 Aug 1968 /J. Guarro FMR 3844 [=RV 24852]. Pigment: grey.
7716 Malaysia /S.-I. Udagawa SIU 6325. Cycloheximide: resistant.
- Spirosphaera floriformis*** van Beverwijk
8476 decaying pine twig submerged in water Ter river, Girona, North Catalonia, Spain S.K. Abdullah 8 Nov 1995 /J. Guarro FMR 5584.
- Sporendocladia bactrospora*** (W.B. Kendr.) M.J. Wingf.
1342 (T *Phialocephala bactrospora*) *Populus trichocarpa* Cinema, B. C. J. Foster Oct 1949 /DAOM 28736 [=ATCC 44606 =IMI 047572ii =MUCL 4270 =CBS 299.62 =GenBank AF486130].
- Sporendonema an. Onygena equina*** see ***Onygena equina***
- Sporendonema casei*** Desmazieres
3790 Japan Y. (AHU 9107) Sasaki 1963 /K. Tubaki IFO 7656. Psychrophilic: opt. 4C.
- Sporendonema purpurascens*** (Bonord.) Mason & Hughes
432 mushroom flats /L.R. Kneebone A.
433 mushroom flats /L.R. Kneebone B.
1497 (T Neotype *Sporendonema purpurascens*) mushroom bed Chesham, Bucks. U.K. F.C. Wood 1951 /IMI 45638 [=CBS 425.51 =UAMH 3791 =IFO 7659 =GenBank GQ272631 ITS =GenBank GQ290135 RPB2 =GenBank GQ280417 SSU]. Hyperparasite: cause of red *Geotrichum* disease // culture conditions: grows well on CER, very poorly on PDA.
3791 (T Neotype *Sporendonema purpurascens*) mushroom bed Chesham, Bucks U.K. F.C. Wood 1951 /K. Tubaki IFO 7659 [=IMI 45638 =CBS 425.51 =UAMH 1497 =GenBank GQ272631 ITS =GenBank GQ290135 RPB2 =GenBank GQ280417 SSU]. Hyperparasite: cause of red *Geotrichum* disease // pigment: brown.
- Sporidesmium harknesii*** (Sacc.) Ellis
7210 decorticated log Cornell Plantation, Cornell Univ., Ithaca, NY K. Hodge Sep 1991 /K. Hodge KTH 7.
- Sporidiobolus johnsonii*** Nyland
1748 (T *Sporidiobolus johnsonii*) Davis, Calif. Nyland strain (304) /R.J. Bandoni B 4.
- Sporidiobolus salmonicolor*** Fell & Tallman (morph *Sporobolomyces salmonicolor*)
488 bone marrow Edmonton, Alta. J.W. Carmichael. Culture conditions: API profile # 2000026; urea +.
- Sporisorium scitamineum*** see ***Ustilago scitaminea***
- Sporobolomyces antarcticus*** see ***Pseudozyma antarctica***
- Sporobolomyces salmonicolor*** see ***Sporidiobolus salmonicolor***
- Sporobolomyces sp.***
202 dry grass Edmonton, Alta. J.W. Carmichael 22 Jun 1951 /J.W. Carmichael.
233 contaminant Farlow Herbarium, Cambridge, MA J.W. Carmichael 1953 /J.W. Carmichael.
- Sporopachydermia lactativora*** Rodrigues de Miranda (syn. *Cryptococcus lactativorus*)
2960 (T *Cryptococcus lactativorus*) Antarctic sea water 1966 /J.W. Fell ML 167 [=ATCC 22026 =CCRC 21491 =CBS 5771 =DBVPG 6118 =IFO 1867 =NRRL Y-6967 =NRRL Y-11592 =CBS 5771 Isotype *Sporopachydermia lactativora* =GenBank EU344149 RPB1 =GenBank EU343949 RPB2 =GenBank EU343871 ITS =GenBank AJ581743 inOX1] mating type alpha.
- Sporophormis spinulosa*** see ***Warcupiella spinulosa***
- Sporormiella affinis*** (Sacc., Bomm. & Rouss.) Ahmed & Cain
4968 J. Vederas [=NRRL 3314]. Cellulolytic.
- Sporormiella chaetomioides*** (Griffiths) Ahmed & Cain
7042 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 294) Aug 1990 /D. Inglis (HD 294). Pigment: yellow.
- Sporormiella intermedia*** Ahmed & Cain
7033 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 45) Aug 1990 /D. Inglis (HD 45). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
7034 guts contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 60) Aug 1990 /D. Inglis (HD 60). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
7035 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) cadavers Lethbridge, Alta. D. Inglis (HD 244) Aug 1990 /D. Inglis (HD 244). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
7036 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (HD 304) Aug 1990 /D. Inglis (HD 304). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).
- Sporormiella minima*** (Auerswald) Ahmed & Cain
4955 J. Vederas A-24183. Cellulolytic.
8903 soil Ecuador J. Rigau Sep 1995 /J. Guarro FMR 5833 [=CBS 609.97].

Sporormiella similis Khan & Cain

- 7460 ex *Populus tremuloides* (aspen poplar) Hinton, BC C.
Myrholm (BG-90-2-14d) 28 Sep 1990 /L. Hutchison NOF
1639 [=NOF 1639 =GenBank DQ468020 (ITS) =GenBank
DQ468040 (LSU)]. Antifungal compounds (Chakravarty et al.,
Can. J. For. Res. 24:2235-2239, 1994). Biocontrol: potential
bioprotectant of *Populus tremuloides* against blue stain fungus
(Chakravarty et al., Can. J. For. Res. 24:2235-2239, 1994).

Sporormiella teretispora Ahmed & Cain

- 7491 rabbit dung E of Soquel, Santa Cruz Co., Monterrey Bay, CA
J. Scott (C) D. Malloch /D. Malloch JS 148. Terezines A-D,
amino acid-derived metabolite, active against some bacteria &
coprophilous fungi (Wang et al., J. Nat. Prod. 58:93-99, 1995).

Sporothrix albicans see ***Sporothrix pallida******Sporothrix an. Ceratocystis coronata*** see ***Ceratocystis coronata******Sporothrix an. Leucosphaera indica*** see ***Leucosphaera indica******Sporothrix an. of Ceratocystis rostrocoronata*** see ***Ophiostoma rostrocoronatum******Sporothrix an. Ophiostoma flexuosum*** see ***Ophiostoma flexuosum******Sporothrix an. Ophiostoma multiannulatum*** see ***Ophiostoma multiannulatum******Sporothrix an. Ophiostoma nigrocarpum*** see ***Ophiostoma nigrocarpum******Sporothrix an. Ophiostoma novae-zelandiae*** see ***Ophiostoma novae-zelandiae******Sporothrix an. Ophiostoma piliferum*** see ***Ophiostoma piliferum******Sporothrix an. Ophiostoma stenoceras*** see ***Ophiostoma stenoceras******Sporothrix an. Ophiostoma tetropii*** see ***Ophiostoma tetropii******Sporothrix an. Petriella guttulata*** see ***Petriella guttulata******Sporothrix an. Petriella lindforsii*** see ***Petriella lindforsii******Sporothrix an. Petriella setifera*** see ***Petriella setifera******Sporothrix an. Petriella sordida*** see ***Petriella sordida******Sporothrix cyanescens*** see ***Quambalaria cyanescens******Sporothrix flocculosa*** see ***Pseudozyma flocculosa******Sporothrix foliorum*** Taylor

- 3679 (T *Sporothrix foliorum*) Unilever /CDC B-1869 [=CBS 326.37
=NBRC 32954 =MUCL 19330].
8421 swab ex moldy basement Ottawa, Ont. D. Malloch Dec 1995
/D. Malloch M22-2c.

Sporothrix fungorum de Hoog & de Vries (morph

- Stephanoascus farinosus*)
3678 (T *Sporothrix fungorum*) old fruit body Fomes sp.
Arberseewald, Bayrischer Wald, Germany W. Gams Jul 1967
/CDC B-1870 [=CBS 259.70].
9276 nail female 49 yr Quebec 1998 /G. St-Germain MY 51484.
Thermotolerant: grows @ 37C // cycloheximide: resistant.

Sporothrix guttuliformis de Hoog

- 6487 (T *Sporothrix guttuliformis*) soil Malaysia T. Furukawa /CBS
437.76.

Sporothrix inflata de Hoog (syn. *Humicola dimorphospora*)

- 1279 soil Delamere Forest, Cheshire, U.K. 1961 /W.B. Kendrick A.
5106 Ponderosa pine stake treated with Bardac 20,
dimethyloctyl-decyclammonium chloride retention
2.6kg/cu.m. Westham Is. B.C. E. Setliff 7 Dec 1981 /E. Setliff
15-3-29B.
5107 Ponderosa pine stake treated with ammoniacal copper borate
mean retention 10.9 kg/cu.m. Westham Is. B.C. E. Setliff 8 Jul
1979 /E. Setliff 6-5-27A. Mesophilic: NG @ 37C.
5109 Ponderosa pine stake, treated with
2-thiocyanomethylthiobenzothiazole, mean retention
0.6kg/cu.m Westham Is. B.C. E. Setliff 23 Oct 1981 /E. Setliff
11-4-26B. Mesophilic: NG @ 37C.
5110 Ponderosa pine stake, treated with
2-thiocyanomethylthiobenzothiazole, mean retention
0.5kg/cu.m Westham Is. B.C. E. Setliff 16 Feb 1982 /E. Setliff
11-3-18B. Mesophilic: NG @ 37C.
5111 E. Setliff 15-1-17D.
5112 Ponderosa pine stake, treated with
2-thiocyanomethylthiobenzothiazole, mean retention
0.3kg/cu.m Westham Is. B.C. E. Setliff 16 Feb 1982 /E. Setliff
11-2-20A. Mesophilic: NG @ 37C.
5113 Ponderosa pine stake, treated with
2-thiocyanomethylthiobenzothiazole, mean retention
0.2kg/cu.m Westham Is. B.C. E. Setliff 23 Oct 1981 /E. Setliff
11-1-9C. Mesophilic: NG @ 37C.
5114 hem-fir plywood stake Westham Is. B.C. E. Setliff 16 Feb
1982 /E. Setliff 810.0.8A. Mesophilic: NG @ 37C.
5115 Ponderosa pine stake, treated with
2-thiocyanomethylthiobenzothiazole, mean retention
0.7kg/cu.m Westham Is. B.C. E. Setliff 16 Feb 1982 /E. Setliff
11-5-1D. Mesophilic: NG @ 37C.
5116 Ponderosa pine stake control for
2-thiocyanomethylthiobenzothiazole test Westham Is. B.C. E.
Setliff 7 Dec 1981 /E. Setliff 11-0-6A. Mesophilic: NG @
37C.

Sporothrix pallida (Tubaki) Matsush. (syn. *Sporothrix albicans*)

- 8308 (T *Sporothrix albicans*) soil (Kettering loam) England S.B.
Saksena Nov 1964 /H. Prillinger HA 654 [=CECT 2799 =IMI
080677 =MUCL 19327 =CBS 302.73 =GenBank EF139108
beta tubulin =GenBank AM498343 beta tubulin =GenBank
AM398396 calmodulin]. Molecular systematics: isolation
from termites and emended description of species (Prillinger et
al., System. Appl. Microbiol. 19:265-283, 1996); phylogenetic
analysis of *Sporothrix schenckii*-*Ophiostoma stenoceras*
complex (Marimon R, Gene J, Cano J, Guarro J, Med Mycol
46:621-625, 2008); de Meyer EM, de Beer ZW, Summerbell
RC, Moharram AM, de Hoog GS, Vismer HF, WIngfield MJ,
Mycologia 100:647-661, 2008).
8309 hindgut of termite (*Zootermopsis nevadensis*) Ile d'Oleron,
France H. Prillinger 1993 /H. Prillinger HA 162. Molecular
systematics: isolation from termites and emended description
of species (Prillinger et al., System. Appl. Microbiol.
19:265-283, 1996).
8701 left stump tendon tissue, male 49 yr, amputee; Phialophora

richardsiae (UAMH 8654) also isolated; histopathology + Melbourne, Australia Austin & Repatriation Medical Centre 1996 /A. Woodgyer 9606973.

Sporothrix ramosissima Arnaud ex de Hoog

3274 air Rabat, Morocco J. Chabert (5111) 16 Mar 1962 /J. Nicot 62A [=CBS 326.72].

Sporothrix rugulosa see ***Pseudozyma rugulosa***

Sporothrix sanguinea see ***Hyphozyma sanguinea***

Sporothrix schenckii Hektoen & Perkins

- 203 Univ. Michigan /see .
 204 N.F. Conant.
 205 human, asteroid tissue forms present /H. Pinkus.
 2609 swab of ? (clinical specimen) Johannesburg 1965 /P. Martin 153.
 2611 skin Johannesburg 1965 /P. Martin 155.
 2616 P. Martin 160.
 3613 arm lesions male physician Red Deer M. Kelm Sep 1973 /M. Kelm MU 7887. Application: QC & teaching strain (Summerbell, Clinical Microbiology Procedures Handbook 2002).
 3614 right forearm lesions female age 43 Red Deer M. Kelm Sep 1973 /M. Kelm MU 8380 (MU 8379).
 4989 finger Ontario /J. Kane FR 625-84.
 5829 arm lesion, tree nursery worker, male 23 yr; biopsy DE + yst cells, KI therapy UAH Edmonton Alta. R. McWhirter Jun 1987 /P. Kibsey MY 0838.
 5843 hand male 50 yr Saskatchewan H. Congly 1987 /H. Congly 1694M.
 5844 finger, female Saskatchewan H. Congly 1987 /H. Congly 1632M.
 5869 lesion middle finger, male 64 yr Saskatchewan H. Congly 1987 /H. Congly 1537M.
 5870 lesion left hand, male 60 yr Saskatchewan H. Congly 1987 /H. Congly 1631M.
 5871 lesion right wrist, female 16 yr Saskatchewan H. Congly 1987 /H. Congly 1669M.
 5872 lesion left hand, female 34 yr Saskatchewan H. Congly 1987 /H. Congly 1872M.
 5873 lesion right middle finger, female 33 yr Saskatchewan H. Congly 1987 /H. Congly 2068M.
 6872 ulcer left forearm, female 48 yr India R. Hemashettar 1990 /B. Hemashettar JNMC F.223/90. Pigment: brown.
 7242 ex Lt leg, female, 56 yr India B. Hemashettar 6 Mar 1992 /B. Hemashettar JNMC F.48/92.
 10661 swab ex skin, female 53 yr, has deep seated infection St. Joseph's General Hospital, Vancouver, B. C. /R. Rennie MY 1499 [=BC CDC A6MR23]. Thermotolerant: grows @ 35 C (fide UAH).
 10743 isolated twice from sputum of female, 77 yr, with bronchiectasis; Mycobacterium avium and Aspergillus also isolated Edmonton, Alta. /R. Rennie MY 5804. Thermotolerant: grows @ 35 C, NG @ 42 C (fide UAH); yeast form on PDA after 24 hr at 35C.

***Sporothrix* sp.**

8806 Jeffrey pine beetle pupal chamber in Jeffrey pine Inyo National Forest, California /T.C. Harrington C 822. Benomyl: resistant // culture conditions: grows well @ 25C & 18C but tends to dies off quicker @ 25C.

***Sporothrix* sp. A**

6774 creosote-treated southern pine pole Chester, NJ /C.J.K. Wang P-1847 [=ATCC 66734]. Pigment: brown // systematics/taxonomy: as *Sporothrix* sp. A in Wang & Zabel (Wang & Zabel, Fungi from Utility Poles p 320, 1990).

6775 creosote-treated southern pine pole Chester, NJ /C.J.K. Wang P-1850 [=ATCC 66733]. Systematics/taxonomy: as *Sporothrix* sp. A in Wang & Zabel (Wang & Zabel, Fungi from Utility Poles p 320, 1990).

6785 creosote-treated southern pine pole New Jersey C.J.K. Wang /C.J.K. Wang P-1851. Systematics/taxonomy: as *Sporothrix* sp. A in Wang & Zabel (Wang & Zabel, Fungi from Utility Poles p 320, 1990).

***Sporothrix* sp. B**

6776 creosote-treated southern pine pole Chester, NJ /C.J.K. Wang P-1821 [=ATCC 66736]. Systematics/taxonomy: as *Sporothrix* sp. B by Wang & Zabel (Wang & Zabel, Fungi from Utility Poles p 322, 1990).

6777 creosote-treated southern pine pole Chester, NJ /C.J.K. Wang P-1822 [=ATCC 66737]. Benomyl: resistant // systematics/taxonomy: as *Sporothrix* sp. B by Wang & Zabel (Wang & Zabel, Fungi from Utility Poles p 322, 1990).

Sporotrichum an. ***Petriella boulangeri*** see ***Petriella boulangeri***

Sporotrichum aureum Link (morph *Pycnoporellus metamorphosus*)

3411 broadleaved tree J. Nicot /CBS 441.70.

Sporotrichum dimorphosporum see ***Disporotrichum dimorphosporum***

***Sporotrichum* sp.**

897 yellow mold disease in mushrooms /L.R. Kneebone. Hyperparasite.

Sporotrichum thermophile see ***Myceliophthora thermophila***

Stachybotrys albipes (Berk. & Br.) Jong & Davis (morph *Melanopsamma pomiformis*)

- 7750 single ascospore isolate ex Ulmus sp. Fountains Abbey Woods, Yorkshire, U.K. C. Booth 1957 /ATCC 18873 [=GenBank DQ676597 rpb2H =GenBank DQ676622 tef1H =IMI 56393 =GenBank AY489677 SSU =GenBank AY 489709 =GenBank AY 489570 =GenBank AY 489637 =GenBank AY 489604]. Pigment: brown // molecular systematics: phylogenetic relationships of Memnoniella & *Stachybotrys* (Castlebury LA, Rossman AY, Sung G-H, Hyten AS, Mycol. Res. 108:864-872, 2004); PCR assay for specific detection (Haugland, Vesper & Wymer, Molecular & Cellular Probes 13:329-340, 1999); reexamination of *Stachybotrys cylindrospora* (Li D-W, Mycologia 99:332-339, 2007); absence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009) // culture conditions: produced anamorph only // cellulolytic: degrades cellophane membrane but Jong & Davis say not cellulolytic.
 10484 ex dead wood (both anamorph and teleomorph *Melanopsamma* present) Algonquin Park, Ontario D. Malloch 09-01 /B. Koster [=GenBank DQ678598 rpb2H =GenBank DQ676611 tef1H =GenBank DQ680068 SSU]. Molecular systematics: absence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009); multi-gene phylogeny of *Stachybotrys* (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009; Koster B et al 2009).

Stachybotrys atra see ***Stachybotrys chartarum***

***Stachybotrys bisbyi* (Srin.) Barron**

- 1526 (T *Stachybotrys aurantia*) soil mixed wood Campbellville, Ont. G. Barron Jul 1961 /G.L. Barron 8609 [=EPA 383 =GenBank DQ676589 rpb2H =GenBank DQ676614 tef1H =GenBank DQ680057 SSU]. Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998); absence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, *Mycol Res* 113:877-886, 2009).

Stachybotrys chartarum* (Ehrenb.) Hughes (syn.Stachybotrys atra*)

- 627 skin & hair ex cat Edmonton, Alta. J.W. Carmichael 1958 /J.W. Carmichael.
- 6715 RCS strip ex indoor air maintenance crawl space Saskatoon, Sask. D. Inglis (2J2) 19 Feb 1991 /S. Poznanski [=EPA 280 =NC-2 =GenBank AY180265 =GenBank AY180257 =GenBank AY180249 =GenBank AY180275 =GenBank AY180260 =GenBank AY176729 (LSU)]. Pigment: black // molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998); hemolysis, toxicity & RAPD analysis (Vesper et al., *Appl. Env. Microbiol.* 65:3175-3181, 1999); phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003); PCR assay for specific detection (Black JA, Dean TR, Foarde K, Menetrez M, *Mycol Res* 112:845-51, 2008); UAMH 6715, 7900, 7568, 7598 demonstrate similar sequence in ITS2 region and differ by one bp from ATCC 9182 (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998) // biodiversity: indoor air fungi // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
- 6716 RCS strip ex indoor air basement furnace room Saskatoon, Sask. D. Inglis (1G2) 19 Feb 1991 /S. Poznanski. Pigment: black; lacking on CYA after 7 d @ 25C // biodiversity: indoor air fungi.
- 6809 bronchial washings male 65 yr Saskatchewan H. Congly 1991 /H. Congly 515M-91.
- 7568 ex moldy cardboard box from bedroom of patient with pulmonary dysfunction and chronic fatigue transported from B.C. to Edmonton, AB L. Sigler 8 Apr 1994 /J. Hutchinson [=EPA 390 =NC-9]. Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998); hemolysis, toxicity & RAPD analysis (Vesper et al., *Appl. Env. Microbiol.* 65:3175-3181, 1999); phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003); UAMH 6715, 7900, 7568, 7598 demonstrate similar sequence in ITS2 region and differ by one bp from ATCC 9182 (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998) // biodiversity: indoor fungi.
- 7598 ex wooden molding supporting trap door to access bathroom plumbing, highrise apartment Edmonton, Alta. Kasper Medical Lab. May 1994 /Kasper Medical Labs [=EPA 391 =NC-10]. Stachybotrylactones & stachybotrylactams (low toxicity) (anticomplement compounds) (Analysis done by B. Jarvis, Univ. Maryland); stachybotrylactones & stachybotrylactams (low toxicity) (anticomplement compounds) (Analysis done by B. Jarvis, Univ. Maryland). Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998); hemolysis, toxicity & RAPD analysis (Vesper et al., *Appl. Env. Microbiol.* 65:3175-3181, 1999); UAMH 6715, 7900, 7568, 7598 demonstrate similar sequence in ITS2 region and differ by one bp from ATCC 9182 (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998) // biodiversity: indoor fungi.
- 7900 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M257) 6 Feb 1995 [=GenBank AF081469 =EPA 281 =NC-3]. Cellulolytic // molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998); hemolysis, toxicity & RAPD analysis (Vesper et al., *Appl. Env. Microbiol.* 65:3175-3181, 1999); UAMH 6715, 7900, 7568, 7598 demonstrate similar sequence in ITS2 region and differ by one bp from ATCC 9182 (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998) // biodiversity: indoor air fungi.
- 8285 indoor air ex RCS strip Winnipeg, Man. S.P. Abbott (SA-M66) 31-Aug-1995 /S.P. Abbott (SA-M66). Pigment: brown // biodiversity: indoor air fungi.
- 9828 drywall Rocky Mountain House, AB L. Sigler /L. Sigler. Pigment: brown; lacking on CYA after 7 d @ 25C // biodiversity: indoor fungi.
- 10150 paper backing of moldy drywall, indoor environment Toronto, ON J. Scott /B. Koster J1 [=MUCL 40562 =GenBank AY095968 =GenBank AY095961 =GenBank AY095954 =GenBank AY095982 =GenBank AY095975 =GenBank DQ676600 rpb2H =GenBank DQ676624 tri5H =GenBank DQ680066 SSU =GenBank AY095982 tri5H]. Biodiversity: indoor fungi // molecular systematics: phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003); presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, *Mycol Res* 113:877-886, 2009); Clade 1 (presumptive *S. chartarum*) includes 10150, 10151, 10154, 10155, 6715 (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003).
- 10151 air sample, indoor environment Ontario, Canada B. Koster /B. Koster B6 [=GenBank AY095970 =GenBank AY095963 =GenBank AY095956 =GenBank AY095984 =GenBank AY095977]. Biodiversity: indoor air fungi // molecular systematics: phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003); Clade 1 (presumptive *S. chartarum*) includes 10150, 10151, 10154, 10155, 6715 (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003).
- 10154 cellulose (paper) backing of moldy drywall, indoor environment Toronto, ON B. Koster /B. Koster B14 [=GenBank AY095967 =GenBank AY095960 =GenBank AY095953 =GenBank AY095981 =GenBank AY095974]. Molecular systematics: phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003); Clade 1 (presumptive *S. chartarum*) includes 10150, 10151, 10154, 10155, 6715 (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003) // biodiversity: indoor fungi.
- 10155 surface of moldy cellulose-based ceiling tile, indoor environment Toronto, ON B. Koster /B. Koster B18 [=GenBank AY095969 =GenBank AY095962 =GenBank AY095955 =GenBank AY095983 =GenBank AY095976]. Molecular systematics: phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003); Clade 1 (presumptive *S. chartarum*) includes 10150, 10151, 10154, 10155, 6715 (Koster, Scott, Wong et al, *Can. J. Bot.* 81:633-643, 2003) // biodiversity: indoor fungi.
- 10879 ex cellulose layer - drywall Ontario B. Koster /B. Koster B79. Biodiversity: indoor fungi.
- 10880 ex cellulose layer - drywall Ontario B. Koster /B. Koster B99. Biodiversity: indoor fungi.
- 10881 ex cellulose-based tile Ontario B. Koster /B. Koster B133. Biodiversity: indoor fungi.
- 10882 ex cellulose layer - drywall Ontario B. Koster /B. Koster B97. Biodiversity: indoor fungi.
- 10883 ex cellulose-based tile Ontario B. Koster /B. Koster B138. Biodiversity: indoor fungi.
- 10884 ex cellulose-based tile Ontario B. Koster /B. Koster B125.
- 10885 ex cellulose layer - drywall Ontario B. Koster /B. Koster B68.

- Biodiversity: indoor fungi.
- 10886 ex cellulose -based tile Ontario B. Koster /B. Koster B131. Biodiversity: indoor fungi.
- 10887 ex cellulose layer - drywall Ontario B. Koster /B. Koster B65. Biodiversity: indoor fungi.
- 10888 ex cellulose -based tile Ontario B. Koster /B. Koster B115. Biodiversity: indoor fungi.
- 10889 ex cellulose layer - drywall Ontario B. Koster /B. Koster B17. Culture conditions: sparse conidial production // biodiversity: indoor fungi.
- 10890 ex cellulose layer - drywall Ontario B. Koster /B. Koster B94. Biodiversity: indoor fungi.
- 10891 ex cellulose layer - drywall Ontario B. Koster /B. Koster B70. Biodiversity: indoor fungi.
- 10892 ex cellulose -based tile Ontario B. Koster /B. Koster B130. Biodiversity: indoor fungi.
- 10893 ex cellulose layer - drywall Ontario B. Koster /B. Koster B82. Biodiversity: indoor fungi.
- 10894 ex cellulose -based tile Ontario B. Koster /B. Koster B124. Biodiversity: indoor fungi.
- 10895 ex cellulose -based tile Ontario B. Koster /B. Koster B129. Culture conditions: atypical isolate // biodiversity: indoor fungi.
- 11540 tape sample collected from wall of electrical room panel in rink shack Edmonton, Alta. L. Sigler 11-Oct-2011. Biodiversity: indoor fungi.
- Stachybotrys chlorohalonata*** Andersen & Thrane
- 1690 leaf in soil Edmonton, Alta. J.W. Carmichael 14 Jun 1963 /J.W. Carmichael. Pigment: green on CYA after 7d @ 25C.
- 3228 feathers in damp chamber ex dead bird on flower bed soil Claremont, Calif. J.W. Carmichael 4 Feb 1969 [=EPA 387 =NC-7 =GenBank AY180268 =GenBank AY180254 =GenBank AY180247 =GenBank AY180271 =GenBank AY180262]. Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); hemolysis, toxicity & RAPD analysis (Vesper et al., Appl. Env. Microbiol. 65:3175-3181, 1999); phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003); PCR assay for specific detection (Black JA, Dean TR, Foarde K, Menetrez M, Mycol Res 112:845-51, 2008); UAMH 3228, 6417, 6425, 7720 and ATCC 9182 have same ITS2 sequence but differ by one bp from *St. chartarum* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); Clade 2 (presumptive *S. chlorohalonata*) includes 10152, 10153, 10156, 3228 (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003) // pigment: green on CYA after 7d @ 25C.
- 6417 desert sand SE of Swakopmund nr Gobabeb, Namibia (C) J. Krug 7 Jan 1986 /R. Khan N-17 [=ATCC 66238 =EPA 388 =NC-8 =GenBank AF206273 (ITS) =GenBank AY489712 =GenBank AY489680 =GenBank AY489607 =GenBank AY489573 =GenBank AY489640]. Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); hemolysis, toxicity & RAPD analysis (Vesper et al., Appl. Env. Microbiol. 65:3175-3181, 1999); phylogenetic relationships of *Memnoniella* & *Stachybotrys* (Haugland, Vesper & Harmon, Mycologia 93:54-65, 2001; Castlebury LA, Rossman AY, Sung G-H, Hyten AS, Mycol. Res. 108:864-872, 2004); PCR assay for specific detection (Haugland, Vesper & Wymer, Molecular & Cellular Probes 13:329-340, 1999; Black JA, Dean TR, Foarde K, Menetrez M, Mycol Res 112:845-51, 2008); UAMH 3228, 6417, 6425, 7720 and ATCC 9182 have same ITS2 sequence but differ by one bp from other *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998) // pigment: green on CYA after 7d @ 25C // application: quantitative PCR analysis of house dust for *Stachybotrys chartarum* (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004).
- 6425 wood, paper & tiles Hildenboro Square, Scarborough, Ont. R. S. Khan 9 Dec 1988 /R. Khan TRTC 51038 [=CBS 251.89 =EPA 389 =NC-12]. Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); hemolysis, toxicity & RAPD analysis (Vesper et al., Appl. Env. Microbiol. 65:3175-3181, 1999); phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003); UAMH 3228, 6417, 6425, 7720 and ATCC 9182 have same ITS2 sequence but differ by one bp from *St. chartarum* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998) // pigment: green on CYA after 7d @ 25C.
- 7044 gut contents ex *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 1140) Aug 1990 /D. Inglis (MR 1140). Pigment: green on CYA after 7d @ 25C.
- 7720 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 335) 11 Mar 1994 [=EPA 392]. Pigment: brown // molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003); UAMH 3228, 6417, 6425, 7720 and ATCC 9182 have same ITS2 sequence but differ by one bp from *St. chartarum* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998).
- 8909 indoor air of office ex RCS strip Red Deer, Alta S.P. Abbott (SA-M172) 13 Mar 1997 /S.P. Abbott (SA-M172). Pigment: green on CYA after 7d @ 25C.
- 10152 paper backing of moldy drywall, indoor environment Ontario, Canada B. Koster /B. Koster B9 [=GenBank AY095971 =GenBank AY095964 =GenBank AY095957 =GenBank AY095985 =GenBank AY095978]. Molecular systematics: phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003); Clade 2 (presumptive *S. chlorohalonata*) includes 10152, 10153, 10156, 3228 (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003) // pigment: green on CYA after 7d @ 25C.
- 10153 Brassica sp. Germany D. Malloch /B. Koster D13 [=GenBank AY095973 =GenBank AY095966 =GenBank AY095959 =GenBank AY095987 =GenBank AY095980 =GenBank DQ676601 rpb2H =GenBank DQ676625 tri5H =GenBank DQ680067 SSU =GenBank AY095987 tri5H]. Molecular systematics: phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003); presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009); Clade 2 (presumptive *S. chlorohalonata*) includes 10152, 10153, 10156, 3228 (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003) // pigment: green on CYA after 7d @ 25C; brown on PDA.
- 10156 air sample, indoor environment Ontario, Canada B. Koster /B. Koster B27 [=GenBank AY095972 =GenBank AY095965 =GenBank AY095958 =GenBank AY095986 =GenBank AY095979]. Molecular systematics: phylogeny of *Stachybotrys chartarum* (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003); Clade 2 (presumptive *S. chlorohalonata*) includes 10152, 10153, 10156, 3228 (Koster, Scott, Wong et al, Can. J. Bot. 81:633-643, 2003).
- 10423 (*Stachybotrys chlorohalonata*) cardboard on gypsum board Sjaelland, Denmark K.F. Nielson (ALK PL.2) 10-97 /B. Andersen IBT 9467 [=CBS 109285 =GenBank AY180253 =GenBank AY180246 =GenBank AY180272 =GenBank AY180261 =C 60160 (holotype)]. Produces atranons, dolabellanes, trichodermin; satratoxins, roridins, hydroxy roridin E not detected (Andersen et al., Mycologia 95:1227-1238, 2003). Molecular systematics: molecular & phenotypic differentiation from *St. chartarum* (Andersen, Nielsen, Thrane et al., Mycologia 95:1227-1238, 2003) //

- pigment: green on CYA after 7d @ 25C (fide Andersen et al.).
- 10424 building material (school) Copenhagen, Denmark K.F. Nielsen 20-1-97 /B. Andersen IBT 9299 [=CBS 109284 =GenBank AF548097]. Produces atranons, dolabellanes, trichodermin; satratoxins, roridins, hydroxy roridin E not detected (Andersen et al., Mycologia 95:1227-1238, 2003). Molecular systematics: molecular & phenotypic differentiation from *St. chartarum* (Andersen, Nielsen, Thrane et al., Mycologia 95:1227-1238, 2003) // pigment: green on CYA after 7d @ 25C (fide Andersen et al.).
- 10481 QC plate on D/E agar Edmonton, Alta. /S. Panteluk QCS-5671-17A. Pigment: green on CYA after 7d @ 25C.

***Stachybotrys dichroa* Grove**

- 7748 ex dead stem of *Senecio jacobaca* England M.B. Ellis /ATCC 18913 [=IMI 61337 =EPA 253 =GenBank AF081472 =GenBank DQ676595 rpb2H =GenBank DQ676620 tef1H =GenBank DQ680063 SSU =GenBank DQ676572 tri5H]. Pigment: brown // molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998; Haugland, Vesper & Harmon, Mycologia 93:54-65, 2001); PCR assay for specific detection (Haugland, Vesper & Wymer, Molecular & Cellular Probes 13:329-340, 1999); presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009) // cellulolytic.

***Stachybotrys echinata* (Rivolta) Smith (syn. *Memnoniella echinata*)**

- 842 contaminant Edmonton, Alta. J.W. Carmichael 8 Aug 1960 /J.W. Carmichael.
- 3195 tent canvas Bouginville I., Solomon Is. CMI 1951 /IMI 45547 [=CBS 627.66 =NRR 2181 =QM 1c =GenBank DQ676590 rpb2H =GenBank DQ676615 tef1H =GenBank DQ680058 SSU =GenBank DQ676568 tri5H]. Biodeteriogen/biodegradation: used for mould resistance testing // molecular systematics: presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009).
- 6594 indoor air ex RCS strip Edmonton, Alta. L. Sigler (4t) 7 Feb 1990 /S. Poznanski 4 [=GenBank AF081470 (ITS) =GenBank AY489736 =GenBank AY489704 =GenBank AY489631 =GenBank AY489599 =GenBank AY489672]. Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); phylogenetic relationships of *Memnoniella* & *Stachybotrys* (Haugland, Vesper & Harmon, Mycologia 93:54-65, 2001; Castlebury LA, Rossman AY, Sung G-H, Hyten AS, Mycol. Res. 108:864-872, 2004); PCR assay for specific detection (Haugland, Vesper & Wymer, Molecular & Cellular Probes 13:329-340, 1999) // application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004).
- 9200 toe (left hallux), male 29 Y AB 1998 /R. Rennie MY 456. Pigment: brown.
- 9838 office wall after water damage Edmonton, AB L. Sigler Jul 2000 /L. Sigler.
- 10485 ex air sample taken from mouldy building Southern Ontario B. Koster /B. Koster [=GenBank DQ672267 tri5 gene]. Molecular systematics: entire trichodiene synthase gene cloned (fide B. Koster).

***Stachybotrys eucylindrospora* Li**

- 7122 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. P. Crane (2-44-1.3m-3a) Jul 1989 /L. Hutchison NOF 1828 [=GenBank DQ676592 rpb2H =GenBank DQ676617 tef1H =GenBank DQ680060 SSU =GenBank DQ676569 tri5H].

Stachybotrydial, *stachybotramide*, 6,8-dihydroxy-3,5,7-trimethyl/isochroman & trichodermin & trichodermol (trichothecene mycotoxins) (Ayer & Maio, Can. J. Chem. 71:487-493, 1993; Ayer, Can. J. Chem. 73:465-470, 1995). Biocontrol: fungus & its metabolites trichodermin & trichodermol inhibitory to blue stain fungus *Ophiostoma crassivaginatatum* (UAMH 7004) (Hiratsuka et al, Can. J. For. Res. 24:174-179, 1994) // cellulolytic: degrades cellophane membrane but Jong & Davis say not cellulolytic // molecular systematics: presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009); BLAST match with *Stachybotrys eucylindrospora* (fide Dewei Li, Connecticut Agricultural Experiment Station, Windsor CT) // pigment: yellow.

- 7211 paper towelling in moist chamber with rotting agaric Cornell Plantation, Cornell Univ., Ithaca, NY K. Hodge Sep 1991 /K. Hodge KTH 8. Pigment: brown // molecular systematics: BLAST match with *Stachybotrys eucylindrospora* (fide Dewei Li, Connecticut Agricultural Experiment Station, Windsor CT).
- 10842 (T *Stachybotrys eucylindrospora*) ex soil under *Thuja occidentalis* (cedar) in bog Guelph, ON G.L. Barron Jan 1961 /CBS 203.61 [=GenBank AF081474 =ATCC 18851 =IMI 085334 =OAC 8603]. Culture conditions: grow on oatmeal or cornmeal agar.
- 11720 ex soft tissue near R eye after penetration by wooden stick that was removed surgically Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio 2013 /D.A. Sutton UTHSC DII13-5 [=GenBank KF294230 D1D2 =GenBank KF294231 RPB2 =GenBank KF294232 ITS]. Human/animal pathogen: oculomycosis following traumatic injury (Wiederhold NP, Sutton DA, Li DW, Liang Y, Thompson EH, Wickes BL, Herrera ML, Rhoads SL, Mortenson JE. Mycoses epub Jan 22 2014).

***Stachybotrys kampalensis* Hansf.**

- 7746 ex forest soil New Guinea T. Matsushima /ATCC 22705 [=MFC 2696 =EPA 254 =GenBank AY180270 =GenBank AY180259 =GenBank AY180252 =GenBank AY180263 =GenBank AY180270 =GenBank DQ680061 SSU =GenBank DQ676593 rpb2 =GenBank DQ676618 tef1 =GenBank DQ676570 tri5]. Molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); PCR assay for specific detection (Haugland, Vesper & Wymer, Molecular & Cellular Probes 13:329-340, 1999; Black JA, Dean TR, Foarde K, Menetrez M, Mycol Res 112:845-51, 2008); presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009) // cellulolytic: degrades cellophane membrane but Jong & Davis say not cellulolytic.

***Stachybotrys microspora* (Mathur & Sankhla) Jong & Davis**

- 7747 (T *Stachybotrys microspora*) ex *Arachis hypogaea* rhizosphere Zaria, N. Nigeria D. McDonald 1967 /ATCC 18852 [=IMI 124902 =EPA 250 =GenBank AF081475 =GenBank DQ676594 rpb2H =GenBank DQ676619 tef1H =GenBank DQ676571 tri5H =GenBank DQ680062 SSU]. Pigment: yellow // molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, Molecular & Cellular Probes 12:387-396, 1998); presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, Mycol Res 113:877-886, 2009) // cellulolytic: degrades cellophane membrane but Jong & Davis say not cellulolytic.

***Stachybotrys parvispora* Hughes**

- 7749 ex soil Congo /ATCC 18877 [=IMI 62338 =EPA 251

- =GenBank AF081483 =GenBank DQ676621 tef1H
=GenBank DQ676596 rpb2H =GenBank DQ680054 SSU].
Pigment: brown // molecular systematics: detection and phylogeny of *Stachybotrys* (Haugland & Heckman, *Molecular & Cellular Probes* 12:387-396, 1998); phylogenetic relationships of *Memnoniella* & *Stachybotrys*; PCR assay for specific detection (Haugland, Vesper & Wymer, *Molecular & Cellular Probes* 13:329-340, 1999); absence of trichothecene biosynthetic pathway gene trichodiene synthase (*tri5*) (Koster B, Wong B, Straus N, Malloch D, *Mycol Res* 113:877-886, 2009) // cellulolytic: degrades cellophane membrane but Jong & Davis say not cellulolytic.
- Stachylidium* sp.** Link
11813 swab ex fur of northern long-eared bat (*Myotis septentrionalis*) Harbell's cave, New Brunswick K.J. Vanderwolf 28-Feb-2012 /K.J. Vanderwolf 381102. Biodiversity: mycobiota of bat caves.
- Stachyomphalina striatula*** Bigelow
9061 sporocarp gregarious in mosses in cut line adjacent to jack pine-lichen woodland Mildred Lake, Alta. R.M. Danielson (RMD 3035) 6 Sep 1980 /R.M. Danielson RMD 3035 [=DAOM 184726 =CCFC 004320]. Pigment: lt brown.
- Staheliella nodosa*** van Emden
3903 (T *Staheliella nodosa*) soil under *Elaeis guineensis* Surinam J.H. van Emden /CBS 589.73 [=ATCC 26835].
- Staphylotrichum coccosporum*** Meyer & Nicot
1257 greenhouse soil Lafayette, Indiana Z. Maciejowska Sep 1960 /DAOM 87847.
1579 G.L. Barron 9708.
5898 soil *Dieffenbachia amoena* in hospital Toronto R.C. Summerbell 15 Apr 1987 /R.C. Summerbell RCS W 578.
- Stellatospora terricola*** T. Ito & Nakagiri
8334 (T *Stellatospora terricola*) paddy soil Ikeda, Osaka Pref., Japan T. Ito (H2-2-10-20) May 1990 /T. Ito IFO 32597. Mesophilic: NG @ 37C.
- Stemphylium botryosum*** see ***Pleospora herbarum***
- Stemphylium sarciniforme*** (Cav.) Wiltshire
4171 M. McGinnis NCMH 832 [=Simmons Myco 7122].
- Stemphylium* sp.**
10487 ex decaying leaves of Phragmites or similar plant South Arm Marshes Wildlife Management Area, Ladner, B.C. S. Landvik, P. Inderbitzin (C) A. & R. Bandoni 7-2-99 /M.L. Berbee P56 [=UBC F14988 (herbarium) =GenBank AY316970 =GenBank AY324751 =GenBank AY329170 =GenBank AY329273 =GenBank AY339851] mating type MAT1-1; in all eight single ascospore isolates of *Pleospora* sp. strain P56, only MAT1-1 was detected (Inderbitzin). Pigment: tan // molecular systematics: mating systems in *Pleospora* (Inderbitzin, P., Ph. D. Dissertation, UBC, Vancouver, 2004; Inderbitzin P, Harkness J, Turgeon BG, Berbee ML, *Proc Natl Acad Sci USA* 102:11390-11395, 2005); cryptic species in *Stemphylium* (Inderbitzin P, Mehta YR, Berbee ML, *Mycologia* 101:329-339, 2009).
10489 ex decaying herbaceous dicotyledonous plant along White Rapids Rd, S of Nanaimo, B.C. P. Inderbitzin 5-6-99 /M.L. Berbee P107 [=UBC F14990 (herbarium) =GenBank AY316973 =GenBank AY324752 =GenBank AY329173 =GenBank AY329275 =GenBank AY339852] mating type MAT1-1. Pigment: tan // molecular systematics: cryptic species in *Stemphylium* (Inderbitzin P, Mehta YR, Berbee ML, *Mycologia* 101:329-339, 2009); mating systems in *Pleospora* (Inderbitzin, P., Ph. D. Dissertation, UBC, Vancouver, 2004).
10490 ex dark spots on green overwintered cabbage leaves Acadia Park Residences, Univ Br Columbia, Vancouver, B.C. J. G. Zhang 20-02-01 /M.L. Berbee P301 [=GenBank AY317047 =GenBank AY324724 =GenBank AY329243 =GenBank AY329307] mating type MAT1-1; MAT1-2. Pigment: tan // molecular systematics: mating systems in *Pleospora* (Inderbitzin, P., Ph. D. Dissertation, UBC, Vancouver, 2004; Inderbitzin P, Harkness J, Turgeon BG, Berbee ML, *Proc Natl Acad Sci USA* 102:11390-11395, 2005); *Pleospora* herbarum clade (Inderbitzin P, Mehta YR, Berbee ML, *Mycologia* 101:329-339, 2009).
10491 ex *Salicornia* sp. near Roberts Bank Port, B.C. (C) A. & R. Bandoni; (I) P. Inderbitzin 24-5-01 /M.L. Berbee P327 [=UBC F14991 (herbarium) =GenBank AY317071 =GenBank AY324771 =GenBank AY329267 =GenBank AY329319 =GenBank AY335180] mating type MAT1-1; MAT1-2. Molecular systematics: mating systems in *Pleospora* (Inderbitzin, P., Ph. D. Dissertation, UBC, Vancouver, 2004; Inderbitzin P, Harkness J, Turgeon BG, Berbee ML, *Proc Natl Acad Sci USA* 102:11390-11395, 2005); cryptic species in *Stemphylium* (Inderbitzin P, Mehta YR, Berbee ML, *Mycologia* 101:329-339, 2009).
10492 ex *Salicornia* sp. on the beach Cape Gurney, Hornsby Island, B.C. (C) A. & R. Bandoni; (I) P. Inderbitzin /M.L. Berbee P338 [=UBC F14992 (herbarium) =GenBank AY317072 =GenBank AY324772 =GenBank AY329268] mating type MAT1-1; MAT1-2. Molecular systematics: mating systems in *Pleospora* (Inderbitzin, P., Ph. D. Dissertation, UBC, Vancouver, 2004; Inderbitzin P, Harkness J, Turgeon BG, Berbee ML, *Proc Natl Acad Sci USA* 102:11390-11395, 2005); cryptic species in *Stemphylium* (Inderbitzin P, Mehta YR, Berbee ML, *Mycologia* 101:329-339, 2009).
10493 ex *Lactuca muralis* Sidney, B.C. (C) M.E. Barr (10382); (I) P. Inderbitzin 22-05-01 /M.L. Berbee P342 [=UBC F14993 (herbarium) =GenBank AY317073 =GenBank AY324773 =GenBank AY329269 =GenBank AY329320 =GenBank AY339862] mating type MAT1-1. Pigment: orange brown // molecular systematics: mating systems in *Pleospora* (Inderbitzin, P., Ph. D. Dissertation, UBC, Vancouver, 2004; Inderbitzin P, Harkness J, Turgeon BG, Berbee ML, *Proc Natl Acad Sci USA* 102:11390-11395, 2005); cryptic species in *Stemphylium* (Inderbitzin P, Mehta YR, Berbee ML, *Mycologia* 101:329-339, 2009).
10494 ex *Geum macrophyllum* Sidney, B.C. (C) M.E. Barr (10380); (I) P. Inderbitzin 22-05-01 /M.L. Berbee P343 [=UBC F14994 (herbarium) =GenBank AY317074 =GenBank AY324774 =GenBank AY329270] mating type MAT1-1. Pigment: tan on PDA // molecular systematics: cryptic species in *Stemphylium* (Inderbitzin P, Mehta YR, Berbee ML, *Mycologia* 101:329-339, 2009); mating systems in *Pleospora* (Inderbitzin P, Harkness J, Turgeon BG, Berbee ML, *Proc Natl Acad Sci USA* 102:11390-11395, 2005; Inderbitzin, P., Ph. D. Dissertation, UBC, Vancouver, 2004).
- Stenocarpella maydis*** (Berk.) Sutton
4940 corn USDA A. Allstrup? /J. Vederas [=ATCC 10235 =CBS 187.55].
4941 corn R. Stevens /J. Vederas [=ATCC 16438].
- Stephanosascus ciferrii*** Smith, van der Walt & Johannsen (morph *Candida ciferrii*)
636 right ear canal swab Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael mates with 10972 a. Molecular systematics: BLAST match 100% ITS similarity with *Stephanosascus ciferrii* AY493435 (CBS 5295) (fide UAMH) // culture conditions: produced asci in pairing with 10972 on 2% MEA at 30C.
3989 lesion on left breast (female) Univ. Hosp., Edmonton, AB L.

- Sigler Jan 1976.
- 6486 (T *Sporothrix catenata*) calf skin lesion; suspected trichophytosis Jilava Farm, nr Bucharest, Romania Jul 1978 /CBS 215.79 [=CBS 541.79A]. Human/animal pathogen: suspected pathogen // culture conditions: no asci produced in pairings with *Stephanoascus ciferrii* mating strains or other *S. catenata* isolates (fide UAMH).
- 7300 ear swab, DE + Edmonton, Alta. Stirrat Laboratories 30 Sep 1992 /R. Rennie MY 4535. Culture conditions: no asci produced in pairings with *Stephanoascus ciferrii* mating strains or other *S. catenata* isolates (fide UAMH 2009).
- 8039 ex clear drainage from blocked ear, male 16 yr, mushroom farm worker; DE yeast & hyphae Alberta 1995 /J. Fielding M71138. Human/animal pathogen: ear infection // culture conditions: no asci produced in pairings with *Stephanoascus ciferrii* mating strains or other *S. catenata* isolates (fide UAMH 2009).
- 9868 left ear, male 44 yr Edmonton, AB Dynacare Kasper (DK E12198) 05 Sep 2000 /R. Rennie MY 6525. Thermotolerant: grows at 37C // culture conditions: no asci produced in pairings with *Stephanoascus ciferrii* mating strains or other *S. catenata* isolates (fide UAMH 2009).
- 10228 ear swab, female 86 yr; DE + for yeast like organism with pseudohyphae Grande Prairie, AB 09-02 /R. Rennie MY 6477. Thermotolerant: grows @ 35 C // culture conditions: no asci produced in pairings with *Stephanoascus ciferrii* mating strains or other *S. catenata* isolates (fide UAMH 2009).
- 10542 ex left mastoid, male 63 yr Edmonton, Alta. 27-Jan-2005 /R. Rennie MY 1067. Thermotolerant: grows @ 42C (fide submitting laboratory) // culture conditions: no asci produced in pairings with *Stephanoascus ciferrii* mating strains or other *S. catenata* isolates (fide UAMH 2009).
- 10971 (T *Stephanoascus ciferrii* mating type alpha) throat of pig Netherlands /A. Nakagiri NBRC 1854 [=IFO 1854 =CBS 5295 =ATCC 58443 =IMI 344641 =BCRC 21427 =NRRL Y-10943 =JCM 7621 =GenBank U40138 =GenBank DQ442681 =GenBank AY493435] A mating type 10972 alpha mating type. Culture conditions: produced asci in pairing with 10972 on 2%MEA after 6 d at 30C (fide UAMH 2009).
- 10972 (T *Stephanoascus ciferrii* mating type a) soil South Africa /A. Nakagiri NBRC 1855 [=IFO 1855 =CBS 6699 =ATCC 58444 =BCRC 21428 =IMI 344642 =JCM 7622 =NRRL Y-10944 =VKM Y-2062 =GenBank AB041005] A mating type 10971 mates with alpha strains 10971 and 10973. Culture conditions: produced asci in pairing with 10971 on 2%MEA after 6 d at 30C (fide UAMH 2009).
- 10973 (T *Candida ciferrii*) cow neck Netherlands /A. Nakagiri NBRC 10192 [=IFO 10192 =ATCC 22873 =CBS 4856 =DBVPG 6217 =JCM 9551 =GenBank AB041004 =GenBank AJ508557 =GenBank AY497681 =GenBank AB018141 =GenBank AY497753] A mating type alpha mates with 10972 a. Culture conditions: produced asci in pairing with 10972 on 2%MEA after 6 d at 30C (fide UAMH 2009).
- 11503 swab left eye, female 22 yr; calcofluor white + for yeast-like University of Alberta Hospitals, Edmonton, Alta. /R. Rennie MY 2023. Thermotolerant: grows at 37C fide submitting lab.
- 8139 *Pinus contorta* Alberta M.K. Nobles 18 Sep 1955 /S. Davies FC-171 [=NOF 265]. Biodeteriogen/biodegradation: white rot.
- Stereum ostrea*** (Blume & Nees: Fr.) Fr.
7235 ex *Populus tremuloides* (aspen poplar) Whitecourt, Alta. P. Crane (6-49-BS2-2b) Jul 1989 /L. Hutchison NOF 1859.
- Stereum sanguinolentum*** (Alb. & Schw.:Fr.) Fr.
8174 *Pinus contorta* (lodgepole pine) Alberta B.C. Sutton 10 Sep 1952 /S. Davies FC-145 [=NOF 34]. Biodeteriogen/biodegradation: white rot // pigment: brown // culture conditions: clamp connections (fide UAMH 2014).
- Stereum sulcatum*** see ***Laurilia sulcata***
- Sterile white I** see ***Meliniomyces variabilis***
- Stilbella aciculosa*** (Ellis & Everhart) Seifert (syn. *Stilbella bulbicola*, *Stilbella flavescens*)
1435 soil Ithaca, N.Y. Jooster (100) Jun 1962 /DAOM 89200.
1531 G.L. Barron [=DAOM 8702].
4117 (T *Stilbella flavescens*) roots of clover (*Trifolium pratense*) submerged in water Estey 1958 /R.H. Estey [=IMI 72418 =CBS 405.80 =ATCC 34955 =Genbank HQ843772 LSU =Genbank FJ663057 COI].
6400 soil Toronto, Ont. (C) S. Teoh Oct 1988 /L. Hutchison.
- Stilbella bulbicola*** see ***Stilbella aciculosa***
- Stilbella fimetaria*** (Pers.) Lindau
6539 herbivore dung Coto Donana, Huelva, Spain J. Guarro 20 Mar 1989 /J. Guarro FMR 3070.
- Stilbella flavescens*** see ***Stilbella aciculosa***
- Stilbella thermophila*** see ***Remersonia thermophila***
- Stropharia rugosoannulata*** Farlow ex Murrill
8019 rice straw K. Yokoyama (SU95) /S. Davies FC-367 [=ATCC 42263 =IFO 30225]. Edible: mushroom.
- Strumella olivatra*** (Sacc.) Saccardo
1373 rotten wood S.J. Hughes Oct 1960 /DAOM 71377b [=IMI 96740].
- Strumella uniseptata*** Matsushima
5016 (T) decaying *Allium fistulosum* Yonaga City, Tottori, Japan 1968 /T. Matsushima 2345.
- Suillus aeruginascens*** see ***Suillus laricinus***
- Suillus albidipes*** (Peck) Singer
9994 Alberta, Canada R.M. Danielson (RMD 2483) 26 Sep 1976 /R.M. Danielson RMD 2483 [=CCFC 003675 =DAOM 176632]. Pigment: brown.
10021 sporocarp in mature jackpine (*Pinus banksiana*) and lichens Mildred Lake, AB R.M. Danielson 20 Sep 1979 /R.M. Danielson RMD 2969. Pigment: brown // mycorrhizae.
- Suillus abivelatus*** Smith, Thiers & Miller
6235 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 /C) S.P. Abbott. Pigment: brown // mycorrhizae.
6245 *Pinus contorta* & *Alnus crispa* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 /C) S.P. Abbott. Pigment: brown // mycorrhizae.
- Stephanoascus farinosus*** see ***Sporothrix fungorum***
- Stephanoascus flocculosus*** see ***Pseudozyma flocculosa***
- Stephanoascus rugulosus*** see ***Pseudozyma rugulosa***
- Stephanosporium cereale*** see ***Oidiodendron cerealis***
- Stereum chailletii*** see ***Amylostereum chailletii***
- Stereum hirsutum*** (Willd.) Pers.
8138 Alberta L.L. Kennedy /S. Davies FC-038.

Suillus americanus (Peck) Snell ex Slipp & Snell

- 5800 gregarious on lawn below *Pinus strobus* York Univ., York Co., Ont. (C) W. Untereiner-McNeely 23 Sep 1986 /L. Hutchison LH-112-86 [=TRTC LH-112-86]. Pigment: yellow // mycorrhizae.
- 5934 mixed woods Dufferin County Forest, Dufferin Co., Ont. (C) R. Summerbell 15 Sep 1985 /L. Hutchison LH-151-85 [=TRTC LH-151-85]. Pigment: brown // mycorrhizae.

Suillus brevipes (Peck) Kuntze

- 5184 *Pinus contorta* woods Edson Forest, Alta. UAMH 5 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
- 5185 mixed *Pinus* & *Picea glauca* woods Slave Lake Forest, Alta. UAMH 5 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
- 5186 mixed *Pinus* & *Picea glauca* woods Slave Lake Forest, Alta. UAMH 5 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
- 5187 *Pinus contorta* woods Grande Prairie Forest, Alta. UAMH 10 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
- 5287 *Pinus contorta* woods Edson Forest, Alta. 2 Sep 1985 /: . Pigment: yellow // mycorrhizae.
- 5507 near lodgepole pine (*Pinus contorta*) Forestry Trunk Road, Alberta R. Danielson (RMD 2793) 26 Aug 1978 /DAOM 176629 [=UAMH 8964 =DAOM 176629 =CCFC 3673]. Pigment: yellow // mycorrhizae.
- 5508 mature pine (*Pinus banksiana*) Mildred Lake, Alta R.M. Danielson (RMD 2945) Sep 1979 /DAOM 176614 [=UAMH 8952 =DAOM 176614 =CCFC 3659]. Pigment: yellow // mycorrhizae.
- 5801 gregarious to scattered in litter below *Pinus resinosa* & *P. strobus* Algonquin Park, Canisbay Twp., Nipissing District, Ont. L.J. Hutchison 18 Oct 1986 /L. Hutchison LH-126-86 [=TRTC LH-126-86]. Pigment: yellow // mycorrhizae.
- 5923 leafy litter under *Picea glauca* & *Pinus banksiana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. L. Hutchison 24 Aug 1986 /L. Hutchison LH-59-86 [=TRTC LH-59-86]. Pigment: brown // mycorrhizae.
- 6159 Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) E. Schwartzel 29 Aug 1983 /L. Hutchison DM322 [=TRTC DM322]. Pigment: brown // mycorrhizae.
- 6181 sandy soil under jack pine (*Pinus banksiana*) Devonian Botanic Garden, Devon, Alta. (C) S. Abbott A. Flis Jul 1988 /((C) S. Abbott A. Flis. Pigment: yellow // mycorrhizae.
- 6229 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 22 Aug 1988 /((C) S.P. Abbott. Pigment: brown // mycorrhizae: poorly salt tolerant (Kernaghan, Hambling, Fung & Khasa, Restoration Ecology 10:43-51, 2002).
- 6232 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 /((C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6233 *Pinus contorta* & *Picea engelmannii* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 /((C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6247 *Pinus contorta*, *Picea engelmannii* & *Salix* sp. woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 /((C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6253 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 22 Aug 1988 /((C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 8951 solitary sporocarp in mature jackpine (*Pinus banksiana*) stand Mildred Lake, Alta. R.M. Danielson (RMD 2971) 20 Sep 1979 /R.M. Danielson RMD 2971. Pigment: brown // crystals: plentiful // mycorrhizae.
- 8952 sporocarps in mature pine (*Pinus banksiana*) Mildred Lake, Alta. R.M. Danielson (RMD 2945) 20 Sep 1979 /R.M. Danielson RMD 2945 [=UAMH 5508 =DAOM 176614 =CCFC 3659]. Pigment: brown // crystals: plentiful // mycorrhizae.
- 8960 sporocarp solitary in mature jackpine (*Pinus banksiana*) Mildred Lake, Alta. R.M. Danielson (RMD 3042) 16 Sep 1980 /R.M. Danielson RMD 3042. Pigment: brown // mycorrhizae.

- 8964 sporocarp near lodgepole pine (*Pinus contorta*) Forestry Trunk Road, Alberta R.M. Danielson (RMD 2793) 26 Aug 1978 /R.M. Danielson RMD 2793 [=UAMH 5507 =DAOM 176629 =CCFC 3673]. Pigment: brown // mycorrhizae.

Suillus granulatus (L.:Fr.) Kuntze

- 6203 under *Pinus densiflora* & mixed hardwoods Mt. Geryong Natl. Pk., South Korea O.K. Miller 6 Sep 1985 /L. Hutchison [=OKM 22366]. Mycorrhizae // pigment: yellow on PDA // culture conditions: no clamps (fide UAMH 2011).
- 6204 under *Pinus densiflora* & mixed conifers & hardwoods east of Mt. Odae Natl. Pk., South Korea O.K. Miller 30 Aug 1985 /L. Hutchison [=OKM 22233]. Pigment: brown // mycorrhizae // culture conditions: no clamps (fide UAMH 2011).
- 8962 sporocarps in mature pine (*Pinus banksiana*) with bearberry, lichen & blueberry Mildred Lake, Alta. R.M. Danielson (RMD 2675) 21 Sep 1977 /R.M. Danielson RMD 2675. Pigment: brown // mycorrhizae.

Suillus grevillei (Klotzsch) Singer

- 5285 *Larix laricina* woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Pigment: yellow/brown // mycorrhizae.
- 5883 *Larix laricina* fen Devonian Botanic Garden, Devon, Alta. A. Smreciu 14 Sep 1987 /A. Smreciu. Pigment: brown // mycorrhizae.
- 5924 in moss under *Larix laricina* Schefferville, Nouveau Quebec, Que. L. Hutchison 5 Sep 1984 /L. Hutchison LH-92-84 [=TRTC LH-92-84]. Pigment: brown // mycorrhizae.
- 6160 scattered/gregarious below *Larix laricina* & *Picea glauca* in small plantation U. of Man. Ft. Garry campus, Winnipeg, Man. L. Hutchison 28 Aug 1987 /L. Hutchison LH-19-87 [=TRTC LH-19-87]. Pigment: yellow // mycorrhizae.
- 6161 under *Larix laricina* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie 1980 /L. Hutchison DM24 [=TRTC Lahaie 80150D]. Pigment: yellow // mycorrhizae.

Suillus laricinus (Berkeley ex Hooker) Kuntze (syn. *Suillus aeruginascens*, *Fuscoboletinus aeruginascens*)

- 5882 *Larix laricina* fen Devonian Botanic Garden, Devon, Alta. (C) S.P. Abbott A. Smreciu 14 Sep 1987 /((C) S.P. Abbott A. Smreciu. Pigment: brown // mycorrhizae.

Suillus neoalbidipes Palm & Stewart

- 6158 gregarious wide area below *Comptonia peregrina*, nr *Picea glauca*, *Salix*, *Betula papyrifera* & *Amelanchier sanguinea* Burt Lake Burt Twp., Timiskaming Dist., Ont. (C) D. Lahaie 24 Aug 1980 /L. Hutchison DM27 [=TRTC Lahaie 80170B]. Pigment: yellow // mycorrhizae.

Suillus paluster (Peck) Kretzer & Bruns (syn. *Fuscoboletinus paluster*)

- 5925 in sphagnum bog under *Larix laricina* Dorset, Muskoka District, Ont. L. Hutchison 19 Sep 1986 /L. Hutchison LH-108-86 [=TRTC LH-108-86]. Pigment: yellow // mycorrhizae.

Suillus pictus see ***Suillus spraguei******Suillus placidus*** (Bonord.) Singer

- 6264 soil under pine (*Pinus strobus*) U of A campus, Edmonton Alta. (C) S.P. Abbott A. Flis 16 Jul 1988 /((C) S.P. Abbott A. Flis. Pigment: brown // mycorrhizae.

Suillus pseudobrevipes A.H. Smith & Thiers

- 8953 sporocarp solitary on site, jackpine nearby Mildred Lake, Alta. R.M. Danielson (RMD 3007) 17 Sep 1980 /R.M. Danielson RMD 3007. Pigment: brown // crystals: plentiful // mycorrhizae.

- Suillus serotinus*** (Frost) Kretzer & Bruns (syn. *Fuscoboletinus serotinus*)
6261 mixed woods (Salix, Populus & Larix laricina) Devonian Botanic Garden, Devon, Alta. (C) S.P. Abbott A. Flis 19 Aug 1988 / (C) S.P. Abbott A. Flis. Mycorrhizae.
- Suillus sinuspaulianus*** Pomerleau & Smith) Dick & Snell (syn. *Fuscoboletinus sinuspaulianus*)
6147 gregarious, deep moss under Picea mariana, Larix laricina in area, 30m away Schefferville at Havell's R., Labrador Nfld (C) D. Malloch 24 Aug 1984 /L. Hutchison DM428 [=TRTC Malloch 24.8.84/9]. Pigment: yellow // mycorrhizae.
- Suillus spectabilis*** (Peck) Kuntze (syn. *Fuscoboletinus spectabilis*)
5286 Larix laricina woods UADBG Devon Alta. 8 Sep 1985 / . Mycorrhizae.
5446 Larch (Larix laricina) fen Devonian Botanic Garden, Devon, Alta. Aug 1986 /: . Mycorrhizae.
6148 scattered in Pleurozium moss under Larix laricina Schefferville, Nouveau Quebec, P.Q. (C) D. Malloch 30 Aug 1984 /L. Hutchison DM430 [=TRTC Malloch 30.8.84/4]. Pigment: yellow // mycorrhizae.
6262 larch (Larix laricina) fen Devonian Botanic Garden, Devon, Alta. (C) S.P. Abbott A. Flis 19 Aug 1988 / (C) S.P. Abbott A. Flis. Mycorrhizae.
- Suillus spraguei*** Kuntze (syn. *Suillus pictus*)
5846 under Pinus strobus in sphagnum moss Federation of Womens Club State Forest, Worcester Co., MA L. Hutchison 9 Aug 1986 /L. Hutchison LH-10-86 [=TRTC LH-10-86]. Pigment: brown // mycorrhizae.
- Suillus subluteus*** (Peck) Snell
6059 gregarious below mature Pinus banksiana Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) E. Schwaertzel 26 Aug 1983 /L. Hutchison DM332 [=TRTC DM332]. Mycorrhizae.
- Suillus tomentosus*** (Kauffman) Singer, Snell & Dick
5197 Pinus contorta woods Edson Forest, Alta. UAMH 12 Aug 1985 /UAMH. Pigment: brown; yellow (fide UAMH 2011) // mycorrhizae // culture conditions: no clamps (fide UAMH 2011).
5198 mixed Pinus contorta & Picea glauca woods Edson Forest, Alta. UAMH 12 Aug 1985 /UAMH. Pigment: brown // mycorrhizae.
5199 mixed Pinus contorta, Picea glauca & Populus woods Edson Forest, Alta. UAMH 12 Aug 1985 /UAMH. Pigment: brown // mycorrhizae.
5200 Pinus contorta wood Edson Forest, Alta. UAMH 12 Aug 1985 /UAMH. Pigment: brown // mycorrhizae.
5201 Pinus contorta wood Edson Forest, Alta. UAMH 12 Aug 1985 /UAMH. Pigment: brown // mycorrhizae.
5202 Pinus contorta wood Edson Forest, Alta. UAMH 12 Aug 1985 /UAMH. Pigment: brown // mycorrhizae.
5203 Pinus contorta wood Edson Forest, Alta. UAMH 12 Aug 1985 /UAMH. Pigment: brown // mycorrhizae.
5204 Pinus contorta wood Edson Forest, Alta. UAMH 2 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
5205 Pinus contorta wood Edson Forest, Alta. UAMH 2 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
5206 Pinus contorta wood Edson Forest, Alta. UAMH 2 Sep 1985 /UAMH. Pigment: brown // mycorrhizae.
5207 Pinus contorta woods Edson Forest, Alta. 2 Sep 1985 /: . Mycorrhizae.
5208 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Mycorrhizae.
5210 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 2 Sep 1985 /: . Mycorrhizae.
5211 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 2 Sep 1985 /: . Mycorrhizae.
5212 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 2 Sep 1985 /: . Mycorrhizae.
5213 Pinus contorta woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Mycorrhizae.
5214 Pinus contorta woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Mycorrhizae.
5215 Pinus contorta woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Mycorrhizae.
5216 Pinus contorta woods Edson Forest, Alta. 2 Sep 1985 /: . Mycorrhizae.
5222 Pinus contorta & Picea glauca woods Grande Prairie Forest, Alta. 4 Sep 1985 /: . Mycorrhizae.
5223 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
5224 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
5225 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
5226 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
5227 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
5228 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
5229 Pinus contorta & Picea glauca woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
5230 Pinus contorta woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
5231 Pinus contorta woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
5264 Picea glauca woods Grande Prairie Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
5270 Pinus contorta woods Edson Forest, Alta. 8 Dec 1985 /: . Pigment: brown // mycorrhizae.
5272 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5273 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5274 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5275 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5276 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5277 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5278 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5279 Pinus contorta & Picea glauca woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
5280 Pinus contorta woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
5281 Pinus contorta & Picea glauca woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
5289 Pinus banksiana woods UADBG Devon Alta. 8 Sep 1985 /: . Pigment: brown // mycorrhizae.
5290 Pinus banksiana woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Pigment: brown // mycorrhizae.
5291 Pinus banksiana woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Pigment: brown // mycorrhizae.
5292 Pinus banksiana woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Pigment: brown // mycorrhizae.
5293 Pinus banksiana woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Pigment: brown // mycorrhizae.
5294 Pinus banksiana woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Pigment: brown // mycorrhizae.
5295 Pinus banksiana woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Pigment: brown // mycorrhizae.

- 5296 *Pinus banksiana* woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Mycorrhizae.
- 5305 *Pinus contorta* woods Edson Forest, Alta. 12 Aug 1985 /: . Pigment: yellow // mycorrhizae.
- 5306 *Pinus contorta* woods Edson Forest, Alta. 2 Sep 1985 /: . Pigment: yellow // mycorrhizae.
- 5307 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: yellow // mycorrhizae.
- 5463 mixed *Picea* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Pigment: yellow // mycorrhizae.
- 5466 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Pigment: yellow // mycorrhizae.
- 5506 widely scattered in mature pine (*Pinus banksiana*) Mildred Lake, Alta. R.M. Danielson (RMD 2944) 20 Sep 1979 /DAOM 176618 [=UAMH 9089 =DAOM 176618 =CCFC 3663]. Mycorrhizae: responses of ectomycorrhizal black spruce, white spruce & jackpine seedlings to fluoride (Calvo Polanco M, Zwiazek JJ, Jones MD, MacKinnon MD, *Physiologia Plantarum* 135:51-61, 2009); responses of ectomycorrhizal jackpine seedlings to salt and boron (Calvo Polanco M, Zwiazek JJ, Jones MD, MacKinnon MD, *Trees* 22:825-834, 2008); responses of mycorrhizal white spruce (*Picea glauca*) and jack pine (*Pinus banksiana*) to soil fluoride and NaCl (Calvo-Polanco M, Zwiazek JJ, *Acta Physiologiae Plantarum* 33:1365-1373, 2011) // culture conditions: no clamps; good growth on charcoal filter paper on PDA (fide UAMH 2012) // pigment: brown (fide UAMH 2012).
- 5550 mixed *Pinus contorta*, *Picea mariana* bog Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Mycorrhizae.
- 5551 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.
- 5795 growing singly below *Pinus banksiana*, *Abies balsamea* & *Picea glauca* Burt LakeBurt Township, Timiskaming District, Ont. L.J. Hutchison 19 Aug 1986 /L. Hutchison LH-28-86 [=TRTC LH-28-86]. Pigment: yellow // culture conditions: no clamps (fide UAMH 2011).
- 5918 singly in moss under *Pinus banksiana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. L. Hutchison 20 Aug 1986 /L. Hutchison LH-39-86 [=TRTC LH-39-86]. Pigment: brown // mycorrhizae // culture conditions: no clamps (fide UAMH 2011).
- 6060 scattered/gregarious in needle litter below *Pinus banksiana* Reynold Local Gov't District, Sandilands Prov. F., Man. L. Hutchison 27 Aug 1987 /L. Hutchison LH-18-87 [=TRTC LH-18-87]. Pigment: yellow // mycorrhizae // culture conditions: no clamps (fide UAMH 2011).
- 6236 *Pinus contorta* & *Picea engelmannii* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6239 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6248 *Pinus contorta* & *Salix* sp. woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6252 *Pinus contorta*, *Picea engelmannii* & *Salix* sp. woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae: effects of fertilization levels on growth & mycorrhizal colonization of container-grown conifer seedlings (Khasa, Sigler, Chakravarty, Dancik, et al., *New Forests* 22:179-197, 2001); persistence of introduced ectomycorrhizal fungi in outplanted seedlings (Gagne A, Jany J-L, Bousquet J, Khasa PD, *Can J For Res* 36:1684-1694, 2006); assessment of mycorrhizal inoculation in aspen and balsam poplar in the nursery (Quoreshi AM, Khasa DP, *Biomass and Bioenergy* 32:381-391, 2008); role of ectomycorrhizal fungi in mineral weathering (Adeleke RA, Cloete TE, Bertrand A, Khasa DP, *Mycorrhiza* Epub Feb 2012) // culture conditions: no clamps.
- 6265 *Pinus contorta* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 22 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 8954 solitary sporocarp in *Pinus banksiana* Mildred Lake, Alta. R.M. Danielson (RMD 3014) 16 Sep 1980 /R.M. Danielson RMD 3014. Pigment: brown // mycorrhizae.
- 9089 sporocarp widely scattered in mature pine (*Pinus banksiana*) Mildred Lake, Alta. R.M. Danielson (RMD 2944) 20 Sep 1979 /R.M. Danielson RMD 2944 [=UAMH 5506 =DAOM 176618 =CCFC 3663]. Mycorrhizae // benomyl: assessment of fungal hydrophobicity properties (Chau HW, Si BC, Goh YK, Vujanovic V, *Mycological Research* 113:1046-1052, 2009).
- 9974 sporocarp, solitary by pine Dawson Trailhead, Alta. R.M. Danielson 08 Sep 1986 /R.M. Danielson RMD 3299. Pigment: dark brown.

***Suillus umbonatus* Dick & Snell**

- 5235 *Pinus contorta* woods Edson Forest, Alta. 12 Aug 1985 /: . Pigment: brown // mycorrhizae.
- 5236 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5237 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5238 *Pinus contorta* & *Picea glauca* woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5239 *Pinus contorta* & *Picea glauca* woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5240 *Pinus contorta* woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5241 *Pinus contorta* woods Edson Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5242 *Pinus contorta* woods Edson Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5243 *Pinus contorta* woods Edson Forest, Alta. 9 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5261 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
- 5262 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
- 5263 *Pinus contorta* & *Picea glauca* woods Slave Lake Forest, Alta. 9 Apr 1985 /: . Pigment: brown // mycorrhizae.
- 5265 *Pinus contorta* woods Grande Prairie Forest, Alta. 4 Sep 1985 /: . Pigment: brown // mycorrhizae.
- 5308 *Picea glauca* woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: yellow // mycorrhizae.
- 5309 *Pinus contorta* woods Grande Prairie Forest, Alta. 9 Sep 1985 /: . Pigment: yellow // mycorrhizae.
- 5461 mixed *Picea mariana*, *P. glauca*, *Populus* and *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Pigment: yellow // mycorrhizae.
- 5464 mixed *Pinus contorta*, *Picea mariana* bog Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Pigment: yellow // mycorrhizae.
- 5549 mixed *Picea glauca*, *P. mariana*, *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.
- 5880 mixed *Picea mariana*, *Pinus contorta*, *Populus* Rocky-Clearwater Forest, Alta. (C) A. Smrečiu. Pigment: brown // mycorrhizae.
- 6230 *Pinus contorta* & *Picea engelmannii* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 22 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6234 *Pinus contorta* & *Picea engelmannii* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6237 *Pinus contorta* & *Picea engelmannii* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6249 *Pinus contorta*, *Picea engelmannii*, *Populus* & *Salix* sp. woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23 Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
- 6251 *Pinus contorta*, *Picea engelmannii*, *Populus tremuloides* & *Salix* sp. woods Bow-Crow Forest, Alta. (C) S.P. Abbott 23

- Aug 1988 / (C) S.P. Abbott. Pigment: brown // mycorrhizae.
8997 sporocarp gregarious in moss in spruce-pine stand Forestry Trunk Road, AB R.M. Danielson (RMD 2787) 26 Aug 1978 /R.M. Danielson RMD 2787 [=DAOM 176619 =CCFC 3664]. Pigment: brown // mycorrhizae.
- 8998 2 basidiocarps scattered in lodgepole pine stand Kananaskis, Alta. R.M. Danielson (RMD 3167) 22 Sep 1981 /R.M. Danielson RMD 3167. Pigment: brown // mycorrhizae.
- 8999 sporocarp solitary in lodgepole pine, spruce and feather moss (*Hylocomium splendens*) Bragg Creek, Alta. R.M. Danielson 13 Sep 1981 /R.M. Danielson RMD 3124. Pigment: brown // mycorrhizae.
- Sydowia polyspora*** (Bref. & Tavel) Muller (morph *Hormonema dematioides*)
6372 *Pinus contorta* Watson Lake, Y.T. (C) D. White 21 Oct 1988 /A. Funk DAVFP 23815.
- Sydowia polyspora* see ***Hormonema dematioides***
- Synecephalastrum racemosum*** Schroeter
197 Edmonton, Alta. 1948 /see .
206 Cutter 551.
2625 dried wine yeast ex Beaujolais New Malden, Surrey J.W. Carmichael May 1966 /W.R. Loftus Ltd..
3223 hair & dung ex cow Ontario, Calif. J.W. Carmichael 3 Feb 1969 /J.W. Carmichael.
6778 indoor air ex RCS strip Edmonton, Alta. D. Inglis (1Q) 18 Dec 1990 /S. Poznanski BM 11.
7606 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 198) 30 Jan 1994 /S.P. Abbott (OHS 198).
9915 shed mid body skin ex Savu Island python (*Liasis mackloti savuensis*), male >3 yr Kansas State University College of Veterinary Medicine, Manhattan, KS UAMH (UW006B-B) 21 Nov 2000. Cycloheximide: resistant // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- Syzygospora* sp.**
5585 contaminant on *Dermocybe* sp. Rocky-Clearwater Forest, Alta. 13 Aug 1986 /; .
- Talaromyces avellaneus* see ***Merimbla ingelheimense***
- Talaromyces bacillisporus*** (Swift) C.R. Benjamin (morph *Geosmithia swiftii*)
5012 (T *Geosmithia swiftii*) leaf *Begonia* sp. New York, U.S. M.E. Swift /J.I. Pitt FRR 1025 [=NRR 1025 =IMI 40045 =CBS 296.48 =ATCC 10126 =GenBank EU021621RPBII =GenBank AY753368 BetaTub =GenBank AF033388 ITS].
- Talaromyces convolutus*** Udagawa (morph *Penicillium convolutum*)
7592 ex soil Ring Road, Kathmandu, Nepal 30 Sep 1986 /S.-I. Udagawa SUM 3018 [=ATCC 90621]. Mesophilic: restricted growth @ 37C.
- Talaromyces eburneus* see ***Rasamsonia eburnea***
- Talaromyces emersonii* see ***Rasamsonia emersonii***
- Talaromyces emodensis*** Udagawa (morph *Penicillium emodense*)
7593 ex paddy soil Tau Daha, Kathmandu Valley, Nepal 4 Sep 1986 /S.-I. Udagawa SUM 3025 [=ATCC 90619]. Pigment: rose-brown.
- Talaromyces flavus*** (Klocker) Stolk & Samson (morph *Penicillium vermiculatum*)
1746 R.J. Bandoni B3. Cellulolytic.
3106 soil ex alluvial pasture & swamp Attenborough, Notts., Engl. A. Apinis 1949 /IMI 100874.
4890 sclerotia of *Sclerotinia minor* /L. Browne [=ATCC 52201 =ATCC 58679 =M. Dunn 282-3 =Papavizas TF-1]. Talaroflavone, 4,6-dihydroxy-5-methylphthalide, deoxytalaroflavone, polyketides, tetraketides, hydrogen peroxide (Ayer & Racok, Can. J. Chem. 68:2085-2094, 1990; Ayer & Racok, Can. J. Chem. 68:2095-2101, 1990). Biocontrol: control of *Verticillium dahliae* wilt of eggplant (Fravel & al., Phytopathol. 77:616-619, 1987; Phytopathol. 74:1171-1175, 1984; Pl. Dis. 66:1166-1168, 1982) // cellulolytic.
5993 barren soil with high metals, nr abandoned mine shaft Davidson Co., Silver Hill mine, North Carolina (C) J. Shaw 5 Feb 1986 /R. Khan TRTC 50998.
6424 soil on *Leucophanes glaucum* rhizoids nr Navua R., Viti Levu, Fiji (C) D. Vitt (33463) 29 Aug 1985 /R. Khan TRTC 51037. Pigment: orange.
7794 ex grapefruit juice (Snapple) Edmonton, Alta. S.P. Abbott (SA-M258) 20 Oct 1994 /S.P. Abbott (SA-M258).
7795 ex pulp paper sample Mississauga, Ont. L. D'Arsie 21 Nov 1994 /L. D'Arsie pulp sample 49615. Thermotolerant: growth @ 45C.
- Talaromyces helicus*** (Raper & Fennell) C.R. Benj. (syn. *Penicillium helicum*, *Talaromyces helicus* var. *major*)
1925 soil Tokyo, Japan 5 Feb 1962 /S.-I. Udagawa NHL 6060. Cellulolytic.
1926 soil Yamagata, Japan Sep 1962 /S.-I. Udagawa NHL 6072.
- Talaromyces helicus* var. *major* see ***Talaromyces helicus***
- Talaromyces indigoticus*** Takada & Udagawa (morph *Penicillium indigoticum*)
7589 (T *Talaromyces indigoticus*) ex soil Royal Botanic Garden, Godawari, Lalitpur, C.D.R., Nepal 2 Sep 1986 /S.-I. Udagawa SUM 3010. Thermotolerant: grows slowly @ 37C.
- Talaromyces lagunensis*** Udagawa, Uchiyama & Kamiya (morph *Penicillium lagunense*)
8330 (T *Talaromyces lagunensis*) forest soil Laguna, Philippines S. Uchiyama & S. Kamiya 23 Feb 1993 /S.-I. Udagawa BF 49341. Pigment: brown.
- Talaromyces luteus*** (Zukal) C.R. Benjamin (morph *Penicillium luteum*)
9441 soil Canada K.B. Raper /A. Jones [=CBS 230.60 =NRR 1010 =Thom 5257.208 =QM 7594].
- Talaromyces ohioensis*** Pitt (morph *Penicillium ohioense*)
10287 surface-sterilized *Typha latifolia* leaves in moist chambers collected from a large *Typha*-dominated marsh Site 2, Elk Island National Park, Alta. M. Schulz (MS-6) 27-6-01 /R.S. Currah MS-6. Glauconic acid (Fide J. Frisvad). Thermotolerant: grows @ 35 C // culture conditions: gelatinolytic, cellulolytic, utilizes starch // biodeteriogen/biodegradation: decomposition of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).
- Talaromyces purpureus*** (E. Müll. & Pacha-Aue) Stolk & Samson (syn. *Penicillium purpureum*)
3553 (T *Arachniotus purpureus*) soil France E. Mueller /CBS 475.71 [=IMI 181546 =ATCC 24069 =GenBank AB025749 cytb =GenBank L14527 ITS =GenBank L14513 SSU]. Pigment:

- red // culture conditions: degenerate poorly sporulating at deposit.
3895 oil-spilled soil Norman Wells NWT /D. Westlake NWF 121.

Talaromyces purpurogenus (Stoll) Samson, Yilmaz, Frisvad & Seifert (syn. *Penicillium crateriforme*)

- 3178 contaminant Edmonton, Alta. K. Wilson & A. Padhye 2 Apr 1969. Pigment: diffusing red pigment // application: Cited as *Penicillium purpurogenum* in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
5146 cassava Mozambique C.J. Rabie 1976 /J.I. Pitt FRR 1977. Pigment: red on OAT.
7909 ex bronchial wash, male 62 yr, DE- Edmonton, Alta. C. Sand 10 Jan 1995 /R. Rennie MY 0088. Pigment: red.
8046 ex homemade rhubarb wine consumed by youths showing hepatotoxicity Magrath, Alta. S.P. Abbott (SA-M248) 19 Jun 1995 /K. Blaikie. Rubratoxin B (J.C. Frisvad, pers. comm.). Human/animal pathogen: fulminant hepatic failure following ingestion of moldy homemade rhubarb wine (American Association for the Study of Liver Diseases Ann Mtg, Washington; DC 1997; Richer L, Sigalet D, Kneteman N, Shapiro J, Jones A, et al. Gastroenterology 112: 4; A1366, 1997); acute toxicity to liver following ingestion of homemade rhubarb wine (Sigler, Abbott & Frisvad, ASM Annl Gen Mtg. Abstr. F22, 1996) // systematics/taxonomy: identified as *Talaromyces purpurogenus* on the basis of multilocus DNA sequence analysis. (fide S.W. Peterson 2015); delimitation and characterization of *Talaromyces purpurogenus* complex (Yilmaz N, Houbraken J, Hoekstra ES, Frisvad JC, Visagie CM, Samson RA, Persoonia:29:39-54, 2012); *Penicillium crateriforme* considered the correct name for the species producing rubratoxins.
8596 sputum, male 38 yr British Columbia BC Provincial Lab 7 Oct 1995 /R. Rennie MY 1076. Serology: exoantigen test for *Penicillium mameffei* negative // pigment: red.
9207 soil near Peterborough, Ontario M. Bidochka 1997 /M.J. Bidochka 23C. Pigment: red.
9261 indoor air of school classroom ex Anderson sampler Pemberton, BC S.P. Abbott (SA-M230) 18 Feb 1998 /S.P. Abbott (SA-M230).
9354 bronchial wash, female 80 yr Victoria, BC Victoria General Hospital 3 Jul 1998 /P. Kibsey 81477. Pigment: ruby red.
10125 cuticle, coffee berry borer (*Hypothenemus hampei*) Rosario Izapa, Chiapas, Mexico J. Perez 27 Apr 2001 /F. Vega RI-CU R42-42. Thermotolerant: good growth @ 35 C.

Talaromyces retardatus Udagawa, Kamiya & Osada (morph *Penicillium retardatum*)

- 9494 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-02-S1G) 19 Jan 1999 /R.S. Currah EI-02-S1G. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Talaromyces stipitatus (Thom) C. Benjamin (morph *Penicillium emmonsii*)

- 5155 Swedish soil Peoria, Ill. K.B. Raper 1946 /J.I. Pitt FRR 2104 [=NRRL 2104]. Pigment: yellow/orange.
6421 soil in abandoned *Mangifera indica* orchard nr Bindar, Karnataka State, India R.S. Khan 20 Aug 1989 /R. Khan TRTC 51011. Pigment: gold.
6866 soil P.C.S.I.R. Labs Experimental Farm, Karachi, Pakistan R. Khan 9 Sep 1987 /R. Khan TRTC 51019. Pigment: yellow/orange/brown.
6871 elephant dung Terangire Game Park, Tanzania M. Keeling 24 Dec 1988 /R. Khan TRTC 51114.

Talaromyces striatus (Raper & Fennell) C. Benjamin (syn. *Hamigera striata*; morph *Penicillium lineatum*)

- 5156 (T *Penicillium striatum*) spoiled canned blueberries U.S.A. C.C. Williams 1938 /J.I. Pitt FRR 717 [=IMI 39741 =NRRL 717 =ATCC 10501 =CBS 377.48 =GenBank GU092928 RPB =GenBank GU092841 Cal =GenBank AF454073 ITS =GenBank AB539871 Btub2 =GenBank GU092799 Btub].
6865 field soil Bidar, Karnataka State, India R. Khan 18 Dec 1989 /R. Khan TRTC 51194. Pigment: brown.

Talaromyces tardifaciens Udagawa (morph *Penicillium tardifaciens*)

- 7591 (T *Talaromyces tardifaciens*) ex paddy soil Bhaktapur, Nepal 21 Jul 1986 /S.-I. Udagawa SUM 3017 [=ATCC 90622].

Talaromyces thermophilus Stolk (morph *Penicillium dupontii*)

- 2027 mushroom compost Pennsylvania J.W. Sinden 1963 /C.L. Fergus. Thermophilic: opt. 45C // pigment: brown // culture conditions: no ascospores formed on any medium at 35 or 42 C.
6131 soil India /R. Maheshwari IIS-65. Thermophilic // pigment: brown.

Talaromyces trachyspermus (Shear) Stolk & Samson

- 4786 badger dung R. Currah /R. Currah. Cellulolytic.
7324 contaminant ex UAMH 7320 UAMH A. Flis Mar 1993 /A. Flis.
10369 carpet dust of bedroom of home Elk Grove, CA S.P. Abbott 11-Feb-2003 /S.P. Abbott SA 1457.

Talaromyces udagawae Stolk & Samson

- 9338 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta 11-16A) T. Lumley (EI-02-S4C 16 Nov 1996 /R.S. Currah EI-02-S4C, 11-16A. Biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).

Teberdinia hygrophila Sogonov, W. Gams, Summerb. & Schroers 2005

- 11527 (T *Teberdinia hygrophila*) ex peaty soil of alpine fen Teberda State Reserve, Karachai-Cherkess Republic, Russia M.V. Sogonov (A19) Jul-1999 /CBS 102670 [=GenBank AY129282 18S =GenBank AY129291 ITS].

Teratosphaeria sp.

- 11563 unknown substrate Lakeshore, near Pike Creek, Ont. (I) J. O. Ewaze; (C) J. A. Scott (131) 12-Mar-2002 /J. Scott 2488190. Culture conditions: produces cladosporioid-like conidia in acropetal chains (fide UAMH & J. Scott).
11564 on brick wall of spirit maturing warehouse Seagrams Distillery, Lawrenceburg, Indiana, USA (I) J. O. Ewaze; (C) J. A. Scott (Indiana 1B) Aug-2004 /J. Scott 2488445. Culture conditions: non sporulating on deposit; no conidia obtained.

Tetracosporium paxianum Szabo

- 7721 indoor air ex RCS strip, from *Apis mellifera* (honeybee) equipment cleaning warehouse Girouxville, Alta. S.P. Abbott (OHS 267) 23 Apr 1994 /S.P. Abbott (OHS 267). Pigment: wine red.
7722 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S.P. Abbott (OHS 85) 13 Dec 1993 /S.P. Abbott (OHS 85).
10123 gut, coffee berry borer (*Hypothenemus hampei*) on artificial diet El Colegio de la Frontera Sur (ECOSUR), Chiapas, Mexico J. Perez 2 Jul 2001 /F. Vega DI-TD R5-1.

Tetraploa aristata Berk. & Br.

- 6571 subcutaneous cyst, left knee, male 54 yr Dothan, Alabama

/CDC B-4836 [=ATCC 66273]. Human/animal pathogen: histology +, KOH + (Markham et al., J. Med. Vet. Mycol. 28:147-150, 1990) // cycloheximide: resistant.

Thamnidium elegans Link

- 207 IMI 23984.
633 soil ex garden Edmonton, Alta. J.W. Carmichael Feb 1959 /J.W. Carmichael.
3381 contaminant ex cross UAMH 189 x 190 Edmonton, Alta. J.W. Carmichael 20 Oct 1970 /J.W. Carmichael.
7325 ex frozen beef Alberta S. Gard 5 Jan 1993 /S. Gard 7. Psychrophilic: grows @ 5C.
7602 indoor air ex RCS strip, from Apis mellifera (honeybee) overwintering facility Manning, Alta. S.P. Abbott (OHS 59) 2 Dec 1993 /S.P. Abbott (OHS 59).

Thanatephorus cucumeris (Frank) Donk (morph *Rhizoctonia solani*)

- 7572 ex cortical cells of orchid *Goodyera oblongifolia* Castle River, Alta. C. Zelmer 20 Jun 1992 /R.S. Currah Z123-or-2c. Mycorrhizae: effects of orchid mycorrhizal fungi on non-orchid hosts in dual culture (Zelmer et al., Mycoscience 37:439-448, 1996); orchid endophyte *Goodyera oblongifolia* // culture conditions: produced basidia & basidiospores (Zelmer et al., Mycoscience 37:439-448, 1996).

Thanatephorus ochraceus (Masse) P. Roberts (syn. *Thanatephorus pennatus*)

- 5404 ex roots fairy slipper orchid *Calypso bulbosa* Obed, Alta. R. Currah (RC111a) 24 Jul 1985 /R. Currah (RC111a) [=ATCC 64537 =GenBank EU218892 ITS]. Mycorrhizae: septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992) // molecular systematics: orchid mycorrhizal fungi (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008); ITS sequence grouped within a clade containing *Thanatephorus cucumeris* and *Ceratobasidium cornigerum* but separated by long branch (fide Taylor & McCormick 2008) // systematics/taxonomy: described originally as *Thanatephorus pennatus* (Currah RS, Can J Bot 65:1957-1960, 1987).
5405 (T *Thanatephorus pennatus*) ex roots fairy slipper orchid *Calypso bulbosa* Obed, Alta. R. Currah 112b 24 Jul 1985 /R. Currah 112b [=ATCC 64683]. Mycorrhizae: orchid endophyte *Calypso bulbosa* // systematics/taxonomy: described originally as *Thanatephorus pennatus* (Currah RS, Can J Bot 65:1957-1960, 1987).
5724 ex orchid *Orchis mascula* /A. Anderson 34. Mycorrhizae: orchid endophyte *Orchis mascula*.

Thanatephorus pennatus see ***Thanatephorus ochraceus***

Thecothelus cinereus (Cr. & Cr.) Chenantais

- 5644 horse dung in moist chamber Shackleford Bank, N. Carolina D. Malloch 25 Oct 1982 /D. Malloch M142h. Pigment: brown.

Thelebolus crustaceus (Fuckel) Kimbr.

- 6023 coyote dung Rocky-Clearwater Forest, Alberta R. Currah 30 Jun 1987 /R. Currah [=GenBank U53394 SSU]. Molecular systematics: phylogenetic analyses of SSU rDNA sequences of the Pezizales (Landvik S., et al., Nord. J. Bot. 17:403-418, 1997) // mesophilic: growth almost equivalent at 18C, 22C and 25C (fide UAMH 2011).
11731 swab ex skin of living tricolored bat (*Perimyotis subflavus*) Markhamville Mine, New Brunswick K.J. Vanderwolf 23-Feb-2012 /K.J. Vanderwolf 142202. Biodiversity: mycobiota of bat caves.
11732 swab ex fur of living long-eared bat (*Myotis septentrionalis*) Howes Cave, New Brunswick K.J. Vanderwolf 24-Feb-2012 /K.J. Vanderwolf 271202. Biodiversity: mycobiota of bat

caves.

- 11733 swab ex fur of living long-eared bat (*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J. Vanderwolf 28-Feb-2012 /K.J. Vanderwolf 401202. Biodiversity: mycobiota of bat caves.

Thelebolus globosus Brumm. & de Hoog

- 11473 swab ex skin of living male little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 56 C.1 . Molecular systematics: Blast match 100% D1D2 similarity with *Thelebolus globosus* AFTOL-ID 5016 (fide A. Lachance, Univ Western Ontario); 100% ITS similarity with UAMH 11475; Blast match 99% ITS similarity with *Thelebolus globosus* DQ028268 *Thelebolus globosus* strain CBS 113940 T (fide UAMH 2011) // culture conditions: produces chlamydo-spores but no ascomata // biodiversity: mycobiota of bat caves.
11475 swab ex fur of living male little brown bat (*Myotis lucifugus*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 30 C.4 . Biodiversity: mycobiota of bat caves // molecular systematics: 100% ITS similarity with UAMH 11473 (fide UAMH) // culture conditions: produces chlamydo-spores but no ascomata.
11624 swab ex skin of living male *Myotis septentrionalis* Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 60 C.2 S skin. Biodiversity: mycobiota of bat caves // culture conditions: produces chlamydo-spores but no ascomata.
11625 swab ex skin of bat Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 53 C.2 skin ox. Biodiversity: mycobiota of bat caves // culture conditions: produces chlamydo-spores but no ascomata.
11626 swab ex skin of living male *Myotis lucifugus* Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 59 C.1 skin. Biodiversity: mycobiota of bat caves // culture conditions: produces chlamydo-spores but no ascomata.

Thelebolus microsporus (Berk. & Br.) Kimbrough

- 9625 tracheal lesions (breathing tract/serous membranes), dead skuas (*Catharacta* sp.) Boeckella Lake, Hope Bay, Antarctica /Gerardo Leotta 8894. Psychrophilic: opt. 5-18 C; scant growth at 25 C // biodiversity: Associated with skuas in Antarctica producing pseudolesions resembling Aspergillosis in trachea (Leotta GA, Paré JA, Sigler L, Montalti D, Vigo G, Petruccell Mi, Reinoso EH, Journal of Wildlife Diseases 38:443-447, 2002).
9626 tracheal lesions (breathing tract/serous membranes), dead skuas (*Catharacta* sp.) Boeckella Lake, Hope Bay, Antarctica /Gerardo Leotta 8890. Psychrophilic: opt. 5 -18 C; scant growth at 25 C // biodiversity: Associated with skuas in Antarctica producing pseudolesions resembling Aspergillosis in trachea (Leotta GA, Paré JA, Sigler L, Montalti D, Vigo G, Petruccell Mi, Reinoso EH, Journal of Wildlife Diseases 38:443-447, 2002).
9662 tracheal lesions (breathing tract/serous membranes), dead skuas (*Catharacta* sp.); histopathology + for hyphae & ascospores Boeckella Lake, Hope Bay, Antarctica /Gerardo Leotta 8892. Psychrophilic: opt. 5 -18 C; scant growth at 25 C // biodiversity: Associated with skuas in Antarctica producing pseudolesions resembling Aspergillosis in trachea (Leotta GA, Paré JA, Sigler L, Montalti D, Vigo G, Petruccell Mi, Reinoso EH, Journal of Wildlife Diseases 38:443-447, 2002).

***Thelebolus* sp.**

- 11515 swab ex fur of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Harbell's Cave, New Brunswick K.J. Vanderwolf 21-Jan-2011 /K.J. Vanderwolf Bat 21 C.4 . Biodiversity: mycobiota of bat caves // culture conditions: multispored asci // psychrophilic: growth equivalent at 7C and

22 C; grows better @ 18 C than at 7C or 22 C // molecular systematics: ITS 1bp difference with *Thelebolus crustaceus* UAMH 6023.

Thelephora americana Lloyd

- 9578 ectomycorrhizae of 6 mo. old *Picea glauca* (white spruce) seedlings Pine Ridge Nursery, Smokey Lake, Alta. G. Kernaghan 26 Feb 1999 /G. Kernaghan [=GenBank AY219838 (ITS)]. Pigment: brown // odor: sweet // mycorrhizae: identification of root associated fungi from containerized *Picea glauca* seedlings (Kernaghan, Sigler & Khasa, *Microbial Ecology* 45:128-136, 2003); *Picea glauca* (white spruce) // molecular systematics: matched by RFLP to reference sporocarp; rDNA sequence analysis (Kernaghan, Sigler & Khasa, *Microbial Ecology* 45:128-136, 2003).

***Thelephora* sp.**

- 8955 solitary sporocarp in cutline, jackpine seedlings nearby Mildred Lake, Alta. R.M. Danielson (RMD 3022) 16 Sep 1980 /R.M. Danielson RMD 3022 [=DAOM 187916 =CCFC 4620]. Mycorrhizae.
9060 sporocarp abundant in cut line with bearberry & pine Mildred Lake, Alta. R.M. Danielson (RMD 3031) 16 Sep 1980 /R.M. Danielson RMD 3031. Pigment: brown // mycorrhizae.

Thelephora terrestris Fr.

- 5931 sphagnum under *Picea rubens* & *Larix laricina* Lawrence Station, Charlotte Co., N.B. L. Hutchison 4 Sep 1985 /L. Hutchison LH-133-85 [=TRTC LH-133-85]. Pigment: tan // mycorrhizae.

Thermoascus aurantiacus Mische

- 1800 hair ex canine Edmonton, Alta. J.W. Carmichael 19 Aug 1963 /J.W. Carmichael. Thermophilic: opt. 37C // cellulolytic.
1935 S.-I. Udagawa NHL 2290. Cellulolytic // thermophilic // culture conditions: produced ascomata with ascospores on OAT.
4911 soil T. Kijima /K.J. Kwong-Chung B4125 [=ATCC 26904 =HUT 4072 (K. Minoura)]. Thermophilic.
8917 low land cultivated soil (turnips) Tansui Chen, Taipei, Taiwan K.-Y. Chen 20-Apr-1984 /K.-Y. Chen 8404-4. Thermophilic: NG @ 30C, optimum growth @ 40-50C (Chen & Chen, *Mycotaxon* 60:225-240, 1996).

Thermoascus crustaceus (Apinis & Chesters) Stolk (syn.

- Dactylomyces crustaceus*; morph *Paecilomyces crustaceus*)
2384 silage Brookings, South Dakota 1953 /G. Semeniuk 269. Thermotolerant: grows @ 54C.
2905 mouse intestine Oklahoma R.S. Pore & H.W. Larsh 1967 /R.S. & Larsh, H.W. Pore 645. Human/animal pathogen: deep infection in mouse (Pore & Larsh, *Mycologia* 59:927-928, 1967) // thermotolerant.
2906 bronchial washing ex farmer with lung infiltration Missouri R.S. Pore & H.W. Larsh 1967 /R.S. & Larsh, H.W. Pore 675. Human/animal pathogen: pulmonary (Pore & Larsh, *Mycologia* 59:927-928, 1967) // thermotolerant.
2919 R.S. Pore 714. Thermotolerant.
3096 culture contaminant Peoria, Illinois /IMI 116814 [=CBS 374.62 =ATCC 16480 =NRRL 1563]. Thermotolerant.
7506 indoor air ex RCS strip Calgary, Alta. S.P. Abbott (SA-M259) 1 Dec 1993 /S.P. Abbott (SA-M259). Pigment: brown // thermotolerant: opt.>30C.
8918 low land cultivated soil (peanuts) Yunlin, Yunlin Hsien, Taiwan K.-Y. Chen 04-Apr-1985 /K.-Y. Chen 8504-10. Thermophilic: NG @ 16C, optimum temperature 30-40C (Chen & Chen, *Mycotaxon* 60:225-240, 1996) // pigment: yellow-orange.
10317 antral washings ex female 63 yr; DE - New Zealand K. Rogers 2003 /K. Rogers MR 3125. Cycloheximide: sensitive //

benomyl: sensitive // pigment: red on CER, tan on PDA; exudate heavy // culture conditions: heavy brown exudate on PDA // thermophilic: grows @ 35 C // molecular systematics: BLAST match 99% ITS similarity with U18353 *Thermoascus crustaceus* (C. Gibas unpublished).

- 10691 ex sputum, female 60 yr Edmonton, Alta. /R. Rennie MY 2649. Thermophilic // cycloheximide: sensitive (MYC) (fide UAH).

Thermoascus taitungiacus Chen, K.Y. & Chen, Z.C. (morph *Paecilomyces taitungiacus*)

- 8916 (T) low land, weed soils Antong, Taitung, Taiwan K.-Y. Chen 05-Sep-1987 /K.-Y. Chen 8709-2. Thermophilic: NG @ 20C, optimum temperature 30-40C (Chen & Chen, *Mycotaxon* 60:225-240, 1996).

Thermoascus thermophilus (Sopp) von Arx (syn.

- Dactylomyces thermophilus*)
2918 soil ex pine woods N. Mexico S. Gochenaur 1964 /R. Larcade. Thermotolerant.

Thermomyces lanuginosus Tsiklinsky (syn. *Humicola lanuginosa*)

- 1623 (T *Humicola lanuginosa*) hay Rothamsted Exp. Station M. Bunce 1959 /IMI 84400 [=ATCC 22070 =DAOM 186313 =CBS 632.91 =DAOM 232588 =GenBank AY706335 SSU-ITS]. Thermophilic: opt. 40C.
2478 ensiling corn Stover 1955 /G. Semeniuk 369. Thermophilic: opt. 40C.
2480 ensiling corn Stover 1955 /G. Semeniuk 387. Thermophilic: opt. 40C.
2482 moist wheat straw held at 55C 1955 /G. Semeniuk 365-1. Thermophilic: opt. 40C.
2483 ensiling alfalfa hay silage 1953 /G. Semeniuk 229. Thermophilic: opt. 40C.
8408 bronchial wash, male 35 yr Alberta Provincial Lab for Southern Alberta 1996 /R. Rennie MY 0049. Pigment: brown // thermophilic: opt. 40C.
8802 sputum, female 71 yr Alberta Prov Lab for Southern Alberta 23 Oct 1996 /R. Rennie MY 5197. Pigment: dark reddish brown // thermophilic: NG @ 25C, good growth @ 41C.
9021 tissue, right leg, male 13 yr with multiple trauma Ottawa, Ontario F. Chan (M25966) 06-Dec-1996 /R.C. Summerbell FR 3798. Pigment: brown // thermophilic: opt. 40C.

Thermomyces stellatus (Bunce) Apinis

- 1622 (T *Humicola stellatus*) hay Rothamsted Exp. Station M. Bunce 1959 /IMI 77024 [=ATCC 22113 =CBS 272.61]. Amylase. Thermotolerant.
5824 R. Shukla. Thermophilic.

Thermomyces verrucosus Pugh, Blakeman & Morgan-Jones

- 1670 salt marsh soil Gibraltar Pt., Lincs. /G. Morgan-Jones 24.

Thermophymatospora fibuligera Udagawa, Awao & Abdullah

- 5714 (T *Thermophymatospora fibuligera*) soil ex date palm plantation Saraji Park, Basrah City, Iraq S. Abdullah 25 Nov 1984 /S.-I. Udagawa NHL 2959 [=ATCC 62942]. Thermophilic // pigment: brown.

Thielavia arxii Stchigel & Guarro

- 8820 (T *Thielavia arxii*) soil nr Hanga-Roa city, Easter Island, Chile L. Zaror (isol. A.M. Stchigel) 15-09-95 /J. Guarro FMR 5875 [=IMI 381336 holotype =GenBank AJ271580 =IMI 374725]. Molecular systematics: *Thielavia* species (Stchigel, Figuera, Cano & Guarro, *Mycol. Res.* 106:975-983, 2002).
9658 soil Ajmer, India A.M. Stchigel 2 Nov 1995 /J. Guarro FMR 5765.

***Thielavia basicola* Zopf**

- 4305 soil outside cattle barn Edmonton, Alta. V. Mann (10) 17 May 1980 /V. Mann (10). Cellulolytic.

***Thielavia coactilis* Nicot**

- 9362 on mats of fallen stems of previous year's *Mentha longifolia*, on N exposed slope of deep-cut rivulet valley abt. 16 K NW of Schetpe, western Karatau Mts., Akatu, Mangyschak Pen., Kazakstan M. Schnittler (6869b) 17 May 1995 /J.C. Krug TRTC 52104.
- 9415 soil Delta del Ebro, Tarragona, Spain 15 Dec 1996 /J. Guarro FMR 6405.

***Thielavia hyrcaniae* Nicot**

- 9627 forest soil Ports de Beseit, Tarragona, Spain A.M. Stchigel 14 Mar 1999 /J. Guarro FMR 6726 [=CBS 102198].

***Thielavia* sp.**

- 500 skin ex toes Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 8277 indoor air ex RCS strip from honeybee (*Apis mellifera*) overwintering facility Fairview, Alta S.P. Abbott (FC-2-1C) 22-Mar-1994 /S.P. Abbott (FC-2-1C). Mesophilic: grows better @ 30C than @ 35C; growth strongly inhibited @ 35 C.
- 9109 (*Thielavia dacrydioides* unpublished name) soil attached to rhizoids of *Grimmia orbicularis* on N-exposed cliff Ksar Haddada, Tunisia J.-P. Frahm (813431) 11 Apr 1981 /J.C. Krug TRTC 52049 [=CBS 100257 =ATCC 201454]. Systematics/taxonomy: culture distributed as *Thielavia dacrydioides* ex-type but species name never validly published (fide UAMH 2012).

***Thielavia terrestris* (Apinis) Malloch & Cain (morph *Acremonium alabamense*)**

- 3264 spruce & pine Forest Prod. Lab. Vancouver B.C. /A. Ofosu-Asiedu. Thermotolerant: opt. 45C.
- 3265 spruce & pine Forest Prod. Lab. Vancouver B.C. /A. Ofosu-Asiedu. Thermotolerant: opt. 45C.
- 3266 spruce & pine Forest Prod. Lab. Vancouver B.C. /A. Ofosu-Asiedu. Thermotolerant: opt. 45C.
- 3267 pine Forest Prod. Lab. Vancouver B.C. /A. Ofosu-Asiedu. Thermotolerant: opt. 45C.
- 3268 spruce & pine Forest Prod. Lab. Vancouver B.C. /A. Ofosu-Asiedu. Thermotolerant: opt. 45C.
- 3988 (*T. Allescheria terrestris*) pasture soil England A.E. Apinis (BDUN 278) /CBS 355.66 [=IFO 9121]. Thermotolerant: grows @ 45C.
- 5532 bronchial washings Massachusetts J. Baker /M. Kemna M865-86. Pigment: brown // thermophilic.
- 6818 ex soil by hair bait Edmonton, Alta. E. Blondell-Hill Nov 1990 /E. Blondell-Hill. Mesophilic: NG @ 37C.
- 6851 soil Mordiah, Mali M. Goettel 15 Jul 1990 /M. Goettel 3A [=ARSEF 3046].
- 8112 ex nail Lt foot, male 68 yr, DE+, atypical filaments, *Aspergillus versicolor* also isolated Alberta C. Sand 19 Apr 1995 /R. Rennie MY 1420Cii.
- 8975 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta 12-7D) T. Lumley (EI-13-S3A 07 Dec 1995 /R.S. Currah EI-13-S3A, 12-7D. Pigment: brown // biodiversity: rotting wood (Lumley et al., Mycotaxon 74:395-414, 2000).
- 10291 from the upper portion of a brown *Typha latifolia* plant in a large *Typha*-dominated marsh Elk Island National Park, Alta. M. Schulz (MS-31) June 2001 /R.S. Currah MS-31. Pigment: yellow/brown // culture conditions: gelatinolytic, cellulolytic, lignolytic, utilizes starch and tannic acid // biodeteriogen/biodegradation: decomposition of *Typha latifolia* and enzymatic abilities (Schulz MJ, Thormann MN, Wetlands 25:675-684, 2005).

***Thielavia terricola* (Gilman & Abbott) Emmons**

- 1918 soil Saitama, Japan Oct 1958 /S.-I. Udagawa NHL 2269. Cellulolytic.
- 6000 Naro Moru Track, Mt. Kenya, Kenya Griffin & Krug (C) Cain 13 Jul 1966 /R. Khan 66.49h. Thermotolerant.
- 6022 barren soil by abandoned mine shaft, high metals Davidson Co. Silver Hill Mine, NC (C) J. Shaw 5 Feb 1986 /R. Khan TRTC 50997 [=CBS 50997]. Thermotolerant.
- 6388 soil abandoned orchard *Mangifera indica* Bidar, Karnataka State, India R.S. Khan 20 Aug 1987 /R. Khan TRTC 51010.
- 6765 soil Mordiah, Mali M. Goettel 15 Jul 1990 /M. Goettel 2C [=ARSEF 3050].
- 9656 soil Kampur, India A.M. Stchigel 5 Nov 1995 /J. Guarro FMR 5767 [=CBS 102200 =IMI 381337]. Thermotolerant: grows better @ 35C than @ 30C.

Thielavia thermophila* see *Corynascus thermophilus***Thielavia tortuosa* Udagawa & Y. Sugiyama**

- 8826 soil Jaipur, India J. Guarro 30 Oct 1995 /J. Guarro FMR 5780.

***Thielaviopsis basicola* (Berk. & Br.) Ferraris**

- 1530 G.L. Barron 5701.

***Thozetella cristata* Pirozynski & Hodges**

- 3975 soil Research Triangle Park, N.C. C.S. Hodges 24 Aug 1972 /DAOM 139483.

***Thysanophora longispora* Kendrick**

- 1460 (*T. Thysanophora longispora*) *Tsuga canadensis* needles Gatineau Park, Quebec W.B. Kendrick June 1959 /DAOM 63073 [=GenBank AF454089 =GenBank AB075439 (SSU) =GenBank AB075455 (LSU)]. Molecular systematics: comparison with species of *Penicillium* (Peterson & Sigler, Mycol. Res. (submitted Feb 02)).

***Thysanophora penicillioides* (Roumeguere) Kendrick**

- 1543 G.L. Barron OAC 7003.
- 3391 wood chip in soil Ellerslie, Alta. J.W. Carmichael /A.L. Johnson.
- 4691 litter beneath old *Picea* Devon, Alta. L. Sigler Nov 1982 /L. Sigler [=GenBank AB213276 Btubulin =GenBank AB213268 ITS].
- 9248 decayed wood (stage 2 decay), white spruce log (*Picea glauca*) Mariana Lake, Alta. 8-8A) T. Lumley (ML-01-S5A 8 Aug 1997 /R.S. Currah TCL 015 [=GenBank AB213270 ITS =GenBank AB213278 Btubulin]. Pigment: brown.
- 9768 Norway spruce (*Picea abies*) Hwy. 21, Tornby, Ostfold, Norway J. Reid (73-7) Sep 1973 /J. Reid UM 320 [=NOR 7-I].

***Thysanophora* sp.**

- 10366 outside air ex Andersen sampler Ventura Co., CA S.P. Abbott 14-Apr-2003 /S.P. Abbott SA 1442.

Tilachlidium brachiatum* (Batsch) Petch (morph**Pseudonectria tilachlidii*)**

- 1016 spleen ex Red Squirrel Caroline, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
- 1390 soil under Falcon roost Alberta Game Farm, Edmonton J.W. Carmichael 18 Jul 1962 /J.W. Carmichael.
- 1698 rotting *Alnus* wood Port Coquitlam, B.C. J.W. Carmichael 11 Jun 1963 /J.W. Carmichael.
- 1727 owl feathers Port Coquitlam, B.C. J.W. Carmichael 20 Jun 1963 /J.W. Carmichael.
- 4453 bear? dung containing seed & other plant material Hondo, Alta. R. Currah 26 Jun 1981 /R.S. Currah 81-14-2.
- 4675 galleries mountain pine beetle ex alpine fir Hinton, Alta. L. Sigler Oct 1982 /Y. Hiratsuka.
- 4681 litter under old *Picea* Devon, Alta. L. Sigler Oct 1982 /L.

- Sigler.
4702 rotten stump *Picea glauca* Devon, Alta. L. Sigler 5 Nov 1982 /L. Sigler.
- 8061 ex toenail, male 61 yr Alberta Provincial Laboratory for Southern Alberta 9 Dec 1994 /R. Rennie MY 0454. Pigment: brown.
- 8288 decorticated wood of poplar (*Populus* sp.) Wagner Natural Area, Alta S.P. Abbott (SA-M41) 29-Aug-1995 /S.P. Abbott (SA-M41). Pigment: grey-brown.
- Tilletiopsis albescens* Gokhale**
5023 lesion of colostomy New York /I. Weitzman 190. Systematics/taxonomy: karyotyping and G+C composition (Boekhout et al., Mycol. Res. 95:331-342, 1992).
6963 indoor air ex ventilation system Albany, NY 1990 /M. Kemna M291-90.
8411 indoor air in pulp and paper mill Quebec G. St-Germain /G. St-Germain MY 7081.
- Tilletiopsis minor* Nyland**
2678 D. Westlake [=PRL 1987]. Systematics/taxonomy: karyotyping and G+C composition (Boekhout et al., Mycol. Res. 95:331-342, 1992).
- Tilletiopsis pallescens* Gokhale**
9072 powdery mildew (*Sphaerotheca fuliginea*) infected cucumber leaves in a greenhouse Maple Ridge, BC E.J. Urquhart /E.J. Urquhart [=ATCC 96155]. Biocontrol: growth & survival enhanced by high humidity & presence of powdery mildew (Urquhart & Punja, Can J. Bot. 75:892-901, 1997); significantly reduced mildew sporulation & hyphal growth (Urquhart et al., Phytopathology 84:341-351, 1994); significant reduction of powdery mildew on infected roses after treatment (Ng et al., HortScience 32:262-266, 1997).
- Tilletiopsis* sp.**
6991 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) adults Lethbridge, Alta. D. Inglis (MR 380) Aug 1990 /D. Inglis (MR 380).
9382 vitreous fluid, eye, male 24 yr Halifax, NS Queen Elizabeth II Health Sciences Centre 3 Sept 1998 /R. Rennie MY 5285.
- Tilletiopsis washingtonensis* Nyland**
1738 leaves Washington strain Nyland /R.J. Bandoni B2 [=CBS 515.93 =GenBank AJ235277]. Molecular systematics: systematics of anamorphs belonging to the Ustilaginales and Tilletiales (Boekhout T et al., Stud. Mycol. 38:175-183, 1995).
6764 toenail, female 62 yr Athabasca, Alta. UAMH Sep 1990 /P. Kibsey MY 1841.
- Togninia fraxinopennsylvanica* (Hinds) Hausner, Eyjolfsdottir & J. Reid (morph *Phaeoacremonium an. Togninia fraxinopennsylvanica*)**
10158 (T *Ceratocystis fraxinopennsylvanica*) brown stain on *Fraxinus pennsylvanica* associated with larval galleries of *Leperisinus californicus* Swain, Bottineau County, North Dakota, USA (C) T. Hinds /J. Reid UM 804 [=ATCC 26664 =CBS 110212 =GenBank AY179947 =GenBank AY179913 =GenBank AY179959]. Culture conditions: perithecia formed around upper edge of petri dish after 6 mo // molecular systematics: relationship with *Phaeoacremonium* (Mostert, Crous, Groenewald, Gams & Summerbell, Mycologia 95:646-659, 2003).
- Togninia novae-zealandiae* Hausner, Eyjolfsdottir & Reid (morph *Phaeoacremonium an. Togninia novae-zealandiae*)**
9587 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity off Road 41, Whangapoua State Forest, Coromandel, New Zealand J. Reid & S. Reid (82-89 bi) 19 May 1982 /J. Reid UM 604 [=CBS 110154]. Systematics/taxonomy: descriptions & relationships of *Togninia* spp. (Hausner et al., Can. J. Bot. 70:724-734, 1993).
9588 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Whangapoua State Forest, Coromandel, New Zealand J. Reid & S. Reid (82-105aiii) 19 May 1982 /J. Reid UM 605 [=CBS 110155]. Systematics/taxonomy: descriptions & relationships of *Togninia* spp. (Hausner et al., Can. J. Bot. 70:724-734, 1993).
9589 (T *Togninia novae-zealandiae*) Monterey cypress (*Cupressus macrocarpa*), inner bark & outer sapwood showing bark beetle activity Compartment 14, Woodhill State Forest, Auckland, NZ J. Reid & S. Reid (82-113 bi) 25 May 1982 /J. Reid UM 606 [=CBS 110156 =GenBank AY179910 =GenBank AY179944]. Systematics/taxonomy: descriptions & relationships of *Togninia* spp. (Hausner et al., Can. J. Bot. 70:724-734, 1993) // molecular systematics: relationship with *Phaeoacremonium* (Mostert, Crous, Groenewald, Gams & Summerbell, Mycologia 95:646-659, 2003).
9590 Monterey pine (*Pinus radiata*), inner bark & outer sapwood showing bark beetle activity Compartment 24, Woodhill State Forest, Auckland, NZ J. & S. Reid (82-116ci) 25 May 1982 /J. Reid UM 607 [=CBS 110157 =GenBank AY179911 =GenBank AY179945 =GenBank AY179958]. Systematics/taxonomy: descriptions & relationships of *Togninia* spp. (Hausner et al., Can. J. Bot. 70:724-734, 1993) // molecular systematics: relationship with *Phaeoacremonium* (Mostert, Crous, Groenewald, Gams & Summerbell, Mycologia 95:646-659, 2003).
- Tolypocladium balanoides* see *Haptocillium balanoides***
- Tolypocladium cylindrosporium* Gams**
4561 *Aedes sierrensis* (treehole mosquito) California /M. Goettel TCA [=DAOM 183951]. Biocontrol: pathogen for mosquitoes (Goettel, Canadian Entomol. 119:599-601, 1987; Goettel, J. Am. Mosquito Control Association 3:239-245, 1987).
4562 *Aedes australis* in supralittoral tidal pool New Zealand J.S. Pillai /M. Goettel TNZ [=DAOM 183953]. Biocontrol: pathogen for mosquitoes.
4563 sewage Czechoslovakia /M. Goettel TCZ [=ARSEF 961 =DAOM 183952 =CBS 719.70? =UAMH 4995?]. Biocontrol: pathogen for mosquitoes.
4592 washed organic soil particle at 1900m Mt. Allen, Kananaskis Valley, Alta. J. Bissett 2 Jun 1971 /M. Goettel [=ARSEF 962 =ATCC 42438 =DAOM 167325].
4593 soil, mineral layer under undisturbed spruce-fir forest (5500-6000 ft.) Luscar, Alta. S. (C) Visser Aug 1976 /M. Goettel [=DAOM 167176 =ARSEF 963].
4827 root of black spruce, larch bog, Sunny lake, Ont. L. Ippolito (C) 27 Aug 1982 /B. Foster [=DAOM 183954].
4995 forest soil nr. Jeseník spaas, Moravia, Czechoslovakia O. Fassatiova (1450) /J. Weiser 132 [=CBS 719.70 =?UAMH 4563].
4996 drinking water Prague, Czech. O. Fassatiova (1679) /J. Weiser 133.
5002 *Aedes sierrensis* mosquito Novato, Calif. G.G. Soares 1979 /M. Goettel [=INRA 4]. Biocontrol: more virulent strain (Soares & al. J. Invert. Pathol. 46:115-120, 1985).
6921 Canadian hemlock litter San Juan Island /B. Katz 1.
10411 field collected larva of wireworm (*Limonius* sp.) Agassiz, B.C. M. Goettel 12-5-03 /M. Goettel LRC 172. Molecular systematics: ITS region sequence identical to *Tolypocladium cylindrosporium* CBS 719.70 (fide John Bissett, Agriculture & Agri-Food Canada).
- Tolypocladium extinguens* Samson & Soares**
5712 (T *Tolypocladium extinguens*) ex *Arachnocampa luminosa* Morin Cave, Waitomo, N.Z. G. Samuels 1977 /CBS 345.77.

Tolypocladium geodes Gams

- 4591 soil, predominantly white spruce woods Sudbury, Ont. Aug 1977 /M. Goettel [=DAOM 176470].

Tolypocladium inflatum W. Gams (syn. *Tolypocladium niveum*; morph *Cordyceps subsessilis*)

- 2472 water sample Whitehorse J.W. Carmichael 15 May 1965 /J.W. Carmichael. Cyclosporin (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990). Application: 2472A single conidial isolate, high cyclosporin producer fide Isaac et al (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 2473 UCLA M 121.
- 2880 soil under *Pinus contorta*, C horizon Kananaskis, Alta. P. Widden Nov 1967 /G.C. Bhatt alpha 77 [=DAOM 167132]. Cyclosporin (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990). Application: 2880A single conidial isolate, high cyclosporin producer fide Isaac et al (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4002 muskeg soil Tuktoyaktuk, NWT S. Davies (H-46-F) 1976 /S. Davies H-46-F [=ATCC 38656]. Cyclosporin (Isaac et al, Antimicrobial. Agents Chemother. 34:121-127, 1990). Biodeteriogen/biodegradation: utilization of aliphatic hydrocarbons (Davies & Westlake, Can. J. Microbiol. 25:146-156, 1979) // application: 4002A single conidial isolate, high cyclosporin producer fide Isaac et al (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4553 soil Hardanger Vidda, Norway J. Hansen 1974 /B. Foster [=ATCC 34921 =IMI 187376? =NRRL 8044 =UAMH 4740]. Cyclosporin A & C in submerged culture (Dreyfuss & al, Eur. J. Appl. Microbiol. 3:125-133, 1976); cyclosporine (Agathos & al, J. Ind. Microbiol. 1:39-48, 1986); cyclosporin (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990). Application: lower yield of cyclosporin fide Isaac et al (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4594 (T neotype of *Tolypocladium niveum*) washed organic particle, alpine meadow, 2530 m Mt. Allen, Kananaskis, Alta. J. Bissett 7 May 1969 /M. Goettel [=DAOM 167322 =ATCC 42437]. Cyclosporin (Isaac et al, Antimicrobial. Agents Chemother. 34:121-127, 1990). Application: 4594A single conidial isolate, high cyclosporin producer fide Isaac et al (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4740 soil Hardanger Vidda, Norway J. Hansen 1974 /J. Vederas [=ATCC 34921 =NRRL 8044 =IMI 187376 =UAMH 4553]. Cyclosporin A, B, C, D, E (Helv. Chim. Acta 59:1075-1092, 1976 & ibid. 60:1568-1578, 1977); cyclosporin (Agathos & al, J. Ind. Microbiol. 1:39-48, 1986; Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990). Application: lower yield of cyclosporin fide Isaac et al (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4828 (T *Tolypocladium inflatum*) humus alpine soil Obergurge Oetzal, Austria W. Gams 1959 /B. Foster [=CBS 824.70 =DAOM 64352]. Cyclosporin (Isaac et al, Antimicrobial. Agents Chemother. 34:121-127, 1990). Application: cyclosporin producer; 4828A single conidial isolate, high cyclosporin producer fide Isaac et al (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4900 mite surface *Mycobates* sp. Frobisher Bay, Baffin Is. V. (C) Behan 1976 /B. Foster [=DAOM 160594]. Cyclosporin (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4901 humified organic material under spruce-fir forest Luscar, Alta. S. Visser Aug 1976 /B. Foster [=DAOM 167175]. Cyclosporin (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990). Application: cyclosporin producer (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).
- 4903 soil Nepal G. Dutzler (C) /B. Foster [=DAOM 180481 =ATCC 36654]. No cyclosporin produced (Isaac et al, Antimicrob. Agents Chemother. 34:121-127, 1990).

- 5952 washed root surface *Cornus canadensis* Burt Lake, Burt Twp., Timiskaming Dist., Ont. R.C. Summerbell /R.C. Summerbell W 951. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989; Mycologia 77:587-593, 1985).
- 8723 single ascospore isolate of *Cordyceps subsessilis* collected on larva of Coleoptera (Scarabaeidae: Aphodiinae) Michigan Hollow State Forest, Danby, NY K.T. Hodge (kth30H) /R. Humber ARSEF 4884 [=CBS 305.95 =CCFC 6988 =CUP 63485 (specimen)]. Efrapeptins C, D & E (Hodge et al., Mycologia 88:715-719, 1996).
- 11424 swab ex skin of living male little brown bat (*Myotis lucifugus*) Howes Cave, New Brunswick K.J. Vanderwolf 21-Jan-2010 /K.J. Vanderwolf Bat 13 C.2. Biodiversity: mycobiota of bat caves.

Tolypocladium microsporium (Jaap) Bissett (syn.*Verticillium microsporium*)

- 4899 (T *Sesquicillium parvulum*) wheat-field soil Flevoland Polder Oostelijk, Netherlands /B. Foster [=ATCC 18932 =CBS 933.69 =DAOM 175219 =IMI 152204].
- 4909 soil under *Populus tremuloides* G.C. Bhatt 1970 /B. Foster [=CBS 355.70 =DAOM 175216].

Tolypocladium niveum see ***Tolypocladium inflatum******Tolypocladium nubicola*** Bissett

- 4595 (T) Warcup soil plate, alpine meadow 2530m Mt. Allen, Kananaskis, Alta. J. Bissett 1 Aug 1968 /M. Goettel [=DAOM 167320].
- 4902 washed mineral particles alpine meadow Mt. Allen, Kananaskis, Alta. J. Bissett (JB 633) 9 Jul 1969 /B. Foster [=DAOM 167324].

Tolypocladium parasiticum Barron

- 5325 (T *Tolypocladium parasiticum*) bdelloid rotifers, farm soil Guelph, Ontario G.L. Barron May 1979 /DAOM 184880 [=GenBank Z54112 ITS =OAC 795 =ATCC 52203 =ARSEF 3436 =GenBank FJ973068 ITS as ARSEF 3436 =GenBank EF468993 SSU as ARSEF 3436 =GenBank EF468945 RPB2 as ARSEF 3436 =GenBank EF468799 EF1 as ARSEF 3436 =GenBank EF468904 RPB1 as ARSEF 3436 =GenBank EF468848 LSU as ARSEF 3436]. Nematode-trapping // systematics/taxonomy: transferred to *Culicinomyces* by Sigler (Sigler et al, Mycologia 79:493-500, 1987).

Tolypocladium tundrense Bissett

- 4885 (T) raised beach soil Devon Island, N.W.T. P. Widden (m106) Sep 1970 /DAOM 167133.

Tomentella sp.

- 10034 sporocarp on planting core of willow planted 5 yrs. previously Calgary, Alberta, Canada R.M. Danielson 27 Jul 1981 /R.M. Danielson RMD 3094.

Torula fasciculata Matsushima

- 8420 swab ex moldy basement Ottawa, Ont. D. Malloch Dec 1995 /D. Malloch M21-4.

Torula herbarum (Pers.) Link

- 1478 Brassica stems Haslmere, Surrey E.W. Mason (c strain) 1945 /IMI 1332 [=CBS 245.57].
- 5337 ex jute backing bathroom carpet Orange Co. Calif. J. Gallup /J. Gallup Y-86. Pigment: gold.
- 7301 indoor air ex RCS strip Edmonton, Alta. S.P. Abbott (SA-M260) 18 Nov 1992 /S.P. Abbott (SA-M260).
- 7867 indoor air ex RCS strips, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 187) 30 Jan 1994 /S.P. Abbott (OHS 187).
- 10135 cuticle, coffee berry borer (*Hypothenemus hampei*)

- Monteperla, Union Juarez, Chiapas J. Perez 12-7-01 /F. Vega MP-CU R24-9.
10136 sinus, female 49 yr Bryan, TX Nov 2001 /Texas Dept. of Health BY 3255.

Torulomyces lagena Delitsch

- 1445 (T *Monocillium humicola*) peat soil cedar bog Ontario G.L. Barron (10504) /DAOM 87661 [=IMI 92745].
4701 rotten stump *Picea glauca* Devonian Bot. Garden. UAMH, Alta. L. Sigler 5 Nov 1982 /L. Sigler.
7371 ex bronchial wash, female 71 yr; DE - Wetaskiwin, Alta. May 1993 /R. Rennie MY 2038C. Pigment: brown.
7427 bronchial washing, female 73 yr Alberta Provincial Laboratory for Southern Alberta Aug 1993 /R. Rennie MY 3645. Mesophilic: NG @ 37C // cycloheximide: slightly sensitive.
8407 D. Malloch Dec 1995 /D. Malloch M20-1A.

Torulopsis candida see ***Candida famata******Torulopsis famata*** see ***Candida famata******Torulopsis glabrata*** see ***Candida glabrata******Torulopsis* sp.**

- 994 spleen, cottontail Smoky Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
995 spleen, Deer Mouse Alta. J.W. Carmichael Jun 1959 /J.W. Carmichael.
1552 fermenting full strength corn syrup Edmonton, Alta. J.W. Carmichael 1 Feb 1963 /J.W. Carmichael.
6536 snowpack nr peak Wavy Mountain, Wells Gray Prov. Park, B.C. R.C. Summerbell 14 Aug 1980 /R.C. Summerbell RCS-Y203. Diazonium blue B: + red when pretreated with KOH // psychophilic: max. nr. 18C.

Trametes hirsuta (Wulf.: Fr.) Pilat

- 8165 Alberta L.L. Kennedy (K107) /S. Davies FC-053. Biodeteriogen/biodegradation: white rot // crystals // application: oxidation of dibenzyl sulfide to dibenzyl sulfoxide (van Hamme JD, Wong ET, Dettman H, Gray MR, Pickard MA, Appl. Env. Microbiol. 69:1320-1324, 2003).

Trametes hispida see ***Coriopsis gallica******Trametes peckii*** see ***Coriopsis gallica******Trametes serialis*** see ***Antrodia serialis******Trametes stuppeus*** see ***Coriopsis gallica******Trametes trogii*** Berk. apud Trog. (syn. *Funalia trogii*)

- 8156 *Populus balsamifera* Alberta M.K. Nobles Jul 1958 /S. Davies FC-157 [=NOF 490]. Biodeteriogen/biodegradation: white rot // application: oxidation of dibenzyl sulfide to dibenzyl sulfoxide (van Hamme JD, Wong ET, Dettman H, Gray MR, Pickard MA, Appl. Env. Microbiol. 69:1320-1324, 2003).

Trametes versicolor (L.:Fr.) Pilat (syn. *Coriolus versicolor*, *Polyporus versicolor*)

- 7331 ex sporophore on very old *Betula papyrifera* Dorset, Ont. M. Nobles (48-49) 1948 /DAOM 21150. Pigment: brown.
8271 A. Jobson /S. Davies FC-016. Biodeteriogen/biodegradation: white rot.
8272 Alberta L.L. Kennedy (K101-D) /S. Davies FC-051. Biodeteriogen/biodegradation: white rot; high biodegradation and mineralization of polychlorinated biphenyl congeners (Beaudette et al., Appl. Env. Microbiol. 64:2020-2025, 1998); evaluation of surfactants in stimulating degradation of

polychlorinated biphenyl congeners (Beaudette et al., Letters in Appl. Microbiol. 30:155-160, 2000) // application: ligninolytic enzymes (Pickard et al., Can. J. Microbiol. 45:627-631, 1999); metabolism of polycyclic aromatic hydrocarbons (Pickard et al., Applied Env. Microbiol. 65:3805-3809, 1999); enzymatic activity & dye decolorization (Rodriguez et al., Curr. Microbiol. 38:27-32, 1999); laccase activity (Tinoco, Pickard & Vazquez-Duhalt, Lett. App. Microbiol. 32:331-335, 2001; Fujihoro S, Higuchi R, Hisamatsu S, Sonoki S. Applied Microbiol Biotechnol 82:853-860, 2009); pesticide depletion by lignolytic fungi (Torres-Duarte C, Roman R, Tinoco R, Vazquez-Duhalt R, Chemosphere 77:687-692, 2009); evaluation of white rot fungi for bioremediation of waste water (Robles-Vargas D, Montoya-Castillo SM, Avelar-Gonzalez FJ, et al, J Environ Sci Health A Tox Hazard Subst Environ Eng 47:589-597, 2012) // culture conditions: cereal bran for laccase production (Pickard et al., Can. J. Microbiol. 45:627-631, 1999).

- 8273 pulpwood Quebec July 1932 /S. Davies FC-177 [=NOF 45]. Biodeteriogen/biodegradation: white rot // culture conditions: clamps.
11521 ex *Acer saccharum* Houghton, MI S.C. Robinson August 2008 /S. C. Robinson SR003. Culture conditions: clamps // biodeteriogen/biodegradation: influence of pH on pigment formation by lignicolous fungi; fungal pigment production for wood spaling applications (Robinson SC, Tudor D, Cooper PA, Int Biodet Biodegrad 65:1145-1149, 2011; Robinson SC, Laks PE, Forest Products Journal 60:490-495, 2011; Robinson SC, Tudor D, Cooper PA, Appl Microbiol Biotechnol 2011 Epub Sep 20).

Trametes zonatus (Nees:Fr.) Pilat (syn. *Polyporus zonatus*, *Coriolus zonatus*)

- 8158 *Populus tremuloides* Alberta R.J. Bouchier 11 Sep 1952 /S. Davies FC-151 [=NOF 35]. Biodeteriogen/biodegradation: white rot.
8180 Alberta L.L. Kennedy (K104-6) /S. Davies FC-061. Biodeteriogen/biodegradation: white rot.

Trechispora vaga see ***Phlebiella sulphurea******Tremella mesenterica*** Fries

- 2668 D. Westlake [=PRL 1982].

Triadelphia heterospora Shearer & Crane

- 3482 (T *Triadelphia heterospora*) on balsa wood block Lower Marlboro, Maryland Shearer & Crane 8 Dec 1967 /C. Shearer CS-33 [=ATCC 22772 =CBS 222.83 =DAOM 126798 =IMI 144033].

Triadelphia pulvinata Maggi, Bartoli & Rambelli

- 4611 laboratory mice inoculated with soil suspension Saudi Arabia /S. & Leathers, C. Al-Hedaithy SA-77. Human/animal pathogen: recoverable after passage through mice (Al-Hedaithy, S.S.A. & C.R. Leathers, Proc. Saudi Biol. Soc. 10:209-216, 1987; Al-Hedaithy, S.S.A. & C.R. Leathers, Proc. Saudi Biol. Soc. 10:197-207, 1987).
4612 laboratory mice inoculated with soil suspension Saudi Arabia /S. & Leathers, C. Al-Hedaithy SA-84. Human/animal pathogen: recoverable after passage through mice (Al-Hedaithy, S.S.A. & C.R. Leathers, Proc. Saudi Biol. Soc. 10:197-207, 1987; Al-Hedaithy, S.S.A. & C.R. Leathers, Proc. Saudi Biol. Soc. 10:209-216, 1987).
9955 bronch wash right middle lung, female 85 yr B.C. Mar 2001 /R. Rennie MY 636. Thermotolerant: grows better @ 37C than 25C.

Triangularia tanzaniensis see ***Zopfiella tanzaniensis***

Tricellula aurantiaca (Haskins) von Arx (syn. *Volucrispora aurantiaca*)

- 1483 (T *Volucrispora aurantiaca*) water culture containing soil Saskatoon, Canada R.H. Haskins (PRL 1554) 1956 /IMI 73024 [=ATCC 13128 =CBS 399.58].
6491 ex decaying lobe of *Opuntia* sp. Cache Creek, B.C. R.C. & J.B. Summerbell Apr 1987 /R.C. Summerbell PE-3.
6649 plate contaminant UAMH A. Flis 4 Jun 1990 /A. Flis.

Trichaptum laricinum (Karsten) Ryvar den (syn. *Hirschioporus laricinus*)

- 8157 Alberta L.L. Kennedy (T-435) /S. Davies FC-318.
Biodeteriogen/biodegradation: white rot.

Tricharina cretea see ***Ascorhizoctonia cretea******Tricharina gilva*** see ***Ascorhizoctonia gilva******Tricharina groenlandica*** see ***Ascorhizoctonia groenlandica******Tricharina mikolae*** see ***Wilcoxina mikolae*** var. ***mikolae******Tricharina ochroleuca*** see ***Ascorhizoctonia ochroleuca******Tricharina praecox*** see ***Ascorhizoctonia intermedia******Tricharina praecox*** see ***Ascorhizoctonia praecox******Trichocladium asperum*** Harz

- 3190 wet Sphagnum and mud Reading Univ., U.K. M.W. Dick 1968 /IMI 131384.

Trichocladium opacum (Corda) Hughes

- 3083 Beech litter Manchester, England R. Caldwell 1958 /IMI 75709.
5426 ex northern green orchid *Platanthera hyperborea* Wagner Bog, Edmonton, Alta. R. Currah (79ra) 10 Jul 1985 /R. Currah (79ra) [=ATCC 64848 =IMI 318088].
6711 ex *Botrychium* sp. gametophyte A. Anderson /R.S. Currah.
7102 D. Malloch /D. Malloch Ceno C5.
9294 thigh tissue, female 39 yr Alberta Provincial Lab. for Southern Alberta 30 Apr 1998 /R. Rennie MY 2693.

Trichoderma citrinoviride Bissett (morph *Hypocrea schweinitzii*)

- 473 sputum Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
475 sputum Edmonton, Alta. J.W. Carmichael 19 Dec 1955 /J.W. Carmichael.
999 lung of woodchuck (*Marmota monax*) High Prairie, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael [=DAOM 175952 =GenBank X93940 ITS]. Systematics/taxonomy: *Hypocrea schweinitzii* complex (Samuels et al., Stud. Mycol. 41:1-53, 1998) // pigment: yellow // application: rapid identification by isoenzyme analysis (Szekeres A, Laday M, Kredics L, Varga J, Antal Z, Hatvani L, Manczinger L, Vágvolgyi C, Nagy E, Clinical Microbiology and Infection 12:369-375, 2006).
4163 soil? /S. Davies FC-007 [=UAMH 8162].
4182 field corn Peking Ting (456-2) /S. Davies FC-222.
5331 white spruce seeds Alberta R. Mittal 22 Jan 1986 /R. Mittal M-47. Plant pathogen: on seed (pathogen?) (Mittal & Wang, Can. J. For. Res. 17:1026-1034, 1987).
6122 finely ground oak leaves Rhode Is. M. Carreiro /M. Carreiro. Culture conditions: competition (Carreiro & Koske, Mycol. Res. 96:12-24, 1992).
8162 L.L. Kennedy (H-7F) /S. Davies FC-007 [=UAMH 4163]. Cellulase (A. Jobson, Alberta Research Council, pers. comm.;

S. Davies, pers. comm.).

Trichoderma hamatum (Bonord.) Bain.

- 806 Monosporium ellipticum strain Danszewska soil Switzerland /CBS 121.13.

Trichoderma harzianum Rifai (morph *Hypocrea lixii*)

- 525 farm yard with horses Edmonton, Alta. J.W. Carmichael Jul 1956 /J.W. Carmichael.
4075 wood chips and bark from logging truck Westlock, Alta. J.W. Carmichael 19 Jan 1978 /J.W. Carmichael.
4162 hyperparasite ex *Alternaria brassicae* on *Brassica campestris* NFRC Edmonton A. Tsuneda /S. Davies FC-146 [=NFRC C-672]. Molecular systematics: BLAST match 99-100% ITS similarity to *Hypocrea lixii* / *Trichoderma harzianum* (fide fungalITSdatabaseID).
5069 ?hyperparasite of *Mycena citricolor* Costa Rica E. Vargas group (TH 2) 1985 /L. Browne.
6997 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 102) Aug 1990 /D. Inglis (MR 102).
10552 ex soil-less growth medium sample (1) Fort Langley, B.C. L. Sigler 30-Mar-2005 /Westcreek Farms. Thermotolerant: grows slowly @ 35C // molecular systematics: BLAST match 99-100% ITS similarity with *Hypocrea lixi*-*Trichoderma harzianum*.
10676 sponge *Mycale* sp. (orange specimen) - internal tissue Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 4B. Molecular systematics: BLAST match 100% ITS similarity with *Trichoderma harzianum* and *Hypocrea lixii*.

Trichoderma koningii Oudemans (morph *Hypocrea koningii*)

- 438 skin from toes Edmonton, Alta. J.W. Carmichael Oct 1955 /J.W. Carmichael.
613 J.W. Carmichael 1958 /J.W. Carmichael. Pigment: yellow.
2052 rotting *Populus* log Edmonton, Alta. J.W. Carmichael 8 Aug 1964 /J.W. Carmichael.
4183 sclerotium *Sclerotinia sclerotiorum* in soil Edmonton, Alta. S. Davies /S. Davies A-66-F.
10553 ex soil-less growth medium sample (2) Fort Langley, B.C. L. Sigler 30-Mar-2005 /Westcreek Farms. Mesophilic: NG @ 35C // molecular systematics: BLAST match 99% ITS similarity with *Trichoderma koningii* // culture conditions: sporulates on tap water agar in window.

Trichoderma longibrachiatum Rifai

- 1206 soft rot cedar cooling tower Toronto J.W. Carmichael 1962 /J.W. Carmichael [=DAOM 175956]. Systematics/taxonomy: *Trichoderma* sect. *longibrachiatum* (Samuels et al., Stud. Mycol. 41:1-53, 1998).
7955 ex sinus, DE+, multiple isolations /M.G. Rinaldi UTHSC 93-99 [=GenBank AY328040 ITS]. Molecular systematics: genetic diversity based on mitochondrial DNA profiles (Antal Z, Varga J, Kredics L, Szekeres A, Hatvani L, Manczinger L, Vágvolgyi C, Nagy E, Medical Microbiology 55:31-35, 2006) // application: rapid identification by isoenzyme analysis (Szekeres A, Laday M, Kredics L, Varga J, Antal Z, Hatvani L, Manczinger L, Vágvolgyi C, Nagy E, Clinical Microbiology and Infection 12:369-375, 2006) // biodeteriogen/biodegradation: extracellular proteolytic enzymes (Kredics L, Antal Z, Szekeres A, Manczinger L, Doczi I, Kevei F, Nagi E, Acta Microbiologica et Immunologica Hungarica 51:283-295, 2004) // human/animal pathogen: antifungal peptide activity against selected fungi (Galgoczy L, Viragh M, Kovacs L, Toth B, Papp T, Vagvolgyi, C. Peptides Epub Nov 2012).
7956 ex multiple isolations from stool, ulcer biopsy, liver and heart, DE+ /M.G. Rinaldi UTHSC 94-1620 [=UTMB 3577 =GenBank AY328041 ITS]. Pigment: yellow //

- systematics/taxonomy: *Trichoderma* sect. *longibrachiatum* (Samuels et al., *Stud. Mycol.* 41:1-53, 1998) // molecular systematics: genetic diversity based on mitochondrial DNA profiles (Antal Z, Varga J, Kredics L, Szekeres A, Hatvani L, Manczinger L, Vágvölgyi C, Nagy E, *Medical Microbiology* 55:31-35, 2006) // application: rapid identification by isoenzyme analysis (Szekeres A, Laday M, Kredics L, Varga J, Antal Z, Hatvani L, Manczinger L, Vágvölgyi C, Nagy E, *Clinical Microbiology and Infection* 12:369-375, 2006) // biodeteriogen/biodegradation: extracellular proteolytic enzymes (Kredics L, Antal Z, Szekeres A, Manczinger L, Doczi I, Kevei F, Nagi E, *Acta Microbiologica et Immunologica Hungarica* 51:283-295, 2004).
- 9515 peritoneal effluent, female St. John's, Newfoundland NF 46470-98 Mar 1999 /R. Rennie MY 1793 [=NF 46470-98 =GenBank AY328035 =GenBank AY625069 ITS]. Pigment: slight yellow on PDA @30C after 70 hr; none @37C or 42C // thermotolerant: good growth @ 37C(radius 100 mm) and 42C (radius 65 mm) after 70 hr // application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, *J Environ Monit* 6:615-620, 2004); rapid identification by isoenzyme analysis (Szekeres A, Laday M, Kredics L, Varga J, Antal Z, Hatvani L, Manczinger L, Vágvölgyi C, Nagy E, *Clinical Microbiology and Infection* 12:369-375, 2006) // molecular systematics: genetic diversity based on mitochondrial DNA profiles (Antal Z, Varga J, Kredics L, Szekeres A, Hatvani L, Manczinger L, Vágvölgyi C, Nagy E, *Medical Microbiology* 55:31-35, 2006) // biodeteriogen/biodegradation: extracellular proteolytic enzymes (Kredics L, Antal Z, Szekeres A, Manczinger L, Doczi I, Kevei F, Nagi E, *Acta Microbiologica et Immunologica Hungarica* 51:283-295, 2004).
- 9573 peritoneal catheter tip St. John's, NF J. Hutchison 1999 /J. Hutchison NF 15421-99 [=GenBank AY328038 ITS]. Application: rapid identification by isoenzyme analysis (Szekeres A, Laday M, Kredics L, Varga J, Antal Z, Hatvani L, Manczinger L, Vágvölgyi C, Nagy E, *Clinical Microbiology and Infection* 12:369-375, 2006) // molecular systematics: Determined as *Trichoderma longibrachiatum* by ITS sequence analysis (fide Dr. L. Kredics); genetic diversity based on mitochondrial DNA profiles (Antal Z, Varga J, Kredics L, Szekeres A, Hatvani L, Manczinger L, Vágvölgyi C, Nagy E, *Medical Microbiology* 55:31-35, 2006).
- 10147 R & L antrum tissue, female 51 yr, DE+ for chlamydispores & septate hyphae Toronto, ON 29 Jan 2002 /S. Mohan 97291522 & 97291529. Human/animal pathogen: allergic fungal sinusitis in patient with history of atopy & asthma (Tang, Mohan, Sigler, Witterick et al., *J. Clin. Microbiol.* 41:5333-5336, 2003); Isolate identity confirmed with ITS region sequence.
- 10677 sponge *Terpios zeteka* (yellow-brown-black specimen) - external surface Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 8F. Molecular systematics: BLAST match 100% ITS similarity with *Trichoderma longibrachiatum*.
- 10847 ex heavy growth of mixed molds on steam line covering in greenhouse tunnel Univ Alberta campus, Edmonton, Alta. (I) L. Sigler (C) N. Dhanani 17-Sep-2007 /N. Dhanani #2. Molecular systematics: BLAST match 100% ITS similarity with *Trichoderma longibrachiatum* (fide UAMH 2008) // biodiversity: heavy growth of mixed molds (*Mucor*, *Aspergillus* and *Trichoderma*) on steamline covering (fide Environmental Health & Safety, U of A).
- J.C.S. Chem. Comm., 1981:585-587).
- 5164 contaminant ex roots *Goodyera oblongifolia* Castle Mountain, Alta. R. Currah (0-39-a) 19 Jun 1985 /R. Currah (0-39-a).
- 5176 contaminant ex *Suillus umbonatus* M240A UAMH L. Sigler Sep 1985 /L. Sigler.
- 5957 macerated, serially washed feeder root *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. R.C. Summerbell 6 Jun 1982 /R.C. Summerbell W 231. Mycorrhizae: microhabitat (Summerbell, *Can. J. Bot.* 67:1085-1095, 1989).
- 11133 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Mt. MacKenzie, Cape Breton Highlands National Park of Canada, Nova Scotia (C) G. Patriquin G. Kernaghan 19-Sep-2007 /G. Kernaghan ARSL 190907.26 [=GenBank HQ157910 ITS]. Molecular systematics: BLAST match 98-99% ITS similarity with *Hypocrea pachybasioides* (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011) // culture conditions: degenerate poorly sporulating at deposit // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- Trichoderma reesei* E.G. Simmons (morph *Hypocrea jecorina*)**
- 4158 (T *Trichoderma reesei*) cotton duck shelter Solomon Islands W.H. & White, W.L. Weston 1944 /S. Davies [=QM 6a =ATCC 13631 =CBS 383.78 =IMI 192654 =IMI 45548 =BCRC 31640 =CCFC 2589 =CBS 819.91 =DAOM 167654 =DSM 768 =FRR 4517 =IFO 31326 =IHEM 5651 =IMI 345107 =JCM 22676 =GenBank HM182994 chitinase gene =NBRC 31326 =GenBank GQ354321 LAS1 gene =GenBank HM182969 RPB2 =GenBank EF563987 =GenBank AM168137 =GenBank AF414296 ITS =GenBank AF510497 ITS =GenBank AF127154 28S =GenBank AF414296 ITS as BCRC 32891 =GenBank NC_003388 Ref seq =GenBank NC_003388 mitochondrion complete genome =GenBank PRJNA225530]. Glucose by enzymatic hydrolysis of cellulose (*Appl. Microbiol.* 16:419-420, 1968); cellulase (*J. Bact.* 79:816-826, 1960); beta-(1,3)-D-glucanase (*C.R. Acad. Sci.* 283D:1397-1399, 1977); endoglucanase; cell-wall lytic enzymes; glucose D-glucose. Pigment: yellow (fide UAMH 2011) // fungus resistance testing: plastics; U.S. federal and military specifications // molecular systematics: genome sequencing of the biomass-degrading fungus *Trichoderma reesei* (syn *Hypocrea jecorina*) (Martinez D, Berka RM, Henrissat B, Saloheimo M, Arvas M et al, *Nat Biotechnol* 26:553-560, 2008) // biodeteriogen/biodegradation: main industrial source of cellulases and hemicellulases used to depolymerize biomass to simple sugars that are converted to biofuels such as ethanol (Martinez et al 2008); numerous genes encode biosynthetic pathways for secondary metabolites (Martinez et al 2008).
- 4159 mutant ex ATCC 24449 (QM 9123) M. Mandels (349) /S. Davies [=ATCC 26921 =IMI 192656 =QM 9414]. Cellulase (Better cellulase producer than ATCC 24449; *Biotechnol. Bioeng.* 18:1751-1760, 1976); paracelsin (mycotoxin) (Bruckner & al., *Biochemical Engineering* (Chmiel, Hammes & Bailey, eds) p 450-453, 1987, Gustav Fischer Verlag, Stuttgart; Bruckner & al., *Experientia* 40:1189-1197, 1984); trichodimerol, sorbicillin, bisvertinol & bisvertinolone (Andrade et al. *Can. J. Chem.* 70:2526-2535, 1992).
- 4160 mutant ex ATCC 13631 (QM 6a) M. Mandels (178) /S. Davies [=QM 9136 =ATCC 26920].
- 4170 radiation mutant 207 ex QM 6a (ATCC 13631) M. Mandels /S. Davies [=QM 9123 =ATCC 24449 =IMI 192655]. Protein (*Biotechnol. Bioeng.* 17:1291-1299, 1975; *Appl. Microbiol.* 21:152-154, 1971; *Appl. Microbiol.* 23:875-879, 1972); cellulase (*Applied Microbiol.* 21:152-154, 1971; enhanced cellulase production); cellobiohydrolase D (*Biochim. Biophys. Acta* 492:225-231, 1977); intracellular beta-glucosidase (*Biochem. J.* 185:515-519, 1980).
- Trichoderma polysporum* (Link) Rifai (morph *Hypocrea pachybasioides*)**
- 1122 G.F. Orr 0-1074.
- 1826 leaf mold Edmonton, Alta. J.W. Carmichael 23 Oct 1963 /J.W. Carmichael.
- 1908 lichen Thorne 1963 /G.F. Orr DT-1.
- 4728 B. Foster [=TMI 60146]. *Trichopolyn* I & II (Fujita & al,

- 5068 ?hyperparasite of *Mycena citricolor* Costa Rica E. Vargas group 1985 /L. Browne. *Trichodimerol*, *sorbicillin*, *bisvertinol* & *bisvertinolone* (Andrade et al, Can. J. Chem. 70:2526-2535, 1992); *trichodermolide* & *sorbiquinol* (Andrade, Ayer & Trifonov, Can. J. Chem. 74:371-379, 1996). Pigment: bright yellow.

Trichoderma reesei see *Hypocrea jecorina*

Trichoderma virens (Miller) Arx (morph *Hypocrea virens*)

- 4938 J. Kane JF 9126.
10678 sponge *Terpios zeteki* (yellow-brown-black specimen) - external surface Mona, Kingston, Jamaica, West Indies P. Reese /P. Reese 8E. Molecular systematics: BLAST match 100% ITS similarity with *Trichoderma virens* & *Hypocrea virens*.

Trichoderma viride Pers.

- 3919 pasture soil 22 days after contamination with crude oil Fort McMurray, Alta. A. Jobson 2 Sep 1975 /A. Jobson. Molecular systematics: Blast match 99-100% ITS similarity with *Trichoderma viride* (fide UAMH 2011).
4161 aspen shavings Alberta S. Davies /S. Davies FC-126. Molecular systematics: BLAST match 100% ITS similarity to *Trichoderma viride* (fide UAMH 2011).
4486 rotting *Alnus rubra* twig in damp chamber Fanny Bay, B.C. J.W. Carmichael Nov 1981 /J.W. Carmichael.
4726 gall *Endocronartium harknessii* Jasper Alta. E. Allen Nov 1982 /E. Allen.
6280 canola oil during processing Edmonton, Alta. A. Flis Sep 1988 /G. Ogren. Molecular systematics: determined as *T. viride* (fide R. Haugland) // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).

Tricholoma albobrunneum (Pers.:Fr.) Kummer

- 6068 gregarious in *Polytrichum* moss below *Picea glauca*, *Pinus strobus* & *Populus tremuloides* Algonquin Park, Canisbay Twp, Nipissing District, Ont. L. Hutchison 3 Oct 1987 /L. Hutchison LH-31-87 [=TRTC LH-31-87]. Mycorrhizae.

Tricholoma albolaripes (Atkinson)

- 5568 mixed *Picea mariana*, *P. glauca*, *Populus* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 3 Sep 1986 /: . Mycorrhizae.

Tricholoma aurantium (Schaff. ex Fr.) Ricken

- 5496 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.
5497 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 6 Aug 1986 /: . Mycorrhizae.
5577 mixed *Picea glauca*, *P. mariana* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /: . Mycorrhizae.
6223 *Picea engelmannii* woods Bow-Crow Forest, Alta. (C) S.P. Abbott 18 Jul 1988 /(C) S.P. Abbott. Mycorrhizae.

Tricholoma flavovirens (Pers. ex Fr.) Lundell

- 5510 Alberta R. Danielson (RMD 2851) 19 Sep 1978 /DAOM 176654 [=RMD 2851 =CCFC 3700 =DAOM 176654]. Mycorrhizae.
5574 mixed *Picea mariana*, *P. glauca*, *Populus* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /: . Mycorrhizae.
9062 sporocarp subhypogeous in cut line, near jackpine (*Pinus banksiana*) Mildred Lake, Alta. R.M. Danielson (RMD 3043) 16 Sep 1980 /R.M. Danielson RMD 3043 [=DAOM 184719 =CCFC 4313]. Mycorrhizae.
9085 (RMD 2458) R.M. Danielson /R.M. Danielson RMD 2458. Mycorrhizae.

- 9181 sporocarp scattered in jackpine (*Pinus banksiana*) with lichen Mildred Lake, Alta. R.M. Danielson (RMD 3187) /R.M. Danielson RMD 3187. Mycorrhizae.

Tricholoma focale (Fr.) Ricken

- 6069 solitary/scattered in *Pleurozium* below *Pinus banksiana* & *P. sylvestris* York Regional For.-Porrit Tract, nr Ballantrae, York Co., Ont. L. Hutchison 15 Oct 1987 /L. Hutchison LH-49-87 [=TRTC LH-49-87]. Mycorrhizae.

Tricholoma fulvum (Bull. ex Fr.) Sacc.

- 5939 gregarious to clustered under *Abies balsamea* & *Betula papyrifera* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Malloch 3 Sep 1981 /L. Hutchison DM 155 [=TRTC DM 155]. Mycorrhizae.
6205 under *Abies balsamea* & *Betula papyrifera* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Malloch 3 Aug 1981 /L. Hutchison DM37 [=TRTC DM37]. Mycorrhizae.
6206 under *Abies balsamea* & *Betula papyrifera* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C) D. Malloch 3 Aug 1981 /L. Hutchison DM40 [=TRTC DM40]. Mycorrhizae.

Tricholoma imbricatum (Fr.) Kummer

- 5267 *Pinus contorta* woods Grand Prairie Forest, Alta. 9 Apr 1985 /: . Mycorrhizae.
5282 *Pinus banksiana* woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Mycorrhizae.
5283 *Pinus banksiana* woods Devonian Botanic Garden, Devon, Alta. 8 Sep 1985 /: . Mycorrhizae.

Tricholoma magnivelare (C.H. Peck) S.A. Redhead (syn.

Armillaria ponderosa)

- 8956 sporocarps gregarious on site with jackpine Mildred Lake, Alta. R.M. Danielson (RMD 3016) 16 Sep 1980 /R.M. Danielson RMD 3016 [=DAOM 184721 =CCFC 4316]. Mycorrhizae: American matsutake or pine mushroom.
9518 ex mushroom in canopy of mainly western hemlock (*Tsuga heterophylla*), lodgepole pine (*Pinus contorta*) & western red cedar (*Thuja plicata*) Skeena River, British Columbia, Biogeoclimatic zone ICHmc2, on 01b site series S. Berch (C. Woon) Sep 1998 /S. Berch FS 101 Tm A. Mycorrhizae: American matsutake or pine mushroom.
9519 ex mushroom in canopy of mainly western hemlock (*Tsuga heterophylla*), lodgepole pine (*Pinus contorta*) & western red cedar (*Thuja plicata*) Skeena River, British Columbia, Biogeoclimatic zone ICHmc2, on 01b site series S. Berch (C. Woon) /S. Berch FS 102 Tm B. Mycorrhizae: American matsutake or pine mushroom.
9520 ex mushroom among lodgepole pine (*Pinus contorta*) & lichens NW of Anahim Lake near the Beef Trail Creek, British Columbia, Biogeoclimatic zone SBPSx S. Berch (C. Woon) Sep 1998 /S. Berch FS 103 Tm C. Mycorrhizae: American matsutake or pine mushroom.

Tricholoma myomyces (Pers. ex Pers.) Lange

- 5936 gregarious to scattered under *Pinus strobus* Milton at Oakville Creek, Esquesing Township, Halton Co., Ont (C) D. Malloch 3 Nov 1985 /L. Hutchison LH-162-85 [=TRTC LH-162-85]. Mycorrhizae.
6067 scattered/gregarious in moss under *Pinus resinosa* & *Quercus velutina* nr Normandale Fish Hatchery, Delhi Twp, Norfolk Co., Ont. L. Hutchison 12 Oct 1987 /L. Hutchison LH-48-87 [=TRTC LH-48-87]. Mycorrhizae.

Tricholoma pessundatum (Fr.) Quelet

- 6066 gregarious in *Polytrichum* below *Pinus banksiana* York Co. Regional For.- Porrit Tract, nr Ballantrae, Ont. L. Hutchison 11 Oct 1987 /L. Hutchison LH-39-87 [=TRTC LH-39-87]. Mycorrhizae.

- 6207 under *Pinus banksiana* Fort McMurray, Alta. (C) R. Danielson 1978 /L. Hutchison J244. Mycorrhizae.
 9000 R.M. Danielson (RMD 2476) /R.M. Danielson RMD 2476. Mycorrhizae.

***Tricholoma pessundatum* var. *montinum* (Fr.) Pilat**

- 8949 sporocarp ex cutline Mildred Lake, Alta. R.M. Danielson (RMD 2874) 20 Sep 1978 /R.M. Danielson RMD 2874. Mycorrhizae.
 9001 sporocarp in jackpine (*Pinus banksiana*), *Cladonia* lichen and bearberry (*Arctostaphylos uva-ursi*) Mildred Lake, Alta. R.M. Danielson (RMD 2853) 19 Sep 1978 /R.M. Danielson RMD 2853. Mycorrhizae.

***Tricholoma populinum* J.E. Lange**

- 9924 sporocarp found under poplar (*Populus tremuloides*) Terwilliger Park, Edmonton, AB G. Kernaghan 30 Sep 1999 /G. Kernaghan GK 99092601. Mycorrhizae // culture conditions: no clamps.

***Tricholoma resplendens* (Fr.) Quel.**

- 5799 ex mixed deciduous-coniferous woods Dorset, Muskoka District, Ont. L.J. Hutchison 20 Sep 1986 /L. Hutchison LH-102-86 [=TRTC LH-102-86]. Mycorrhizae.

***Tricholoma* sp.**

- 9177 sporocarp under jackpine (*Pinus banksiana*) Mildred Lake, Alta. R.M. Danielson (RMD 2968) 20 Sep 1979 /R.M. Danielson RMD 2968. Pigment: brown // mycorrhizae.
 9178 sporocarp scattered on site Mildred Lake, Alta. R.M. Danielson (RMD 3017) 16 Sep 1980 /R.M. Danielson RMD 3017. Pigment: brown // mycorrhizae // culture conditions: prefers 18C, exceptionally slow growing.
 9655 sporocarp solitary in bearberry patch with pine seedlings in burn Richardson's Fire Tower, Ft. McMurray, AB R.M. Danielson 25 Sep 1976 /R.M. Danielson RMD 2444 [=DAOM 176640 =CCFC 003680].
 10020 yellow rhizomorphs on stick in peat with willow Luscar, AB R.M. Danielson 17 Sep 1981 /R.M. Danielson RMD 3142.

***Tricholoma vaccinum* (Pers. ex Fr.) Kummer**

- 5472 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /R.M. Danielson. Mycorrhizae.
 5498 mixed *Picea* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Mycorrhizae.
 5499 mixed *Picea* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Mycorrhizae.
 5500 mixed *Picea* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Mycorrhizae.
 5501 mixed *Picea* woods Rocky-Clearwater Forest, Alta. 28 Jul 1986 /: . Mycorrhizae.
 5578 mixed *Picea glauca*, *Populus* woods Rocky-Clearwater Forest, Alta. 20 Aug 1986 /: . Mycorrhizae.
 6070 gregarious in *Pleurozium* carpet below *Picea glauca*, *Alnus rugosa*, *Betula glandulosa* & *Salix* sp. Schefferville Airport, Nouveau Quebec, PQ L. Hutchison 31 Aug 1987 /L. Hutchison DM435 [=TRTC DM435]. Mycorrhizae.
 6162 gregarious in *Cladonia* carpet under *Picea mariana* Schefferville, Nouveau Quebec P.Q. (C) D. Malloch 5 Sep 1984 /L. Hutchison DM436 [=TRTC Malloch 5.9.84/1]. Mycorrhizae.
 6267 *Pinus contorta*, *Picea engelmannii* & *Populus tremuloides* woods Rocky-Clearwater Forest, Alta. (C) S.P. Abbott 22 Aug 1988 /(C) S.P. Abbott. Mycorrhizae.

***Tricholoma virgatum* (Fr. ex Fr.) Kummer**

- 5576 mixed *Picea mariana*, *P. glauca*, *Populus* & *Pinus contorta* woods Rocky-Clearwater Forest, Alta. 13 Aug 1986 /: . Mycorrhizae.

- 5798 soil under *Abies balsamea* & *Pinus strobus* Dorset, Muskoka District, Ont. L.J. Hutchison 19 Sep 1986 /L. Hutchison LH-96-86 [=TRTC LH-96-86]. Mycorrhizae.

***Tricholoma zelleri* (Stuntz & Smith) Ovrebo & Tylutki**

- 9059 sporocarp solitary in immature jackpine (*Pinus banksiana*) Mildred Lake, Alta. R.M. Danielson (RMD 2967) 20 Sep 1979 /R.M. Danielson RMD 2967. Pigment: brown // mycorrhizae.
 9086 sporocarp gregarious on slope under pine Richardson's Fire Tower, Ft. McMurray, AB R.M. Danielson (RMD 2491) 26 Sep 1976 /R.M. Danielson RMD 2491 [=DAOM 176661 =CCFC 3706]. Mycorrhizae.

***Tricholomataceae* sp. I**

- 11130 ex *Cenococcum geophilum* mycorrhizae of balsam fir (*Abies balsamea*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 17-May-2007 /G. Kernaghan ARSL 170507.37 [=GenBank HQ157909 ITS]. Mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, Microb Ecol online 8-Apr-2011).

Trichophaea minuta* see *Dichobotrys sessilispora

***Trichophaea saccata* (Evans) Korf (morph *Dichobotrys parvispora*)**

- 4032 elm bark in moist chamber Carlton Univ., Ottawa W. Illman Jan 1977 /W. Illman.
 4079 wood chips & bark ex logging truck Westlock, Alberta J.W. Carmichael 26 Jan 1978 /J.W. Carmichael.

Trichophyton ajelloi* see *Arthroderma uncinatum

***Trichophyton concentricum* Blanchard**

- 275 Dr. Munroe.
 2497 UCLA M 356 (D. Howard 248).

***Trichophyton equinum* (Matruchot & Dassonville) Gedoelst**

- 587 CDC VM 1069.
 2948 A.T. Londero 63.3.1094.
 2949 A.T. Londero 66.69.2099.
 4006 horse with circular, flaky lesions Alta. B. McDonald Aug 1976 /B. MacDonald 1474. Culture conditions: no growth on *Trichophyton* agar 1-4; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
 4204 skin ex horse Alberta B. Murray 1979 /B. Murray. Culture conditions: BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive; no growth on *Trichophyton* agar 1-4; colony with pink or yellow surface pigment.
 5848 horse Edmonton, Alta. C. Jenkins Jun 1987 /C. Jenkins 3119.
 6436 horse skin Alberta K. Manninen 1989 /K. Manninen 7248.
 7689 ex imported polo pony New Zealand A. Woodgyer /A. Woodgyer MY 77-641. Culture conditions: requires nicotinic acid (stimulated on *Trichophyton* agar 5); no growth on *Trichophyton* agar 1-4; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive // human/animal pathogen: first NZ isolate of this form of the species (fide submitting laboratory).

***Trichophyton equinum* var. *autotrophicum* Smith, Jolley, Georg & Connole**

- 3010 (T *Trichophyton equinum* var. *autotrophicum*) horse N.Z. /J.M.B. Smith H10 [=ATCC 22443 =IMI 133568 =CBS 100080 =GenBank EF043273 ITS]. Culture conditions: no requirement for vitamins; does not require nicotinic acid.
 7688 ex lesions on face & neck of horse; DE+ New Zealand A. Woodgyer 1990 /A. Woodgyer MY 90-227. Culture conditions: does not require nicotinic acid; growth equivalent on *Trichophyton* agar 1-4; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive; BCP-MS-G profuse

growth; no alkalinity; no hydrolysis; urea positive.

- Trichophyton erinacei** (Smith & Marples) Padhye & Carmichael (syn. *Trichophyton mentagrophytes* var. *erinacei*; morph *Arthroderma benhamiae*)
- 2962 hedgehog N.Z. /F.M. Rush-Munro 1 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2963 body ex child N.Z. /F.M. Rush-Munro 2 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2964 back & buttock, child N.Z. /F.M. Rush-Munro 5 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2965 neck adult N.Z. /F.M. Rush-Munro 6 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2966 knee adult N.Z. /F.M. Rush-Munro 3 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2967 hand, face, neck of adult New Zealand /F.M. Rush-Munro 4 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2968 forearm adult N.Z. /F.M. Rush-Munro 7 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2969 F.M. Rush-Munro 8 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2970 knee adult N.Z. /F.M. Rush-Munro 9 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2971 side of foot, child N.Z. /F.M. Rush-Munro 10 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2972 thigh child N.Z. /F.M. Rush-Munro 11 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2973 foot child N.Z. /F.M. Rush-Munro 12 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 2974 knee adult N.Z. /F.M. Rush-Munro 13 + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3011 hedgehog N.Z. /J.M.B. Smith H8-6 [=CDC B-1855] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3012 hedgehog N.Z. /J.M.B. Smith H8-28 [=CDC B-1854] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3013 hedgehog N.Z. /J.M.B. Smith H8-30 [=CDC B-1856] + Padhye & Ajello, Sabouraudia 15:103-114, 1977. Culture conditions: BCP-MS-G profuse growth; alkalinity; urea negative.
- 3014 human N.Z. /J.M.B. Smith H8-Human 1 [=CDC B-1857] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3016 human N.Z. /J.M.B. Smith Hh 8-2 [=CDC B-1858] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3017 human N.Z. /J.M.B. Smith Hh 8-3 [=CDC B-1859] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3018 human N.Z. /J.M.B. Smith Hh 8-4 [=CDC B-1860] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3019 human N.Z. /J.M.B. Smith Hh 8-7 [=CDC B-1861] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3020 human N.Z. /J.M.B. Smith Hh 8-35 [=CDC B-1862] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3021 human N.Z. /J.M.B. Smith Hh 8-36 [=CDC B-1863] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3022 human N.Z. /J.M.B. Smith Hh 8-37 [=CDC B-1864] + Padhye & Ajello, Sabouraudia 15:103-114, 1977.
- 3023 mouse N.Z. /J.M.B. Smith H 21.

Trichophyton fischeri Kane

- 5369 (T *Trichophyton fischeri* paratype) contaminant ex blood agar plate Toronto, Ont. J. Kane Dec 1965 /J. Kane OMH 506.
- 5390 (T *Trichophyton fischeri*) contaminated blood agar plates Toronto, Ont. J. Kane (OHM 595) Dec 1965 /ATCC 32871 [=DAOM 198320 =IMI 213848 =GenBank AF170459 ITS =CBS 100081 =GenBank AJ270792 ITS]. Molecular systematics: Part of the *T. rubrum* dermatophyte complex (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999); isolates of *T. raubitschekii*, *T. fischeri* and *T. kanei* found to have ITS sequences identical to *T. rubrum* (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).

Trichophyton flavescens see **Arthroderma flavescens**

Trichophyton gallinae see **Microsporium gallinae**

Trichophyton gloriae see **Arthroderma gloriae**

Trichophyton gourvilii Catanei

1467 CDC X-484.

Trichophyton kanei Summerbell

- 5370 (T *Trichophyton kanei*) buttock (human) London, Ont. J. Kane 1985 /R.C. Summerbell F 8546.86 [=CBS 289.86 =ATCC 62345 =TRTC 50887 =NCPF 724]. Human/animal pathogen.
- 7525 skin, male 67 yr Edmonton, Alta. C. Sand 23 Nov 1994 /R. Rennie MY 4938.
- 8538 1994 /R.C. Summerbell BB 1537 [=NOMH 1113 =FR 2728 =OMH 1342 =GenBank AF170460 ITS]. Molecular systematics: Part of the *T. rubrum* dermatophyte complex (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999); isolates of *T. raubitschekii*, *T. fischeri* and *T. kanei* found to have ITS sequences identical to *T. rubrum* (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).
- 8595 nail, male 55 yr, DE+ Edmonton, Alta. C. Sand 11 Apr 1996 /R. Rennie MY 1641.
- 9045 skin scraping ex foot female 77 yr, DE+ Fort Saskatchewan, Alta. C. Sand 23 Jul 1997 /R. Rennie MY 3848.

Trichophyton kraidenii Kane, Scott & Summerbell

- 3244 (T *Trichophyton kraidenii*) skin lesion L. Friedman /CDC X-441 [=GenBank AY176740 (LSU)]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002; Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
- 3246 CDC X-662.
- 3253 nail scraping, left hand Edmonton, Alta. J.W. Carmichael 9 Jul 1969 /J.W. Carmichael. Pigment: brown.
- 5949 onychomycosis toenail Toronto 30 Sep 1987 /R.C. Summerbell FR 1489.
- 7617 ex Rt foot, female Provincial Laboratory for Southern Alberta /R. Rennie MY 5297. Pigment: brown.
- 8539 R.C. Summerbell BB 1225 [=NOMH 800 =FR 83 =OMH 1092 =GenBank AF170462]. Keratinophilic: hair perforation (pers. comm. G. St-Germain, 29 Jul 1996) // molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).
- 8540 left & right great toenails & left 3rd toenail, female 84 yr, DE + London, Ont. 01 May 1996 /R.C. Summerbell F 4762.
- 8541 Rt great toenail, female 37 yr, DE - Thornhill, Ont. 23 Apr 1996 /R.C. Summerbell F 4360.
- 8546 1991 /R.C. Summerbell BB 1138 [=NOMH 713 =FR 1908 =OMH 1042 =GenBank AF170461]. Keratinophilic: no hair perforation (pers. comm. G. St-Germain, 29 Jul 1996) // molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).
- 10197 atypical isolate ex nail, male 59 yr Mission Memorial Hosp., Mission, BC Mar-02 /R. Rennie MY 2285. Benomyl: sensitive // cycloheximide: tolerant // culture conditions: good growth at 35 C, no vitamin requirements, hair digestion with perforating bodies; BCP-MS-G profuse growth; alkalinity; urea positive; nonsporulating.

Trichophyton longifusum (Florian & Galgoczy) Ajello

- 3388 (T *Keratinomyces longifusum*) Tinea capitis in presence of *Microsporium gypseum* E. Florian 1950 /CBS 243.64 [=ATCC 22397 =UAMH 3392 =IMI 136932].
- 3392 (T *Keratinomyces longifusum*) Tinea capitis man Florian 1950 /IMI 136932 [=ATCC 22397 =CBS 243.64 =UAMH 3388].
- 3579 hair baited soil India Ghosh /G.F. Orr 153#2.

Trichophyton megninii Blanchard

- 1469 CDC A-0617.
 2460 UCLA M 242 [=CDC 424].
 8542 atypical /R.C. Summerbell BB 1320 [=NOMH 896 =GenBank AF170463]. Culture conditions: requires histidine // molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).

Trichophyton mentagrophytes (Robin) Blanchard (morph *Arthroderma benhamiae*, *Arthroderma vanbreuseghemii*)

- 208 eyelashes, right lower eyelid Edmonton, Alta. E.S.Keeping 7 Nov 1947 /E.S.Keeping.
 209 scalp hair Edmonton, Alta. A. Bakerspigel 1952 /A. Bakerspigel.
 210 scrapings from temple Edmonton, Alta. A. Bakerspigel 1952 /A. Bakerspigel.
 270 Dr. Munroe.
 274 Dr. Munroe.
 653 lung, Peromyscus Slave Lake, Alta. J.W. Carmichael Jul 1959 /J.W. Carmichael.
 654 spleen, Peromyscus Fort Vermilion Alta. J.W. Carmichael Aug 1959 /J.W. Carmichael.
 778 hair Edmonton, Alta. J.W. Carmichael 14 Aug 1959 /J.W. Carmichael.
 781 face Edmonton, Alta. J.W. Carmichael 28 Jul 1959 /J.W. Carmichael.
 855 skin from leg Edmonton, Alta. Oct 1960 /J.W. Carmichael.
 902 scalp hair Edmonton, Alta. J.W. Carmichael 13 Mar 1961 /J.W. Carmichael.
 904 pus swab from eyelid Edmonton, Alta. J.W. Carmichael 4 Mar 1961 /J.W. Carmichael.
 1124 skin & hair, dead Chinchilla Calgary, Alta. /J.W. Carmichael. Thermotolerant: good growth @ 37C.
 1269 CDC 45-70-62.
 1573 sputum /G.F. Orr 62-8030.
 1574 sputum /G.F. Orr 62-6463.
 1575 sputum /G.F. Orr 62-6454.
 1629 skin scrapings ex shoulders Edmonton, Alta. J.W. Carmichael 15 Mar 1963 /J.W. Carmichael.
 1630 skin shoulders patient from Jamaica Edmonton, Alta. J.W. Carmichael 15 Mar 1963 /J.W. Carmichael.
 1666 scrapings ex toe nail Edmonton, Alta. J.W. Carmichael 23 Apr 1963 /J.W. Carmichael.
 1882 swab ex scalp lesion child 5 yr Edmonton, Alta. J.W. Carmichael 10 Dec 1963 /J.W. Carmichael.
 1946 neck lesion child Edmonton, Alta. J.W. Carmichael 6 Mar 1964 /J.W. Carmichael.
 2033 great toenail ex female 46 yrs. Edmonton, Alta. J.W. Carmichael 2 May 1964 /J.W. Carmichael.
 2123 ears, cat, 4 months Edmonton, Alta. J.W. Carmichael 24 Aug 1964 /J.W. Carmichael.
 2128 left temple, male 19 yrs Edmonton, Alta. J.W. Carmichael 25 Jun 1964 /J.W. Carmichael.
 2130 face, male 13 yr Edmonton, Alta. J.W. Carmichael 11 Aug 1964 /J.W. Carmichael.
 2131 thighs Edmonton, Alta. J.W. Carmichael 17 Aug 1964 /J.W. Carmichael.
 2132 leg, male Edmonton, Alta. J.W. Carmichael 18 Aug 1964 /J.W. Carmichael.
 2150 ear, male Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
 2151 feet, male, 27 yr Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
 2153 toe, female 45 yr Edmonton, Alta. J.W. Carmichael 10 Aug 1964 /J.W. Carmichael.
 2178 face, female Edmonton, Alta. J.W. Carmichael 10 Aug 1964 /J.W. Carmichael.
 2179 thigh Edmonton, Alta. J.W. Carmichael 5 Aug 1964 /J.W. Carmichael.
 2180 scalp, female, 9 yr Edmonton, Alta. J.W. Carmichael 7 Aug 1964 /J.W. Carmichael.
 2181 head lesion, male, 13 yrs. Edmonton, Alta. J.W. Carmichael 8 Aug 1964 /J.W. Carmichael.
 2182 between toes, female, 67 yrs. Edmonton, Alta. J.W. Carmichael Oct 1964 /J.W. Carmichael.
 2184 soles and between toes, male 46 yr Edmonton, Alta. J.W. Carmichael 28 Jul 1964 /J.W. Carmichael.
 2188 toes, male 27 yr Edmonton, Alta. J.W. Carmichael 1 Aug 1964 /J.W. Carmichael.
 2189 finger, male, 19 yr Edmonton, Alta. J.W. 05-08-64 Carmichael /J.W. 05-08-64 Carmichael.
 2191 J.W. Carmichael 28 Jul 1964 /J.W. Carmichael.
 2192 heel, male, 45 yrs. Edmonton, Alta. J.W. Carmichael 28 Aug 1964 /J.W. Carmichael.
 2201 soles, female 42 yr Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
 2205 palms, male, 61 yrs. Edmonton, Alta. J.W. Carmichael Sep 1964 /J.W. Carmichael [=UAMH 2489].
 2206 foot, female, 56 yr Edmonton, Alta. J.W. Carmichael Nov 1964 /J.W. Carmichael.
 2212 swab (same patient as UAMH 2213) Edmonton, Alta. J.W. Carmichael 14 Sep 1964 /J.W. Carmichael.
 2213 scrapings (same patient as UAMH 2212) Edmonton, Alta. J.W. Carmichael 14 Sep 1964 /J.W. Carmichael.
 2214 male, 23 yrs. Edmonton, Alta. J.W. Carmichael 28 Aug 1964 /J.W. Carmichael. Culture conditions: cottony form typical.
 2215 scraping forearm, female 31 yr Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
 2234 feet, male, 21 yr Edmonton, Alta. J.W. Carmichael Dec 1964 /J.W. Carmichael.
 2237 face, male, 18 yr Edmonton, Alta. J.W. Carmichael Dec 1964 /J.W. Carmichael.
 2239 male, 12 yrs. Edmonton, Alta. J.W. Carmichael Dec 1964 /J.W. Carmichael.
 2244 scrapings Edmonton, Alta. J.W. Carmichael 29 Sep 1964 /J.W. Carmichael.
 2245 scrapings, back Edmonton, Alta. J.W. Carmichael 30 Sep 1964 /J.W. Carmichael.
 2246 scales, palms Edmonton, Alta. J.W. Carmichael 30 Sep 1964 /J.W. Carmichael.
 2248 swab, scalp discharge Edmonton, Alta. J.W. Carmichael 6 Oct 1964 /J.W. Carmichael.
 2250 hair, head Edmonton, Alta. J.W. Carmichael 30 Sep 1964 /J.W. Carmichael.
 2252 scrapings, arm and thigh Edmonton, Alta. J.W. Carmichael 28 Sep 1964 /J.W. Carmichael.
 2253 scrapings, cheek Edmonton, Alta. J.W. Carmichael 21 Sep 1964 /J.W. Carmichael.
 2254 scrapings, forearm Edmonton, Alta. J.W. Carmichael 24 Sep 1964 /J.W. Carmichael.
 2259 feet Edmonton, Alta. J.W. Carmichael 17 Sep 1964 /J.W. Carmichael.
 2262 skin lesion Edmonton, Alta. J.W. Carmichael 28 Sep 1964 /J.W. Carmichael.
 2264 scalp lesion scales Edmonton, Alta. J.W. Carmichael 5 Oct 1964 /J.W. Carmichael.
 2265 skin scrapings & hair, cat Edmonton, Alta. J.W. Carmichael 24 Aug 1964 /J.W. Carmichael.
 2267 skin scrapings, face male 25 yr Edmonton, Alta. J.W. Carmichael 21 Aug 1964 /J.W. Carmichael.
 2268 scalp hairs Edmonton, Alta. J.W. Carmichael 21 Oct 1964 /J.W. Carmichael.
 2270 scales from face lesion Edmonton, Alta. J.W. Carmichael 2 Jul 1964 /J.W. Carmichael.
 2272 scrapings, Lt foot Edmonton, Alta. J.W. Carmichael 23 Jul 1964 /J.W. Carmichael.
 2274 toes Edmonton, Alta. J.W. Carmichael 30 Sep 1964 /J.W. Carmichael.
 2275 skin scrapings Rt hand Edmonton, Alta. J.W. Carmichael 7 Jul

- 1964 /J.W. Carmichael.
 2279 Edmonton, Alta. J.W. Carmichael Dec 1964 /J.W. Carmichael.
 2280 scalp hairs Edmonton, Alta. J.W. Carmichael 21 Oct 1964 /J.W. Carmichael.
 2281 left foot Edmonton, Alta. J.W. Carmichael 19 Oct 1964 /J.W. Carmichael.
 2284 scrapings, feet Edmonton, Alta. J.W. Carmichael 6 Jul 1964 /J.W. Carmichael.
 2286 scrapings Rt foot Edmonton, Alta. J.W. Carmichael 9 Jul 1964 /J.W. Carmichael.
 2312 scrapings feet Edmonton, Alta. J.W. Carmichael 14 Jul 1964 /J.W. Carmichael.
 2313 scrapings arm Edmonton, Alta. J.W. Carmichael 21 Jul 1964 /J.W. Carmichael.
 2314 scrapings feet Edmonton, Alta. J.W. Carmichael 16 Jul 1964 /J.W. Carmichael.
 2316 foot Edmonton, Alta. J.W. Carmichael 13 Jul 1964 /J.W. Carmichael.
 2318 feet Edmonton, Alta. J.W. Carmichael 23 Jul 1965 /J.W. Carmichael.
 2319 swab wrist lesion Edmonton, Alta. J.W. Carmichael 23 Jul 1964 /J.W. Carmichael.
 2325 scrapings scalp Edmonton, Alta. J.W. Carmichael 8 Sep 1964 /J.W. Carmichael.
 2327 scrapings toe Edmonton, Alta. J.W. Carmichael 14 Jul 1964 /J.W. Carmichael.
 2328 scrapings thigh Edmonton, Alta. J.W. Carmichael 14 Oct 1964 /J.W. Carmichael.
 2329 neck scrapings Edmonton, Alta. J.W. Carmichael 13 Oct 1964 /J.W. Carmichael.
 2337 Edmonton, Alta. J.W. Carmichael 16 Jul 1964 /J.W. Carmichael.
 2343 scrapings foot Edmonton, Alta. J.W. Carmichael 11 Dec 1964 /J.W. Carmichael.
 2344 Edmonton, Alta. J.W. Carmichael 21 Oct 1964 /J.W. Carmichael.
 2345 Edmonton, Alta. J.W. Carmichael 24 Oct 1964 /J.W. Carmichael.
 2346 scrapings forearm Edmonton, Alta. J.W. Carmichael 22 Oct 1964 /J.W. Carmichael.
 2350 Edmonton, Alta. J.W. Carmichael 30 Oct 1964 /J.W. Carmichael.
 2351 feet Edmonton, Alta. J.W. Carmichael 10 Nov 1964 /J.W. Carmichael.
 2367 skin scrapings Edmonton, Alta. J.W. Carmichael 17 Nov 1964 /J.W. Carmichael.
 2371 segregate ex UAMH 2314 J.W. Carmichael 1965 /J.W. Carmichael.
 2372 segregate ex UAMH 2179 J.W. Carmichael 1965 /J.W. Carmichael.
 2373 segregate ex UAMH 2319 J.W. Carmichael 1965 /J.W. Carmichael.
 2374 segregate ex UAMH 2319 J.W. Carmichael 1965 /J.W. Carmichael.
 2380 scrapings foot Edmonton, Alta. J.W. Carmichael 11 Dec 1964 /J.W. Carmichael.
 2382 scrapings face Edmonton, Alta. J.W. Carmichael 3 Feb 1965 /J.W. Carmichael.
 2385 scrapings wrist Edmonton, Alta. J.W. Carmichael 1 Dec 1964 /J.W. Carmichael.
 2387 arm Edmonton, Alta. J.W. Carmichael 13 Jan 1965 /J.W. Carmichael.
 2400 segregate ex UAMH 1946 J.W. Carmichael 1965 /J.W. Carmichael.
 2401 segregate ex UAMH 2267 J.W. Carmichael 21 Aug 1964 /J.W. Carmichael.
 2404 skin male, 37 yr Edmonton, Alta. J.W. Carmichael 2 Jan 1965 /J.W. Carmichael.
 2405 hair & skin, head, dog, Edmonton, Alta. J.W. Carmichael 18 Jan 1965 /J.W. Carmichael.
 2411 hair left whisker, male 11 yr Edmonton, Alta. J.W. Carmichael 29 Mar 1965 /J.W. Carmichael.
 2415 scrapings wrist, male Edmonton, Alta. J.W. Carmichael 1 Aug 1964 /J.W. Carmichael.
 2416 toenail, male Edmonton, Alta. J.W. Carmichael 22 Jan 1965 /J.W. Carmichael.
 2417 segregate ex UCLA 361 LBVA Hospital Calif. P. Martin 1964 /P. Martin UCLA 361-D.
 2422 segregate ex UAMH 2421 Edmonton, Alta. J.W. & Martin, P. Carmichael 10 Feb 1965 /J.W. & Martin, P. Carmichael. Culture conditions: BCP-MS-G profuse growth; alkalinity; urea positive; no requirement for vitamins.
 2423 scrapings neck dog Edmonton, Alta. J.W. Carmichael 17 Feb 1965 /J.W. Carmichael.
 2424 palms Edmonton, Alta. J.W. Carmichael 17 Nov 1964 /J.W. Carmichael.
 2425 scalp hairs, female, 3 yrs Edmonton, Alta. J.W. Carmichael 24 Feb 1965 /J.W. Carmichael.
 2426 scalp lesion female, 3 yr Edmonton, Alta. J.W. Carmichael 22 Feb 1965 /J.W. Carmichael.
 2427 skin scrapings male 38 yr Edmonton, Alta. J.W. Carmichael 5 Feb 1965 /J.W. Carmichael.
 2428 scales cheek lesion male 5 yrs Edmonton, Alta. J.W. Carmichael 11 Feb 1965 /J.W. Carmichael.
 2457 segregate ex UAMH 1946 P. Martin 1965 /P. Martin.
 2458 segregate ex UAMH 2267 P. Martin & J.W. Carmichael 1965 /P. Martin & J.W. Carmichael.
 2465 scrapings male Edmonton, Alta. J.W. Carmichael 24 Feb 1965 /J.W. Carmichael.
 2466 scrapings ex neck male 22 yr Edmonton, Alta. J.W. Carmichael 13 Feb 1965 /J.W. Carmichael.
 2467 scrapings leg, female, 11 yr Edmonton, Alta. J.W. Carmichael 13 Mar 1965 /J.W. Carmichael.
 2484 contaminant ex culture *Malbranchea sulfurea* /G. Semeniuk 443.
 2489 segregate ex UAMH 2205 Edmonton, Alta. J.W. & Martin, P. Carmichael /J.W. & Martin, P. Carmichael.
 2493 toe nail, female 47 yr Edmonton, Alta. J.W. Carmichael 5 May 1965 /J.W. Carmichael.
 2494 toenail, female 47 yr Edmonton, Alta. J.W. Carmichael 5 May 1965 /J.W. Carmichael.
 2510 skin scrapings feet J.W. Carmichael & (P. Martin), 27-01-65 /J.W. Carmichael.
 2588 P. Martin 3.
 2788 skin rash, arm of child Ohio 1967 /N. Clarke.
 2829 scraping ex foot Edmonton, Alta. J.W. Carmichael 18 Sep 1967 /J.W. Carmichael.
 2840 soil chicken yard Poona, India A. Padhye Nov 1966 /A. Padhye. Culture conditions: no requirement for vitamins; BCP-MS-G profuse growth; alkalinity; urea positive.
 2841 chicken feathers Poona, India A. Padhye Jan 1967 /A. Padhye.
 2842 chicken feathers Poona, India A. Padhye Jan 1967 /A. Padhye.
 2866 chicken feathers Poona, India A. Padhye 1967 /A. Padhye CS021.
 2912 toe nail, Edmonton, Alta. J.W. Carmichael 15 Apr 1968 /J.W. Carmichael.
 3245 CDC X-491 [=Tulane Univ. 3334].
 3296 CDC X-537.
 3297 CDC X-538.
 3298 CDC.
 3490 nest of tree sparrow, *Passer montanus* Bzenec near Hodonin, Czech. Hubalek 8 Jun 1971 /Z. Hubelak 909 A.
 5889 thigh; DE not done Toronto, Ont. 1987 /J. Kane F 11816.
 5890 elbow; DE ++ Toronto, Ont. 1987 /J. Kane F 12081.
 5906 toenail, DE irregular filaments Toronto, Ont. /J. Kane 8994/87.
 5907 toenail, DE irregular filaments Toronto, Ont. /J. Kane 8873/87.
 5909 toe, DE - Toronto, Ont. 1987 /J. Kane F 6478 [=BB 273].
 5910 toe nail, DE ++ Toronto, Ont. 1987 /J. Kane F 8030/BB274.
 5911 toenail, DE - Toronto, Ont. 1986 /J. Kane K33.
 6256 class strain Prov. Lab. 53317 /J. Kane [=GenBank AF038359

- (ITS)]. Molecular systematics: comparison with members of the genus *Ajellomyces* (Peterson & Sigler, J. Clin. Microbiol. 36:2918-2925, 1998) // culture conditions: granular form.
- 6718 face lesion, female 50 yr Spain /M. Pereiro 149.
- 9851 unusual isolate, contaminant ex UAMH 9830 L. Sigler /R. Rennie MY 4285B. Cycloheximide: resistant.
- Trichophyton mentagrophytes* see *Arthroderma vanbreuseghemii*
- Trichophyton mentagrophytes* var. *erinacei* see *Trichophyton erinacei*
- Trichophyton mentagrophytes* var. *quinckeanum* (Zopf) Smith & Austwick 1967
1026 F. Blank.
2604 P. Martin 22.
- Trichophyton onychocola* Cmokova, Hubka, Skorepova & M. Kolarik
11826 (T *Trichophyton onychocola*) ex right great toenail, 33 yr old male with suspected onychomycosis; DE negative; repeat isolation negative General University Hospital, Prague, Czech Republic M. Skorepova 14-Nov-2011 /V. Hubka SK 3941/11 [=PRM 860611 holotype =CCF 4259 =CBS 132920 =GenBank HF937405 ITS =GenBank HF937393 RPB2 =GenBank HF937401 Btub =GenBank HF937400 Actin]. Molecular systematics: description *Trichophyton onychocola* (Hubka V, Cmokova A, Skorepova M, Mikula P, Kolarik M, Med Mycol 52:285-292, 2014) // biodiversity: pathogenicity not confirmed by repeated isolation or by direct microscopy of nail (Hubka V, Cmokova A, Skorepova M, Mikula P, Kolarik M, Med Mycol 52:285-292, 2014).
- Trichophyton phaseoliforme* Borelli
2543 soil Germany Bohme isolate 1965 /G.F. Orr C461.
2545 soil Germany Bohme isolate 1965 /G.F. Orr C459 II.
2648 (T *Trichophyton phaseoliforme*) Venezuela D. Borelli /D. Borelli 6459 [=GenBank AJ970152 ITS =CBS H-7871 =CBS 364.66].
- Trichophyton proliferans* English & Stockdale
3199 (T) dermatophytosis M.P. English /IMI 117369 [=ATCC 22442 =UAMH 3252].
3252 (T) dermatophytosis M.P.English /IMI 117369 [=ATCC 22442 =UAMH 3199].
- Trichophyton raubitschekii* see *Trichophyton rubrum* African variant
- Trichophyton redellii* Minnis, J.M. Lorch, D.L. Lindner & Blehert
1863 soil Dugway, Utah /G.F. Orr DPG 100 - mates with UAMH 3424. Molecular systematics: Blast match 99% ITS similarity to *Trichophyton redellii*, 98% to *A. quadrifidum* (CBS 613.74 AJ877214) (fide V. Hubka 2015).
- Trichophyton rubrum* (Castellani) Sabouraud
268 Dr. Munroe.
779 toes Edmonton, Alta. J.W. Carmichael 28 Jul 1959 /J.W. Carmichael.
780 foot Edmonton, Alta. J.W. Carmichael 17 Sep 1959 /J.W. Carmichael.
1620 arm of 20 yr. old male D.W.R. Mackenzie 23 Jun 1962 /D.W.R. Mackenzie D473.
1621 fingernails male 40 yr D.W.R. Mackenzie 2 Feb 1962 /D.W.R. Mackenzie E107.
1652 skin scrapings ex axilla Edmonton, Alta. J.W. Carmichael 9 Apr 1963 /J.W. Carmichael.
1799 skin groin, female 41 yr Edmonton, Alta. J.W. Carmichael 16 Sep 1963 /J.W. Carmichael. Culture conditions: red reverse on PDA; urease neg (variable); BCP-MS-G moderate growth; no alkalinity.
1868 skin, groin Edmonton, Alta. J.W. Carmichael 9 Nov 1963 /J.W. Carmichael.
2029 pus and biopsy ex jaw & neck, male Edmonton, Alta. J.W. Carmichael May 1964 /J.W. Carmichael [=UAMH 2152 =UAMH 2276 =UAMH 2277 =UAMH 2278].
2124 toes, male Edmonton, Alta. J.W. Carmichael 24 Aug 1964 /J.W. Carmichael.
2126 groin, male, 35 yr Edmonton, Alta. J.W. Carmichael 12 Aug 1964 /J.W. Carmichael.
2127 soles, feet, female 46 yr Edmonton, Alta. J.W. Carmichael 11 Aug 1964 /J.W. Carmichael.
2129 feet, male Edmonton, Alta. J.W. Carmichael 31 Jul 1964 /J.W. Carmichael [=GenBank AY176744 (LSU)]. Molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, Stud. Mycol. 47:25-35, 2002).
2133 groin & face Edmonton, Alta. J.W. Carmichael Sep 1964 /J.W. Carmichael.
2147 groin, male, 52 yr Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
2148 feet, male, 37 yr Edmonton, Alta. J.W. Carmichael 17 Aug 1964 /J.W. Carmichael.
2149 back of hand, female, 61 yrs. Edmonton, Alta. J.W. Carmichael 17 Aug 1964 /J.W. Carmichael.
2152 pus and biopsy ex jaw & neck, male Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael [=UAMH 2029 =UAMH 2276 =UAMH 2277 =UAMH 2278].
2176 sole, foot male 47 yr Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
2177 toenails, female 7 yr Edmonton, Alta. J.W. Carmichael Oct 1964 /J.W. Carmichael.
2183 foot Edmonton, Alta. J.W. Carmichael 6 Aug 1964 /J.W. Carmichael.
2185 between toes, male, 32 yrs. Edmonton, Alta. J.W. Carmichael 28 Jul 1964 /J.W. Carmichael.
2190 foot, female, 36 yr Edmonton, Alta. J.W. Carmichael 4 Aug 1964 /J.W. Carmichael.
2202 Lf wrist, male Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
2216 face, female, 65 yr Edmonton, Alta. J.W. Carmichael 28 Aug 1964 /J.W. Carmichael.
2236 groin, male, 40 yr Edmonton, Alta. J.W. Carmichael Dec 1964 /J.W. Carmichael.
2242 great toe Edmonton, Alta. J.W. Carmichael 17 Sep 1964 /J.W. Carmichael.
2243 scrapings, feet Edmonton, Alta. J.W. Carmichael 21 Sep 1964 /J.W. Carmichael.
2247 scrapings, crural region Edmonton, Alta. J.W. Carmichael 10 Oct 1964 /J.W. Carmichael.
2249 toenails Edmonton, Alta. J.W. Carmichael 10 Sep 1964 /J.W. Carmichael.
2260 toes Edmonton, Alta. J.W. Carmichael 22 Sep 1964 /J.W. Carmichael.
2261 scrapings Edmonton, Alta. J.W. Carmichael 9 May 1964 /J.W. Carmichael.
2266 scrapings, Rt leg Edmonton, Alta. J.W. Carmichael 2 Jul 1964 /J.W. Carmichael.
2269 toenails Edmonton, Alta. J.W. Carmichael 27 Aug 1964 /J.W. Carmichael.
2273 feet Edmonton, Alta. J.W. Carmichael 24 Sep 1964 /J.W. Carmichael.
2276 segregate ex UAMH 2152 J.W. Carmichael 6 May 1964 /J.W. Carmichael [=UAMH 2029 =UAMH 2277 =UAMH 2278].
2277 segregate ex UAMH 2152 Edmonton, Alta. J.W. Carmichael 6 May 1964 /J.W. Carmichael [=UAMH 2029 =UAMH 2276

- =UAMH 2278].
- 2278 segregate ex UAMH 2152 Edmonton, Alta. J.W. Carmichael 6 May 1964 /J.W. Carmichael [=UAMH 2029 =UAMH 2276 =UAMH 2277].
- 2282 scrapings, crural region Edmonton, Alta. J.W. Carmichael 5 Oct 1964 /J.W. Carmichael.
- 2283 scrapings Edmonton, Alta. J.W. Carmichael 28 Sep 1964 /J.W. Carmichael.
- 2285 skin scrapings, hand Edmonton, Alta. J.W. Carmichael 6 Jul 1954 /J.W. Carmichael.
- 2315 between toes Edmonton, Alta. J.W. Carmichael 15 Jul 1964 /J.W. Carmichael.
- 2317 scrapings, feet Edmonton, Alta. J.W. Carmichael 16 Jul 1964 /J.W. Carmichael.
- 2320 scrapings, groin Edmonton, Alta. J.W. Carmichael 5 Aug 1965 /J.W. Carmichael.
- 2321 feet Edmonton, Alta. J.W. Carmichael 5 Aug 1964 /J.W. Carmichael.
- 2322 scrapings, toenails Edmonton, Alta. J.W. Carmichael 23 Mar 1964 /J.W. Carmichael.
- 2323 toes Edmonton, Alta. J.W. Carmichael 23 Jul 1964 /J.W. Carmichael.
- 2333 scrapings, wrist Edmonton, Alta. J.W. Carmichael 27 Aug 1965 /J.W. Carmichael.
- 2336 scrapings Edmonton, Alta. J.W. Carmichael 28 Sep 1964 /J.W. Carmichael.
- 2379 scrapings, soles Edmonton, Alta. J.W. Carmichael 28 Dec 1964 /J.W. Carmichael.
- 2381 toes Edmonton, Alta. J.W. Carmichael 14 Jan 1965 /J.W. Carmichael.
- 2386 toenails Edmonton, Alta. J.W. Carmichael 7 Jan 1965 /J.W. Carmichael.
- 2512 scrapings Edmonton, Alta. P. Martin Jul 1965 /P. Martin.
- 2564 skin from feet Rostock, Germany /U. Kaben.
- 2594 toenail, male 53 yr Edmonton, Alta. J.W. Carmichael Mar 1966 /J.W. Carmichael.
- 2608 skin scrapings Johannesburg S. Africa 1966 /P. Martin 29.
- 2614 nail infection, chronic Johannesburg S. Africa 3 Sep 1966 /P. Martin 31.
- 3453 tinea cruris human New Delhi, India L.N. Mohapatra 1971 /L.N. Mohapatra TR 2.
- 3454 tinea cruris human New Delhi, India Mohapatra 1971 /L.N. Mohapatra TR 10.
- 3467 tinea cruris human New Delhi, India L.N. Mohapatra 1971 /L.N. Mohapatra TR 6.
- 3508 CDC 40-72-020032.
- 4852 toenail clippings Edmonton, Alta. L. Sigler 25 Aug 1983 /L. Sigler.
- 5891 leg scraping Toronto, Ont. 1987 /J. Kane 1761.
- 5892 J. Kane K230.
- 5980 dermatophytosis hand Toronto, Ont. R.C. Summerbell 1986 /R.C. Summerbell F 809-86.
- 6134 ankle scrapings Kitchener, Ont. 1 Sep 1987 /R.C. Summerbell FR 1523.87.
- 6511 G. Ghosh C-11. Odor: pungent.
- 6824 wrist, DE+ /R.C. Summerbell OMH 931.
- 7187 inflammatory tinea pedis, white male 14 yr New Orleans, Louisiana D. Greer May 1992 /D. Greer 5-22-92.
- 7798 ex skin, male 24 yr Ontario 3 Oct 1994 /R. Rennie MY 4251.
- 8332 fingernail, female 32 yr, DE+ New Zealand /A. Woodgyer 95-160. Culture conditions: inositol dependent.
- 8547 toenails, male 34 yr, DE + Toronto, Ont. 24 Mar 1996 /R.C. Summerbell F 3114 [=GenBank AF170471]. Molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999) // application: QC & teaching strain (Summerbell, Clinical Microbiology Procedures Handbook 2002).
- 8818 toenail, female, 25 yr London, ON 04-Jul-1996 /R.C. Summerbell FR 1980. Culture conditions: requires thiamine.
- 9199 skin ex foot, female 40 yr British Columbia BC Prov. Lab. 1997 /R. Rennie MY 3968. Culture conditions: requires inositol // keratinophilic: penetrating bodies.
- 10231 atypical isolate ex skin of "moustache" area, female 19 yr; DE + for hyphae and arthroconidia Ontario /R. Rennie MY 3868. Culture conditions: BCP-MS-G slow growth; no alkalinity; urea usually negative // pigment: strong yellow reverse; no red reverse pigment // cycloheximide: tolerant // thermotolerant: good growth @ 35 C // molecular systematics: BLAST match 100% ITS similarity with *T. rubrum* - *T. raubitschekii* (fide UAMH).
- Trichophyton rubrum African variant*** (syn. *Trichophyton raubitschekii*)
- 1619 scrapings between toes, male 26 yr; DE hyphae & arthro Ireland D.W.R. Mackenzie 30 Mar 1962 /D.W.R. Mackenzie D247.
- 4021 skin ex Ugandan female immigrant, Indian by origin Montreal /L. Kapica 115.
- 4025 skin scrapings ex male black Jamaican with generalized skin infection of many years duration received as *Trichophyton rubrum* (African strain) /L. Kapica 1954 [=NCPF 722].
- 4314 (*T. Trichophyton raubitschekii*) skin /J. Kane OMH 1094 [=ATCC 42631 =DAOM 196321 =NCPF 723 =GenBank AF170470]. Pigment: brown // molecular systematics: Part of the *T. rubrum* dermatophyte complex (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).
- 8545 1994 /R.C. Summerbell BB 1519 [=NOMH 1095 =FR 1573 =OMH 1324 =GenBank AF170468 ITS]. Molecular systematics: Part of the *T. rubrum* dermatophyte complex (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999); isolates of *T. raubitschekii*, *T. fischeri* and *T. kanei* found to have ITS sequences identical to *T. rubrum* (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).
- 9516 ex female with tinea corporis on buttocks; DE +; treated with fluconazole + topical isoconazole but lesions recurred Sao Paula, Brazil C. da Silva Lacaz /C. da Silva Lacaz FM 599. Human/animal pathogen: dermatophytosis in Brazil (da Silva Lacaz, Rev. Inst. Med. trop. S. Paulo 41:313-317, 1999).
- 9822 nail, female Ontario 2000 /R. Rennie MY 2751. Pigment: brown.
- 10732 ex toenail, female 38 yr Gibsonia, PA /N. Isham MRL 8736. Thermotolerant: grows at 37C but slower than @ 30C // culture conditions: no requirement for vitamins; BCP-MS-G moderate growth; no alkalinity; urea positive.
- Trichophyton schoenleinii*** (Lebert) Lang. & Miloch. ex Nannizzi
- 1470 CDC A-0726. Culture conditions: no requirement for vitamins; BCP-MS-G slow growth; no alkalinity; hydrolysis; urea positive // application: QC & teaching strain.
- 2468 P. Martin UCLA 302.
- 2605 P. Martin 24.
- 3567 human Chile /L. Zaror 019.
- 3581 human Chile /L. Zaror 014.
- 4358 scalp lesion girl 5 yr S. Dakota /L. Zaror. Culture conditions: BCP-MS-G moderate growth; weak alkalinity; hydrolysis; urea positive; no requirement for vitamins; faster growing variant from proficiency sample.
- Trichophyton simii* see *Arthroderma simii*
- Trichophyton soudanense*** Joyeux
- 1464 CDC X-403.
- 2375 segregate ex UAMH 1464 UAMH P. Martin 1965 /P. Martin.
- 2414 P. Martin UCLA 253.
- 4022 scalp black African immigrant Montreal /L. Kapica 163 Nov 1.
- 7125 R.C. Summerbell BB 934.
- 7126 scalp 1991 /R.C. Summerbell BB 1095. Pigment: yellow.
- 8548 atypical 1993 /R.C. Summerbell BB 1479 [=NOMH 1055 =FR

- 2449 =OMH 1284 =GenBank AF170474]. Molecular systematics: dermatophytes (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999).
- 8817 male, 7 yr, DE+ Toronto, ON 03-Apr-1993 /R.C. Summerbell F 3826.
- 9605 skin, male Calgary, AB 26 May 1999 /R. Rennie MY 3941.
- 10210 nail, female 85 yr; DE + Burnaby, BC Mar-02 /R. Rennie MY 1888. Culture conditions: grows @ 35 C; no requirement for vitamins; few arthroconidia.
- 10322 ex scalp, female 4 yr, originally from Africa Saskatoon, SK C. Kinahan 03-03 /C. Kinahan 89052194. Pigment: tan on PDA; yellow on PYE // culture conditions: stimulated by thiamine; produces macroconidia on PYE at 30C; BCP-MS-G slow growth, alkalinity, hydrolysis // molecular systematics: BLAST match 100% with *Trichophyton soudanense* (C. Gibas unpublished).
- 10323 ex scalp, female 11 yr, originally from Africa Saskatoon, SK C. Kinahan 3-03 /C. Kinahan 89052186. Pigment: tan on PDA; yellow on PYE // culture conditions: produces macroconidia on PYE at 30C; BCP-MS-G slow growth, alkalinity, hydrolysis; urea negative; stimulated by thiamine.
- 10388 scalp hair, skin scrapings, female 3 yr; DE + St. John's Hospital, Vancouver, B.C. 12-03 /R. Rennie MY 7661 [=BC CDC A3MR707]. Culture conditions: no requirement for vitamins; BCP-MS-G slow growth, weak alkalinity; urea negative (fide submitting laboratory) // human/animal pathogen: travel history to Africa.
- 10524 nail scraping, male 41 yr Burnaby, B.C. /R. Rennie MY 7329 [=BC CDC A4MR435]. Culture conditions: stimulated by nicotinic acid (*Trichophyton* agar #5); BCP-MS-G slow growth; no alkalinity; urea negative; no growth on *Trichophyton* agar 1 & 2, poor growth on 3 & 4.
- 10829 ex cutaneous lesion on hand of young gorilla born at Toronto Zoo Toronto Zoo, Scarborough, Ont. J. Pare 05-07 /J. Pare 013. Molecular systematics: BLAST match 99% similarity with *Trichophyton soudanense* (fide UAMH) // culture conditions: no requirement for vitamins; BCP-MS-G profuse growth; alkalinity; urea weak positive // keratinophilic: digests hairs with penetrating bodies.
- 1862 soil Dugway, Utah /G.F. Orr DPG 125.
- 2049 G.F. Orr 0-3038.
- 2225 soil (1) near Big Sur, Calif. P. Martin Nov 1962 /P. Martin 1235.
- 2271 contaminant Edmonton, Alta. J.W. Carmichael 22 Jul 1964 /J.W. Carmichael.
- 2407 soil, hair baited Masongoleni, Kenya Y. Al-Doory Dec 1964 /Y. Al-Doory SF2.
- 2853 soil ex fabric bait Hungary Szathmary (SZ 476) 1967 /G.F. Orr.
- 4532 skin; DE neg Ontario /J. Kane FR 1273-81. Pigment: brown // culture conditions: BCP-MS-G moderate growth; alkalinity; hydrolysis; urea positive // keratinophilic: digests hairs with penetrating bodies.
- 6105 J. Harris BY8-930.
- Trichophyton terrestre* Durie & Frey (morph *Arthroderma insingulare*, *Arthroderma lenticularum*, *Arthroderma quadrifidum*)**
- 539 soil, sheep yard Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael.
- 657 (T *Trichophyton terrestre*) soil Australia Durie /CDC B-0312 [=GenBank KM091305 ITS]. Pigment: red reverse on PDA // molecular systematics: Blast match 100% ITS similarity to *Trichophyton terrestre* KM091305 (96% to T. onychocola).
- 664 CDC B-0026.
- 665 CDC B-0002.
- 712 soil, K.F. Dean, Connecticut isolate? /CDC 45-160-60.
- 851 soil N.E. Coalinga, San Joaquin Valley /CDC [=Orr O-260].
- 852 soil N.E. Coalinga, San Joaquin Valley /CDC [=Orr O-300].
- 894 soil /CDC [=Orr O-912].
- 1021 lung Richardson's Ground squirrel Camrose, Alta. J.W. Carmichael Jun 1960 /J.W. Carmichael.
- 1049 soil from alkali flats Riverside Co. Calif. Orr (737a) /G.F. Orr O-1062.
- 1687 soil empty flowerbed Edmonton, Alta. J.W. Carmichael 19 Jun 1963 /J.W. Carmichael.
- 1914 sputum /E. Varsavsky 45-747-63.
- 1915 skin of hand Edmonton, Alta. J.W. Carmichael 4 Feb 1964 /J.W. Carmichael.
- 1976 Scotland Dawson isolate 1963 /G.F. Orr O-3021.
- 2208 soil New Zealand pasture /M.J. Marples 11c.
- 2442 soil by hair bait technique Japan /N.M. McClung 71.
- 2446 soil by hair bait technique Costa Rica /N.M. McClung 81.
- 2517 soil Hungary Szathmary isolate 1964 /G.F. Orr Szath B-51 & III.
- 2867 chicken feathers Poona, India A. Padhye 1967 /A. Padhye CS021.
- 3458 human hair, apparently normal /R. Mayorga 90-B.
- 3564 soil Sudan /CDC 52 a.
- Trichophyton terrestre* see *Arthroderma insingulare*, *Arthroderma lenticularum***
- Trichophyton terrestre* see *Arthroderma quadrifidum***
- Trichophyton thuringiense* H.A. Koch**
- 3431 rodent hair Czechoslovakia Otcenasek et al. 1967 /CDC X-751 [=ATCC 22648 =IMI 134993 =NCPF 492A] +. Molecular systematics: Blast match 100% ITS similarity to 2 strains of *Trichophyton thuringiense* (fide V. Hubka 2015).
- Trichophyton tonsurans* Malmsten (syn. *Trichophyton tonsurans* var. *sulfureum*)**
- 212 origin unknown / . Culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive // keratinophilic: digests hairs with penetrating bodies.
- 213 origin unknown /; . Culture conditions: enhanced by thiamine.
- Trichophyton* sp.**
- 1039 source unknown H.H. Kuehn /G.F. Orr K376.
- 1066 soil at water hole? S.W. of Inyokern, Calif. Orr /G.F. Orr 0-2044.
- 1132 D. Frey 470.
- 1143 soil Calcutta S.R. Bose /CDC 45-676A-61.
- 1144 soil Calcutta S.R. Bose /CDC 45-676B-61.
- 1471 soil, turkey run Edmonton, Alta. J.W. Carmichael 30 Oct 1962 /J.W. Carmichael.
- 1472 soil, turkey run Edmonton, Alta. J.W. Carmichael 30 Oct 1962 /J.W. Carmichael.
- 1474 soil, turkey run Edmonton, Alta. J.W. Carmichael 3 Nov 1962 /J.W. Carmichael.
- 1490 soil under sparrow tree Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
- 1492 soil, turkey run Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
- 1495 soil, turkey run Edmonton, Alta. J.W. Carmichael 18 Oct 1962 /J.W. Carmichael.
- 1536 scrapings feet Edmonton, Alta. J.W. Carmichael 27 Dec 1962 /J.W. Carmichael.
- 1549 soil fowl yard NSW Austr. /D. Frey 92-c.
- 1550 soil Lindfield NSW Austr. /D. Frey 17-a.
- 1551 soil fowl yard Dural NSW Austr. /D. Frey 14.
- 1660 lung, Richardson's Ground squirrel Camrose, Alta J.W. Carmichael 8 Aug 1960 /J.W. Carmichael.
- 1684 soil, flowerbed Edmonton, Alta. J.W. Carmichael 18 Jun 1963 /J.W. Carmichael.
- 1855 soil Guatemala /G.F. Orr G4B.
- 1856 soil Guatemala /G.F. Orr G4A.

- 269 Dr. Munroe. Culture conditions: enhanced by thiamine.
- 271 Dr. Munroe. Culture conditions: enhanced by thiamine // keratinophilic: digests hairs with penetrating bodies.
- 273 Dr. Munroe. Culture conditions: enhanced by thiamine.
- 279 Dr. Munroe. Culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 282 Dr. Munroe. Culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 1232 scalp child South Georgia 1962 /CDC 45-45-62. Keratinophilic: digests hairs with penetrating bodies // culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 1618 toenails of male 75 yr; nails dystrophic > 60 yr; employed in textile mill Belfast, Ireland D.W.R. Mackenzie 15 Aug 1961 /D.W.R. Mackenzie C585. Culture conditions: stimulated on inositol (++) and inositol + thiamine (+++) // keratinophilic: digests hairs with penetrating bodies.
- 2418 segregate ex UCLA 361 LBVA Hospital Calif. P. Martin 1964 /P. Martin UCLA 361-A. Culture conditions: enhanced by thiamine.
- 2419 segregate ex UCLA 361 LBVA Hospital Calif. P. Martin 1964 /P. Martin UCLA 361-B. Culture conditions: enhanced by thiamine.
- 2459 P. Martin UCLA M-344. Culture conditions: enhanced by thiamine.
- 4267 clinical specimen Misericordia Hospital, Edmonton S. Hnatko 1980 /S. Hnatko 14301. Culture conditions: enhanced by thiamine // keratinophilic: digests hairs with penetrating bodies.
- 5740 floors geriatric residence during T. tonsurans outbreak Ottawa, Ont. J. Kane 14 May 1986 /R.C. Summerbell FR 831.86. Human/animal pathogen: as var. sulfureum subvariety perforans (Kane & al., *European J. Epidemiol.* 4:144-149, 1988).
- 5741 floors of geriatric residence during T. tonsurans outbreak Ottawa, Ont. J. Kane 14 May 1986 /R.C. Summerbell FR 856.86. Human/animal pathogen: as var. sulfureum subvariety perforans (Kane & al., *European J. Epidemiol.* 4:144-149, 1988) // culture conditions: enhanced by thiamine.
- 6653 tinea capitis Detroit, MI /D. Babel A. Pigment: brown // culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6654 tinea capitis Detroit, MI /D. Babel B. Pigment: brown // culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6655 tinea capitis Detroit, MI /D. Babel F. Culture conditions: enhanced by thiamine; produces macroconidia // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6656 tinea capitis Detroit, MI /D. Babel D. Pigment: brown // culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6657 tinea capitis Detroit, MI /D. Babel J. Culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6658 tinea capitis Detroit, MI received as T. tonsurans v. sulfureum /D. Babel C. Pigment: brown // culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6659 tinea capitis Detroit, MI received as T. tonsurans v. sulfureum /D. Babel G. Culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6660 tinea capitis Detroit, MI received as T. tonsurans v. sulfureum /D. Babel H. Culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6661 tinea capitis Detroit, MI received as T. tonsurans v. sulfureum /D. Babel I. Culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 6662 tinea capitis Detroit, MI received as T. tonsurans v. sulfureum /D. Babel E. Culture conditions: enhanced by thiamine // human/animal pathogen: tinea outbreak associated with an asymptomatic adult carrier (Babel, D.E., Baughman, S.A., *J. Am. Acad. Dermatol.* 21:1209-1212, 1989).
- 7263 scalp, female 5 yr, DE+ Edmonton, Alta. C. Sand 7 Nov 1992 /R. Rennie MY 5294. Keratinophilic: perforates hair in vitro (subvariety perforans) // culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 7334 hair, male 9 yr; DE+ endothrix Edmonton, Alta. C. Sand Mar 1993 /R. Rennie MY 0993. Keratinophilic: perforates hair in vitro (subvariety perforans) // culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive; in vitro pharmacodynamic characteristics of griseofulvin against Trichophyton tonsurans (Gupta AK, Williams JV, Zaman M, Singh J, *Medical Mycology* 47:796-801, 2009).
- 7335 hair, male 4 yr, DE+ Edmonton, Alta. C. Sand Mar 1993 /R. Rennie MY 1197. Keratinophilic: perforates hair in vitro (subvariety perforans) // culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 7337 skin, male 19 yr Yellowknife, NWT C. Sand Mar 1993 /R. Rennie MY 1248. Keratinophilic: perforates hair in vitro (subvariety perforans).
- 7338 red scaly rash on skin of stomach, female, 88 yr Calgary, Alta. Foothills Hospital (6395) Microbiology Dept. Apr 1993 /R. Rennie MY 1305. Pigment: brown // culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 8549 atypical /R.C. Summerbell BB 1424 [=NOMH 1000 =F 5836 =OMH 1229]. Molecular systematics: dermatophytes (Summerbell et al., *J. Clin. Microbiol.* 37:4005-4011, 1999).
- 8550 skin, male Ontario Dynacare Laboratories 15 Apr 1996 /R.C. Summerbell FR 1154 [=GenBank AF170477]. Molecular systematics: dermatophytes (Summerbell et al., *J. Clin. Microbiol.* 37:4005-4011, 1999) // culture conditions: produces macroconidia.
- 8551 scalp, male 2.5 yr, DE + Ontario 16 Apr 1996 /R.C. Summerbell F 4015 [=GenBank AF170478]. Molecular systematics: dermatophytes (Summerbell et al., *J. Clin. Microbiol.* 37:4005-4011, 1999) // culture conditions: requires thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 8552 left ear, male, DE+ Ontario 11 Apr 1996 /R.C. Summerbell F 3968 [=GenBank AF170479]. Molecular systematics: dermatophytes (Summerbell et al., *J. Clin. Microbiol.* 37:4005-4011, 1999); rapid identification using ITS1 & ITS2 region sequences (Pryce, Palladino, Kay & Coombs, *Med. Mycol.* 41:369-381, 2003) // application: QC & teaching strain (Summerbell, *Clinical Microbiology Procedures Handbook* 2002) // culture conditions: requires thiamine; BCP-MS-G

- profuse growth; weak alkalinity; no hydrolysis; urea positive.
- 9361 skin between toes, female 41 yr Ohio M. Burleson 14 Aug 1998 /M. Burleson 98004497. Culture conditions: enhanced by thiamine; BCP-MS-G profuse growth; weak alkalinity; no hydrolysis; urea positive // keratinophilic: perforates hair within 8 days // cycloheximide: resistant.
- 10456 skin scrapings, R forearm, female 16 yr Saskatoon, SK C. Kinahan 2004 /C. Kinahan A0302024. Culture conditions: BCP-MS-G slow growth; weak alkalinity; no hydrolysis; urea positive; stimulated on inositol (++) and inositol + thiamine (+++) // cycloheximide: resistant (MYC) // keratinophilic: digests hairs with penetrating bodies // molecular systematics: BLAST match 100% ITS similarity with *T. tonsurans* (fide UAMH).
- 10610 corneal scraping ex left eye, male 46 yr, DE positive for fungal elements; isolated from two specimens Mount Sinai Hospital, Toronto, ON S. Mohan 19 Jan 2006 /S. Mohan E5192433. Human/animal pathogen: corneal lesions // culture conditions: BCP-MS-G moderate growth; no alkalinity; urea positive; stimulated by thiamine.
- Trichophyton tonsurans* var. *sulfureum* see *Trichophyton tonsurans*
- Trichophyton vanbreuseghemii* see *Arthroderma gertleri*
- Trichophyton verrucosum* Bodin
- 215 scalp hairs Edmonton, Alta. J.W. Carmichael 1951 /J.W. Carmichael.
- 575 hair infected calf Edmonton, Alta. J.W. Carmichael 1957 /J.W. Carmichael.
- 1663 skin face, female 2 yr Innisfail, Alta. J.W. Carmichael 19 Apr 1963 /J.W. Carmichael.
- 2203 face, male, 6 yr Edmonton, Alta. J.W. Carmichael Sep 1964 /J.W. Carmichael.
- 2204 leg, female, 30 yrs. Edmonton, Alta. J.W. Carmichael Sep 1964 /J.W. Carmichael.
- 2211 lesion, cheek, male, 5 yrs Edmonton, Alta. J.W. Carmichael Aug 1964 /J.W. Carmichael.
- 2238 male, 8 yrs Edmonton, Alta. J.W. Carmichael Dec 1964 /J.W. Carmichael.
- 2251 skin scrapings Edmonton, Alta. J.W. Carmichael 2 Oct 1964 /J.W. Carmichael.
- 2331 scalp and skin lesion Edmonton, Alta. J.W. Carmichael 12 Aug 1964 /J.W. Carmichael.
- 2340 left arm Edmonton, Alta. J.W. Carmichael 22 Jul 1964 /J.W. Carmichael.
- 2341 skin, Lt elbow Edmonton, Alta. J.W. Carmichael 13 Oct 1965 /J.W. Carmichael.
- 2342 swab, scalp lesion Edmonton, Alta. J.W. Carmichael 8 Jul 1964 /J.W. Carmichael.
- 2347 skin scrapings, abdomen Edmonton, Alta. J.W. Carmichael 5 Jan 1965 /J.W. Carmichael.
- 2352 skin scrapings Edmonton, Alta. J.W. Carmichael 7 Dec 1964 /J.W. Carmichael.
- 2353 scalp Edmonton, Alta. J.W. Carmichael 8 Jan 1965 /J.W. Carmichael.
- 2359 skin scrapings Edmonton, Alta. J.W. Carmichael 7 Jan 1965 /J.W. Carmichael.
- 2360 forehead Edmonton, Alta. J.W. Carmichael 7 Jan 1965 /J.W. Carmichael.
- 2361 scrapings, thumb Edmonton, Alta. J.W. Carmichael 6 Nov 1964 /J.W. Carmichael.
- 2362 scrapings, arm Edmonton, Alta. J.W. Carmichael 11 Jan 1965 /J.W. Carmichael.
- 2363 arm Edmonton, Alta. J.W. Carmichael 4 Dec 1964 /J.W. Carmichael.
- 2364 face Edmonton, Alta. J.W. Carmichael 29 Dec 1964 /J.W. Carmichael.
- 2365 right hand Edmonton, Alta. J.W. Carmichael 7 Dec 1964 /J.W. Carmichael.
- 2366 back and shoulder Edmonton, Alta. J.W. Carmichael 28 Oct 1964 /J.W. Carmichael.
- 2402 hairs Edmonton, Alta. J.W. Carmichael 24 Nov 1965 /J.W. Carmichael.
- 2403 lesion elbow Edmonton, Alta. J.W. Carmichael 22 Dec 1964 /J.W. Carmichael.
- 2421 scrapings, female Edmonton, Alta. J.W. & Martin, P. Carmichael 10 Feb 1965 /J.W. & Martin, P. Carmichael. Culture conditions: requires inositol & thiamine (stimulated on Trichophyton agar 3).
- 2524 scrapings face, female 6 yr Edmonton, Alta. J.W. Carmichael 23 Nov 1964 /J.W. Carmichael. Culture conditions: requires inositol & thiamine (stimulated on Trichophyton agar 3); opt 30C.
- 5350 abscess, neck & left maxillary, male veterinarian Regina, Sask. G.J. Hardy 1986 /G.J. Hardy 1485. Culture conditions: requires inositol & thiamine (stimulated on Trichophyton agar 3).
- 5666 arm lesion U A Hospital, Edmonton /P. Kibsey MY 17-2. Thermotolerant: grows @ 37C // application: QC & teaching strain // culture conditions: requires inositol & thiamine (stimulated on Trichophyton agar 3).
- 10527 skin scraping ex annular dermatitis, right cheek, male 12 yr Mission, B.C. 13-10-04 /R. Rennie MY 6502 [=BC CDC A4MR375]. Molecular systematics: BLAST match 99-100% ITS similarity with *T. verrucosum* (fide UAMH) // culture conditions: slow growing; BCP-MS-G slow growth, weak alkalinity, hydrolysis; urea negative; requires inositol (Trichophyton 2 and 3).
- Trichophyton violaceum* Sabouraud ex Bodin
- 2589 hair and scales on scalp Johannesburg, S. Africa 1965 /P. Martin 14.
- 2715 African patient Johannesburg, South Africa May 1966 /P. Martin SAIMR 286.
- 2716 African patient Port Elizabeth, South Africa Jun 1966 /P. Martin SAIMR 335.
- 2717 African patient Port Elizabeth, South Africa Jun 1966 /P. Martin SAIMR 335 var. 1.
- 2719 African patient Johannesburg, South Africa May 1966 /P. Martin SAIMR 286 var. 2.
- 2721 African patient Johannesburg, South Africa 21 May 1966 /P. Martin SAIMR 286 var. 5.
- 2722 African patient Johannesburg, South Africa 21 May 1966 /P. Martin SAIMR 286 var. 8.
- 2723 African patient Johannesburg, South Africa 21 May 1966 /P. Martin SAIMR 286 var. 9.
- 2724 African patient Johannesburg, South Africa 21 May 1967 /P. Martin SAIMR 286 var. 10.
- 2725 African patient Johannesburg, South Africa 21 May 1966 /P. Martin SAIMR 286 var. 11.
- 2726 African patient Johannesburg, South Africa 21 May 1966 /P. Martin SAIMR 286 var. 12.
- 2727 African patient Johannesburg, South Africa 21 May 1966 /P. Martin SAIMR 286 var. 13.
- 2728 African patient Johannesburg, South Africa 21 May 1966 /P. Martin SAIMR 286 var. 14.
- 2729 African patient Johannesburg, South Africa 21 May 1967 /P. Martin SAIMR 286 var. 15.
- 2730 African patient Johannesburg, South Africa May 1966 /P. Martin SAIMR 286 var. 18.
- 2913 skin scrapings, rash on groin & buttocks Edmonton, Alta. J.W. Carmichael 25 Mar 1968 /J.W. Carmichael.
- 2914 skin scrapings, rash on groin & buttocks Edmonton, Alta. J.W. Carmichael 25 Mar 1968 /J.W. Carmichael.
- 2961 groin Edmonton, Alta. J.W. Carmichael 8 Jul 1968 /J.W. Carmichael.
- 4029 scalp of Portuguese immigrant child Kapica Aug 1976 /L.

- Kapica 2046-76.
5645 toenail lesion ex 26 yr female Regina, Sask. H. Congly /H. Congly 956M.
5646 scalp lesion ex Ethiopian male 4 yr living in Regina Sask. H. Congly /H. Congly 2220M.
6103 scalp male 28 yr Sask. H. Congly 1988 /H. Congly 231M.
6679 face, female 16 yr Saskatchewan H. Congly /H. Congly 1218M.
7173 ex neck, female 6 yr Saskatchewan H. Congly 1992 /H. Congly 1085M-92.
7174 ex scalp, female 2 yr Saskatchewan H. Congly 1992 /H. Congly 1147M-92.
7175 ex scalp, female 4 yr Saskatchewan H. Congly 1992 /H. Congly 1307M-92.
7244 rt. 3rd toenail; direct microscopy negative Edmonton, Alta. C. Sand 19 Oct 1992 /R. Rennie MY 4878. Culture conditions: macroconidia on Trichophyton #4.
7321 non inflammatory tinea capitis, Ethiopian child 3 yr; DE - observations by calcofluor, KOH & fluorescent stain Royal Univ. Hospital, Saskatoon, SK C. Kinahan /C. Kinahan 180569. Human/animal pathogen: atypical white variant (Sigler & Sand, PLNA Biologos 5(4):1-2, 1993); East African white variant.
7399 scalp skin & hair ex 6 yr child from Eritrea with seborrhoeic tinea capitis; DE neg in primary specimen but positive for endothrix hair invasion in repeat specimen Saskatchewan C. Kinahan 1993 /C. Kinahan 104079-93. Human/animal pathogen: tinea capitis in child originating from Eritrea.
8586 scrapings from scalp & ear, female 4 yr; CAFL positive for arthroconidia Edmonton, Alta. July 1996 /R. Rennie MY 2501. Pigment: brown.
9020 human hair, DE+, white East African type Ontario 31-Dec-1996 /R.C. Summerbell F 63. Culture conditions: East African white variant.

Trichophyton yaoundei Cochet & Doby-Dubois

- 1496 CDC B-0250.
7388 scalp, patient with tinea capitis Quebec G. St-Germain 1991 /R.C. Summerbell FR 195 [=GenBank AF170480]. Molecular systematics: dermatophyte phylogeny (Summerbell et al., J. Clin. Microbiol. 37:4005-4011, 1999; Graser et al., J. Clin. Microbiol. 38:3329-3336, 2000) // culture conditions: BCP-MS-G moderate growth; no alkalinity; no red pigment; urea neg; no requirement for vitamins.

Trichosporiella an. Canariomyces notabilis see ***Canariomyces notabilis******Trichosporiella an. Diplogelasinospora grovesii*** see ***Diplogelasinospora grovesii******Trichosporiella an. Diplogelasinospora princeps*** see ***Diplogelasinospora princeps******Trichosporiella cerebriformis*** (de Vries & Kleine-Natrop) Gams

- 3461 wheat field soil Kiel-Kitzeberg, Germany W. Gams (C 190) 1962 /CBS 243.68 [=ATCC 22553].
3462 wheat field soil Kiel-Kitzeberg, Germany W. Gams (C 282) 1962 /CBS 244.68 [=ATCC 22551].
3463 (T *Trichosporiella hyalina*) wheat field soil Kiel-Kitzeberg, Germany W. Gams (C 403) 1963 /CBS 135.68 [=ATCC 22552]. Molecular systematics: Blast match 95-98% ITS similarity with uncultured *Tetracladium* isolates (fide UAMH 2012).

Trichosporiella flavificans (Nakase) de Hoog, Rodrigues de Miranda & van Oorschot (syn. *Candida flavificans*)

- 6488 paint Netherlands L. Rodrigues de Miranda /CBS 471.83. Pigment: yellow.
6489 (T *Candida flavificans*) washing of ion-exchange resin at guanosine monophosphate plant Japan T. Nakase 1965 /CBS 760.79 [=CBS 6735 =IFO 1573 =NBRC 1573 =NRRL Y-7922 =JCM 1506]. Pigment: yellow // thermotolerant: grows better @ 30C than @ 22C or 35C.

Trichosporiella multisporum Sigler & Currah

- 5179 (T *Trichosporiella multisporum*) fungal endophyte of *Habenaria viridis* Cardinal River, Alta. (C) R. Currah (0-90t-a) 5 Jul 1985 [=ATCC 64847 =DAOM 197966 =IMI 318095]. Pigment: yellow on OAT // molecular systematics: Blast match 96% ITS similarity to named *Tetracladium* species (fide UAMH 2011).
5382 fungal endophyte of *Habenaria hyperborea* Edson, Alta. R. Currah 24 Jul 1986 /R. Currah [=ATCC 64846 =IMI 318094].
11505 swab ex skin of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 79 C.3 . Biodiversity: mycobiota of bat caves // culture conditions: NG @ 30C (fide UAMH 2011); grows better @ 22C than @ 25C (fide UAMH 2011).
11528 swab ex fur of living Northern long-eared myotis bat (*Myotis septentrionalis*) (sex unknown) Kitts Cave, New Brunswick K.J. Vanderwolf /K.J. Vanderwolf Bat 33 C.1. Molecular systematics: Blast match 100% D1D2 similarity with *Tetracladium furcatum* CCM F-11883 (fide A. Lachance, Univ Western Ontario) // biodiversity: mycobiota of bat caves.
11623 swab ex fur of living female Northern long-eared myotis bat (*Myotis septentrionalis*) Underground Lake Cave, New Brunswick K.J. Vanderwolf 11-Mar-10 /K.J. Vanderwolf Bat 74 C.2 CC1 S fur. Biodiversity: mycobiota of bat caves // molecular systematics: Blast match 96-97% ITS similarity to *Tetracladium* species (fide UAMH 2012).
11734 swab ex skin of living little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 6-Mar-2012 /K.J. Vanderwolf 642202. Biodiversity: mycobiota of bat caves.

Trichosporiella paludigena see ***Candida paludigena******Trichosporiella sporotrichoides*** see ***Trichosporon sporotrichoides******Trichosporium tingens*** Lagerb. & Melin

- 1367 DAOM 70006.

Trichosporon aquatile Hedrick & Dupont

- 7673 (T *Trichosporon aquatile*) ex water USA L. R. Hedrick /CBS 5973 [=ATCC 22310 =CCRC 22271 =JCM 3936 =NRRL Y-17146 =NRRL Y-7051 =GenBank AB018011 =GenBank AF410475]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon asahii Akagi

- 87 cow jaw /O.A. Plunkett [=Bobrov 2]. Mesophilic: strongly inhibited @ 35C // culture conditions: API profile # 2744775 excellent ID for *Trichosporon asahii*; nitrate negative (fide I. Salkin).
217 pulmonary infection Los Angeles /O.A. Plunkett [=Bobrov 8]. Molecular systematics: 100% ITS similarity with T. asahii AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475) // culture conditions: colony creamy.
492 gastric juice Edmonton, Alta. J.W. Carmichael 1956 /J.W.

- Carmichael. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony creamy.
- 559 urine Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony creamy.
- 563 urine Edmonton, Alta. J.W. Carmichael 1956 /J.W. Carmichael. Culture conditions: raffinose +; melibiose -; grows at 37 C // systematics/taxonomy: Determined as *T. asahii* by sequencing (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010); matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010).
- 576 throat swab Edmonton, Alta. J.W. Carmichael 1957 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony creamy (fide UAMH).
- 609 throat swab Edmonton, Alta. J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony dry (fide UAMH).
- 615 watermelon 1957 /M.A. Smith. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony creamy (fide UAMH).
- 635 mouth swab Edmonton, Alta. J.W. Carmichael 1959. Culture conditions: raffinose +; melibiose -; grows at 37 C // systematics/taxonomy: Determined as *T. asahii* by sequencing (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010); matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010) // molecular systematics: 100% ITS sequence similarity to *Trichosporon asahii* Genbank AY055381 = CBS 2479 T (fide UAMH 2011).
- 672 urine Edmonton, Alta. J.W. Carmichael Dec 1959. Culture conditions: raffinose +; melibiose -; grows at 37 C // systematics/taxonomy: Determined as *T. asahii* by sequencing (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010); matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010).
- 829 human feces Pavia G. Caretta /R. Ciferri. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony moist, soft (fide UAMH).
- 1883 urine ex five yr. old Edmonton, Alta. J.W. Carmichael 13 Dec 1963 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony flat, creamy (fide UAMH).
- 2220 clinical culture Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479) // culture conditions: colony moist, powdery on surface (fide UAMH).
- 2475 stool, male Edmonton, Alta. J.W. Carmichael 21 May 1965 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479); 100% ITS similarity among UAMH 217, 492, 559, 576, 609, 615, 829, 2475 // culture conditions: colony dry, heaped (fide UAMH).
- 3828 as *Oidium pullorum* Jungherr; chicken E. Baudet /CBS 261.35 [=MUCL 15691]. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479) // culture conditions: colony dry, soft, crumbly (fide UAMH).
- 4403 white colony, contaminant ex UAMH 336 *Aureobasidium pullulans* complex Apr 1981. Molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479) // culture conditions: colony creamy, heaped.
- 7654 (T *Trichosporon asahii*) skin from human with *trichosporia cutis psoriatiiformis* progressiva Fukusaka, Japan M. Ota (88) /CBS 2479 [=JCM 2466 =NCYC 2677 =GenBank AY055381]. Diazonium blue B: + // molecular systematics: genetics (DNA) (Sugita et al. J. Gen. Appl. Microbiol. 40:397-408, 1994); systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004) // systematics/taxonomy: Coenzyme Q system (Hara et al. J. Gen. Appl. Microbiol. 35:1-10, 1989); matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010).
- 7655 (T *Proteomyces infestans*) mouse inoculated with pus from female groom 18 yr with multiple abscesses Rio de Janeiro, Brazil /CBS 2530 [=CCRC 22314 =IFO 1200 =JMC 1810 =NRRL Y-1491 =NRRL Y-17159 =GenBank AB018014 (ITS)]. Systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010).
- 9916 shed skin ex green iguana (*Iguana iguana*), male Wildlife Care Center, Fort Lauderdale, FL J. Pare Oct 2000 /J. Pare UW001A-A. Cycloheximide: slightly sensitive // culture conditions: as *Trichosporon asahii* by physiological profile (fide C. Sand) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 9917 shed lateral body skin ex red blood python (*Python curtus brongersmai*), male 5 yr Barbertown Veterinary Clinic, Barbertown OH UAMH (UW004B-B) 21 Nov 2000 /UAMH (UW004B-B). Culture conditions: as *Trichosporon asahii* by physiological profile (fide C. Sand) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 9988 shed skin ex royal python (*Python regis*), >15yr Bergen County Zoological Park, Paramus NJ J. Pare Jan 2001 /J. Pare UW065A-A. Cycloheximide: slightly sensitive // culture conditions: arthroconidia; API 20C (98.1%) & API 32C (99.9%) *Trichosporon asahii*; raffinose negative (fide C. Sand) // molecular systematics: 100% ITS similarity with *T. asahii* AY055381 (CBS 2479) // biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. Herpetol. Med. Surg. 13:10-15, 2003).
- 10878 male green iguana, 2 yr, in poor condition; histopathology + for hyphae; improved on itraconazole therapy Centro Veterinario Madrid Exoticos, Madrid, Spain M. Gallego 1-Nov-2007 /M. Gallego 1374.
- 11582 environmental sample from hospital wash basin, in area designated for patient use University of West Indies, Mona Campus, Kingston, Jamaica O. Heslop (C757; ICU-B) /S.P. Abbott SA1510. Biodiversity: Indoor fungus associated with human infection (Heslop OD, Nyi Nyi M-P, Abbott SP, Rainford LF, Castle DM, Coard KCM, J Clin Microbiol 49:4405-4408, 2011) // culture conditions: API 20C profile # 2744734.
- 11583 specimen ex female 44 yr with diabetes and thermal burns; same fungus isolated from facial wounds, sputum and

meningeal swab; histopathology + for yeast cells and arthroconidia University of West Indies, Mona Campus, Kingston, Jamaica O. Heslop (F211D425;ICU-B) /S.P. Abbott SA1511. Human/animal pathogen: Disseminated trichosporonosis (meningitis and cerebral abscess) in a burn patient (Heslop OD, Nyi Nyi M-P, Abbott SP, Rainford LF, Castle DM, Coard KCM, J Clin Microbiol 49:4405-4408, 2011) // culture conditions: API 20C profile # 2744734.

- 11584 specimen ex female 44 yr with diabetes and thermal burns; same fungus isolated from facial wounds, sputum and meningeal swab; histopathology + for yeast cells and arthroconidia University of West Indies, Mona Campus, Kingston, Jamaica O. Heslop (F221D768; ICU-B) /S.P. Abbott SA1512. Human/animal pathogen: Disseminated trichosporonosis (meningitis and cerebral abscess) in a burn patient (Heslop OD, Nyi Nyi M-P, Abbott SP, Rainford LF, Castle DM, Coard KCM, J Clin Microbiol 49:4405-4408, 2011) // culture conditions: API 20C profile # 2744734.

Trichosporon asteroides (Rischin) Ota (syn. *Prototheca filamenta*)

- 99 cow eye epithelioma (slaughter house) Kansas City, KA R. Menges /R. Menges 2188 [=UAMH 100 =UAMH 101 =UAMH 102]. Molecular systematics: ITS 1bp difference with *T. asteroides* AF444416 (CBS 2481) (fide UAMH) // culture conditions: colony dry, firm.
- 4261 (*T. Prototheca filamenta*) human skin Cleveland, OH D.G. Ahearn (45-681-69) 1969 /ATCC 22432 [=CBS 7623 =JCM 10016 =IP 24 =GenBank AB018018]. Culture conditions: demonstrates strictly meristematic growth type formerly described as *Fissuricella filamenta*.
- 7656 (*T. Parentomyces asteroides*) skin on chin, male 43 yr Berne, Switzerland /CBS 2481 [=JCM 2937 =GenBank AB081515 =GenBank AB066405 =GenBank AF444416]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).
- 10278 O'Shaughnessy's chameleon with severe cutaneous mycosis; histopathology + for hyphae & arthroconidia University of Illinois Zoological Pathology Program, Loyola University Medical Center, Maywood, IL J. Pare 02-03 /J. Pare. Culture conditions: API profile # 2744775 excellent ID for *Trichosporon asahii* (fide C. Sand); Determined as *T. asteroides* by sequencing (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010) // systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species; Determined as *Trichosporon asteroides* by sequencing (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010).

Trichosporon brassicae Nakase

- 7657 (*T. Trichosporon brassicae*) ex cabbage Japan T. Nakase /CBS 6382 [=AJ 4833 =ATCC 24124 =CCRC 21783 =IFO 1584 =JCM 1599 =GenBank AF444436]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon coremiiforme (M. Moore) Gueho & Th. Smith

- 7658 (*T. Hemispora coremiiformis*) ex lesion on head Costa Rica M. Moore /CBS 2482 [=JCM 2938 =GenBank AF444434]. Systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010) // molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven,

Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon cutaneum (de Beurmann, Gougerot & Vaucher) Ota

- 4482 sewage effluent water Willimantic R. J. Buck (WR 112) /Kaneda [=ATCC 32967]. Molecular systematics: Closest match (9 bp difference) to *T. shinodae* AB180201 (fide UAMH) // culture conditions: colony moist, white powdery (fide UAMH).
- 7659 (*T. Trichosporon cutaneum*) M. Langeron /CBS 2466 [=ATCC 28592 =CCRC 21675 =IFO 1198 =JCM 1462 =NCYC 444 =NRRL Y-1490 =GenBank AF444325]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon dermatis Sugita, Takashima, Nakase & Shinoda

- 98 sputum Mass. Gen. Hosp. J.W. Carmichael Dec 1952 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565 // culture conditions: colony mucoid (fide UAMH).
- 221 rec'd as type strain of Lodder & Kreger-van Rij, *T. pullulans* but this strain does not match CBS culture fide I. Salkin 1975; redetermined as *T. dermatis* 2007 Berlin Lindner 1912 /CBS. Molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565 // culture conditions: colony mucoid (fide UAMH).
- 235 foot skin Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565 // culture conditions: colony mucoid (fide UAMH).
- 309 sputum Mass. Gen. Hosp. J.W. Carmichael Feb 1953 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565 // culture conditions: colony very mucoid (fide UAMH).
- 330 skin, hands & feet Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Thermotolerant: grows @ 42 C (fide I. Salkin) // culture conditions: nitrate negative (fide I. Salkin); colony very mucoid // molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565.
- 608 swab, infected toes Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565 // culture conditions: colony very mucoid.
- 611 vaginal swab Edmonton, Alta. J.W. Carmichael 1958 /J.W. Carmichael. Molecular systematics: 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565; 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043) // culture conditions: soft, crumbly (fide UAMH).
- 792 foot skin Edmonton, Alta. J.W. Carmichael 23 Mar 1960 /J.W. Carmichael [=GenBank AY591347 (ITS) =GenBank AY591346 (ITS)]. Cycloheximide: slightly sensitive // thermotolerant: grows @ 42 C (fide I. Salkin) // culture conditions: nitrate negative (fide I. Salkin); colony mucoid // molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565.
- 2565 water Whitehorse, Yukon Terr. J.W. Carmichael Jan 1966 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. dermatis* AY143557 (CBS 2043); 100% ITS similarity among UAMH 98, 99, 221, 235, 309, 330, 608, 611, 792, 2565

// culture conditions: colony very mucoid (fide UAMH).

Trichosporon domesticum Sugita, A. Nishikawa & Shinoda

- 89 cow jaw /O.A. Plunkett [=Bobrov 4]. Molecular systematics: BLAST match 100% ITS similarity to AF444414 (CBS 8280) & other isolates of *Trichosporon domesticum* (fide UAMH 2010) // culture conditions: produces arthroconidia.

Trichosporon dulcitum (Berkh.) Weijman

- 115 (T *Oospora dulcita*) soil C.M. Berkhout /S. Windisch 26 [=?CBS 123.22].
- 7660 (T *Trichosporon dulcitum*) ex soil Netherlands L.E. den Dooren de Jong /CBS 8257 [=CBS 123.22 =NRRL Y-17148 =GenBank AF444428]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).
- 11495 swab ex fur of living male little brown bat (*Myotis lucifugus*) Markhamville Mine, New Brunswick K.J. Vanderwolf 09-Feb-2010 /K.J. Vanderwolf Bat 46 C.1 [=Bat 46 C.6 CC1]. Molecular systematics: Blast match 100% D1D2 sequence to *Trichosporon dulcitum* (fide A. Lachance, Univ Western Ontario) // biodiversity: mycobiota of bat caves.
- 11496 swab ex skin of living male little brown bat (*Myotis lucifugus*) Berryton Cave, New Brunswick K.J. Vanderwolf 11-Mar-2010 /K.J. Vanderwolf Bat 85 C.2. Molecular systematics: determined as *T. dulcitum* by sequencing (fide A. Lachance, Univ Western Ontario) // biodiversity: mycobiota of bat caves.
- 11529 swab ex skin of living little brown bat (*Myotis lucifugus*) Markhamville Mine, New Brunswick K.J. Vanderwolf /K.J. Vanderwolf Bat 42 C.2. Molecular systematics: Blast match 100% D1D2 similarity to *Trichosporon dulcitum* CBS 8259 (fide A. Lachance, Univ Western Ontario).

Trichosporon faecale (Batista & Silveira) Gueho & Th. Smith

- 82 healthy horse spleen Edmonton, Alta. E. Keeping 1949 /E.S. Keeping 58. Molecular systematics: 100% ITS similarity with *T. faecalei* AF444419 (CBS 4828); 100% ITS similarity among UAMH 82, 223, 306, 317, 318, 670, 704, 4923 // culture conditions: colony moist, creamy (fide UAMH).
- 223 rec'd as *Trichosporon undulatum* nomen nudum; dairy product? Germany Schnegg (22) /S. Windisch 15. Molecular systematics: 100% ITS similarity among UAMH 82, 223, 306, 317, 318, 670, 704, 4923; >99% ITS similarity with *T. faecalei* AF444419 (CBS 4828) // culture conditions: colony dry, adherent (fide UAMH).
- 306 cucumber at pickle plant Bur. Agr. & Indust. Chem., Raleigh, N.C. Etchells (CF 8F418) Jun 1952 /F. Raymond [=Etchells CF 8F418]. Molecular systematics: 100% ITS similarity with *T. faecalei* AF444419 (CBS 4828); 100% ITS similarity among UAMH 82, 223, 306, 317, 318, 670, 704, 4923 // culture conditions: colony dry, leathery, adherent (fide UAMH).
- 317 F. Raymond. Molecular systematics: 100% ITS similarity with *T. faecalei* AF444419 (CBS 4828); 100% ITS similarity among UAMH 82, 223, 306, 317, 318, 670, 704, 4923 // culture conditions: colony dry, leathery, adherent (fide UAMH).
- 318 F. Raymond. Molecular systematics: >99% ITS similarity with *T. faecalei* AF444419 (CBS 4828); 100% ITS similarity among UAMH 82, 223, 306, 317, 318, 670, 704, 4923 // culture conditions: colony dry, heaped (fide UAMH).
- 670 contaminant ex throat swab Edmonton, Alta. J.W. Carmichael 1959 /J.W. Carmichael. Molecular systematics: 100% ITS similarity among UAMH 82, 223, 306, 317, 318, 670, 704, 4923; >99% ITS similarity with *T. faecalei* AF444419 (CBS 4828) // culture conditions: colony dry (fide UAMH).
- 704 throat swab Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Molecular systematics: 100% ITS similarity

- among UAMH 82, 223, 306, 317, 318, 670, 704, 4923; >99% ITS similarity with *T. faecalei* AF444419 (CBS 4828) // culture conditions: colony creamy, dry on top (fide UAMH).
- 4923 calf /O. Petrini. Molecular systematics: 100% ITS similarity among UAMH 82, 223, 306, 317, 318, 670, 704, 4923; >99% ITS similarity with *T. faecalei* AF444419 (CBS 4828) // culture conditions: colony creamy, dry at base.
- 7661 (T *Endomycopsis mali*) ex human feces A.C. Batista /CBS 4828 [=IMUR 932 =JCM 2941 =GenBank AF444419]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon gracile (Weigmann & A. Wolff) Gueho & M.T. Smith

- 116 (T *Oidium gracile*) strain Bierberg of *Oospora gracilis*; sour milk Germany deposited by W.B. Bierberg in CBS /S. Windisch 27 [=CBS 102.10 =CBS 8189 =UAMH 7662].
- 7662 (T *Oidium gracile*) ex sour milk Germany W.B. Bierberg /CBS 8189 [=CBS 102.10 =UAMH 116 =GenBank AF444440]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon inkin (Oho) Carmo-Sousa & van Uden (syn. *Sarcinosporon inkin*)

- 81 hammock mesh Q. M. Labs, Florida /Farlow Herb 648. Molecular systematics: 3 bp difference with *T. inkin* AF444420 (CBS 5585) (fide UAMH); 100% ITS similarity among UAMH 81, 84, 606, 607 // culture conditions: colony dry, heaped (fide UAMH).
- 84 healthy horse spleen Edmonton, Alta. E. Keeping 1949 /E.S. Keeping. Molecular systematics: 3 bp difference with *T. inkin* AF444420 (CBS 5585); 100% ITS similarity among UAMH 81, 84, 606, 607 // culture conditions: colony dry, adherent.
- 606 urethra & cervix swab Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Molecular systematics: 3 bp difference with *T. inkin* AF444420 (CBS 5585); 100% ITS similarity among UAMH 81, 84, 606, 607 // culture conditions: colony dry (fide UAMH).
- 607 vaginal swab Edmonton, Alta. J.W. Carmichael 1958 /J.W. Carmichael. Molecular systematics: 3 bp difference with *T. inkin* AF444420 (CBS 5585); 100% ITS similarity among UAMH 81, 84, 606, 607 // culture conditions: colony dry (fide UAMH).
- 4260 (T *Sarcinomyces inkin*) Portuguese woman with 'tinea cruris' caused by *Trichophyton tonsurans* /ATCC 18020 [=CBS 5585 =CCRC 21503 =CDC 75-068884 =IFO 10131 =IGC 3727 =NRRL Y-7793 =UAMH 7663 =GenBank AF444420]. Systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010).
- 4479 clinical specimen /I. Salkin M 3176.
- 5678 onychomycosis ex male, 62 yr Regina H. Congly /H. Congly 2662M. Molecular systematics: 3 bp difference with *T. inkin* AF444420 (CBS 5585) (fide UAMH) // culture conditions: colony creamy, furrowed (fide UAMH).
- 7663 (T *Sarcinomyces inkin*) ex human skin L. do Carmo-Sousa /CBS 5585 [=ATCC 18020 =CCRC 21503 =CDC 75-068884 =IFO 10131 =IGC 3727 =NRRL Y-7793 =UAMH 4260 =GenBank AF444420]. Systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010) // molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol.

Microbiol. 54:975-986, 2004).

- 7664 ex case of pubic white piedra E. Gueho /CBS 7655 [=IP 74]. Systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010).

Trichosporon jirovecii Fragner

- 236 foot skin Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. jirovecii* AF444437 (CBS 6864) // culture conditions: colony creamy, furrowed.
- 4483 clinical specimen Minnesota /Kaneda [=ATCC 34148 [as *T. cutaneum*]]. Mesophilic: NG @ 37C // molecular systematics: >99% ITS similarity with *T. jirovecii* AF444437 (CBS 6864) // culture conditions: colony dry, furrowed.
- 7665 (T *Trichosporon jirovecii*) ex toe nail Czechoslovakia /CBS 6864 [=ATCC 34499 =CCY 30-7-1 =GenBank AF444437]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon lactis Lopandic & Prillinger

- 705 skin, feet Edmonton, Alta. J.W. Carmichael /J.W. Carmichael. Molecular systematics: 100% ITS similarity with *T. lactis* AJ319759 (CBS 9051) // culture conditions: colony heaped, crumbly.

Trichosporon laibachii (Windisch) Gueho & Th. Smith

- 7666 (T *Endomyces laibachii*) ex soil S. Windisch /CBS 5790 [=JCM 2947 =GenBank AF444421]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon lignicola (H. Diddens) Fell & Scorzetti (syn.

Hyalodendron lignicola)

- 2575 (T *Hyalodendron lignicola* f. *undulatum*) wood pulp E. Melin /CBS 222.34 [=GenBank AF444482]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).
- 4579 beer pipes Rotterdam, Netherlands Vermeulen 09-34 /CBS 208.35 [=ATCC 44977].
- 11462 swab ex skin of living female little brown bat (*Myotis lucifugus*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 58 C.5. Biodiversity: mycobiota of bat caves // molecular systematics: determined as *Trichosporon lignicola* by ITS sequencing (fide A. Lachance, Univ Western Ontario).

Trichosporon loubieri (Morenz) Weijman

- 2566 water Whitehorse, Yukon J.W. Carmichael Jan 1966 /J.W. Carmichael. Molecular systematics: 100% ITS similarity with GenBank AF444438 *Trichosporon loubieri* CBS 7065 T (fide UAMH 2011).
- 4692 on 'biotower' for sewage treatment of high phenol sewage /A. Kopecky. Biodeteriogen/biodegradation: digestion of polychlorinated biphenols // molecular systematics: 100% ITS similarity with *T. loubieri* AF444438 (CBS 5580) // culture conditions: colony dry, soft (fide UAMH).
- 7667 (T *Geotrichum loubierei*) ex cow Baarn, Netherlands /CBS 7065 [=JCM 3939 =GenBank AF444438]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon moniliiforme (Weigmann & Wolff) Gueho & Th. Smith

- 7668 (T *Trichosporon moniliiforme*) ex curdling milk W.B. Bierberg /CBS 2467 [=JCM 2389 =NRRL Y-17145 =NRRL Y-337 =GenBank AF444415]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon montevidense (Aciole de Queiroz) Gueho & Th. Smith

- 7669 (T *Endomyces montevidensis*) ex water purification tank Uruguay L. Aciole de Queiroz /CBS 6721 [=IMUR 2329 =NRRL Y-7944 =GenBank AF444422]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon mucoides Gueho & Th. Smith

- 7670 (T *Trichosporon mucoides*) ex case of meningitis Belgium I. Surmont /CBS 7625 [=IP 151 =GenBank AF444423]. Systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010) // molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon mycotoxinivorans Molnár, Schatzmayr & Prillinger

- 10833 isolated from sputa, bronchial aspirates, both lungs at autopsy, cystic fibrosis patient, male 20 yr NIH, Bethesda, MD 2007 /D.A. Sutton R-3912 [=GenBank EU118973 ITS =GenBank EU118979 D1D2]. Human/animal pathogen: respiratory disease in a non transplant patient with cystic fibrosis (Hickey PW, Sutton DA, Fothergill AW, Rinaldi MG, Wickes BL, Schmidt HJ, Walsh TJ, J Clin Microbiol 47:3091-3097, 2009).

Trichosporon oryzae see *Pseudozyma antarctica*

Trichosporon ovoides Behrend

- 104 as *Geotrichum amycelicum*; presumably same strain as UAMH 107 /S. Windisch 23 [=UAMH 107 =CBS 5580 =GenBank AB018033].
- 107 as *Geotrichum amycelicum* strain Polacci; resumably same strain as UAMH 104 /CBS 5580 [=UAMH 104].
- 117 (T *Geotrichum hirtum*) Piedra Keijo, Korea Kawasaki /S. Windisch 32 [=Ota strain 84]. Culture conditions: raffinose +; melibiose -; grows at 37 C.
- 3777 as *Oospora tenuis* (Mazé) Berkhout /CBS 114.12. Molecular systematics: 100% ITS similarity with *T. ovoides* AB018033 (CBS 5580) // culture conditions: colony heaped, dry powdery on surface (fide UAMH).
- 7671 (T Neotype *Trichosporon ovoides*) scalp infected with white piedra /CBS 7556 [=JCM 9940 =RV 34067 =GenBank AF444439]. Systematics/taxonomy: matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) for the rapid identification of yeast species (Stevenson LG, Drake SK, Shea YR, Zelazny AM, Murray PR, J Clin Microbiol 48:3482-3486, 2010) // molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporon penicillatum see *Geotrichum klebahnii*

Trichosporon rotundatum (Castellani) Puntoni

- 815 as *Geotrichum rotundatum* strain Castellani (?=ex-type) /IMUR 572 [=IMT 52].

***Trichosporon* sp.**

- 100 cow lung & lymph node /R. Menges 2189 [=UAMH 99 =UAMH 101 =UAMH 102].
- 101 cow eye epithelioma /R. Menges 2190 [=UAMH 99 =UAMH 100 =UAMH 102].
- 102 cow heart blood /R. Menges 2195 [=UAMH 99 =UAMH 100 =UAMH 101].
- 775 soil pig yard, no vegetation, baited with turkey feathers Alta. J.W. Carmichael 21 Jul 1959. Molecular systematics: Closest match (6 bp difference) to *T. guehoae* AF410476 (CBS 8521) (fide UAMH) // culture conditions: colony dry, soft.
- 821 as *Geotrichum membranogenes* [=IMUR 1022]. Culture conditions: produces budding cells and arthroconidia.
- 11441 swab ex skin of living male Northern long-eared myotis bat (*Myotis septentrionalis*) Markhamville Mine, New Brunswick K.J. Vanderwolf 9-Feb-2010 /K.J. Vanderwolf Bat 50 C.1. Molecular systematics: close to *Trichosporon coprophilum* (fide A. Lachance, Univ Western Ontario); valid description of *T. coprophilum* not found; Mycobank record incomplete // biodiversity: mycobiota of bat caves.

Trichosporon sporotrichoides (van Oorschot) van Oorschot & de Hoog (syn. *Trichosporiella sporotrichoides*)

- 5670 (*T. sporotrichoides*) soil Surinam J.H. van Emden 1974 /CBS 671.74 [=CBS 8246 =GenBank AF444470]. Molecular systematics: systematics of *Trichosporon* and related taxa (Middelhoven, Scorzetti & Fell, Int. J. Syst. Evol. Microbiol. 54:975-986, 2004).

Trichosporonoides australiense see ***Brettanomyces anomalus******Trichosporonoides madida*** de Hoog

- 4546 (*T. madida*) margarine factory (=Unilever 30-380) /CBS 240.79 [=GenBank AF335522 D1D2]. Culture conditions: physiological reactions (Inglis et al., Mycologia 84:555-570, 1992) // molecular systematics: phylogeny of *Moniliella* and *Trichosporonoides* (Rosa CA, Jindamorakot S, Limtong S, Nakase T, Lachance MA, et al, Int J Syst Evol Microbiol.;59:425-429, 2009).

Trichosporonoides megachiliensis Inglis & Sigler

- 6490 (*T. megachiliensis*) *Ascosphaera*-infected *Megachile rotundata* (alfalfa leafcutting bee) Tilley, Alta. M. Goettel Jul 1989 /M. Goettel [=ATCC 76718 =CBS 190.92 =DAOM 213330 =GenBank EF137916 D1D2]. Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan); production of erythritol (US Patent 6110715 - Method for producing erythritol using a microorganism). Benomyl: resistant // cycloheximide: sensitive // thermotolerant: grows @ 37C // culture conditions: physiological reactions (Inglis et al., Mycologia 84:555-570, 1992) // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993) // systematics/taxonomy: description (Inglis et al., Mycologia 84:555-570, 1992) // molecular systematics: reclassification in *Moniliella* proposed (Rosa CA, Jindamorakot S, Limtong S, Nakase T, Lachance MA, et al, Int J Syst Evol Microbiol.;59:425-429, 2009).
- 6820 *Megachile rotundata* (alfalfa leafcutting bee) larvae provisions Lethbridge, Alta. D. Inglis (MR 34) 25 Aug 1990 /D. Inglis (MR 34). Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa

Women's Univ., Tokyo, Japan). Cycloheximide: sensitive // thermotolerant: grows @ 37C // culture conditions: physiological reactions (Inglis et al., Mycologia 84:555-570, 1992).

- 6821 *Megachile rotundata* (alfalfa leafcutting bee) larvae frass Lethbridge, Alta. D. Inglis (MR 181) 25 Aug 1990 /D. Inglis (MR 181). Low yield of citric, malic & succinic organic acids in high glucose fermentation method. Cycloheximide: sensitive // thermotolerant: grows @ 37C // culture conditions: physiological reactions (Inglis et al., Mycologia 84:555-570, 1992).
- 6822 *Megachile rotundata* (alfalfa leafcutting bee) larvae (instar IV) Lethbridge, Alta. D. Inglis (MR 804) 25 Aug 1990 /D. Inglis (MR 804) [=CBS 191.92]. Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan); production of erythritol (US Patent 6110715 - Method for producing erythritol using a microorganism). Cycloheximide: sensitive // thermotolerant: grows @ 37C // culture conditions: physiological reactions (Inglis et al., Mycologia 84:555-570, 1992) // application: produces erythritol.
- 6823 *Megachile rotundata* (alfalfa leafcutting bee) larvae (instar II) Lethbridge, Alta. D. Inglis (MR 946) 25 Aug 1990 /D. Inglis (MR 946). Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan). Cycloheximide: sensitive // thermotolerant: grows @ 37C // culture conditions: physiological reactions (Inglis et al., Mycologia 84:555-570, 1992).
- 6969 ex *Megachile rotundata* (alfalfa leafcutting bee) Saskatchewan D. Goerzen /D. Goerzen. Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan).
- 6970 *Ascosphaera*-infected *Megachile rotundata* (alfalfa leafcutting bee) Idaho D. Inglis 7 Aug 1991 /J. Vandenberg. Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan).
- 7060 emerging *Megachile rotundata* (alfalfa leafcutting bee) adult Lethbridge, Alta. D. Inglis (ER5w) Aug 1990 /D. Inglis (ER5w). Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan).
- 7108 ex cadaver *Megachile* sp. Manitoba B. Fingler /CBS 567.85. Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan).
- 7147 polystyrene nesting material of *Megachile rotundata* (alfalfa leafcutting bee) Parkside, Sask. D. Goerzen (3 NM-C) 29 Jul 1986 /DAOM 196433. Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan).
- 7148 mold on *Megachile rotundata* (alfalfa leafcutting bee) larva Saskatchewan D. Goerzen (17) Sep 1986 /DAOM 197159. Low yield of citric, malic & succinic organic acids in high glucose fermentation method (Fide H. Lino, Showa Women's Univ., Tokyo, Japan).
- Trichosporonoides nigrescens*** Hocking & Pitt
- 7092 (*T. nigrescens*) ex spoiled melon jam New South Wales, Australia J. Pitt 1981 /CBS 269.81 [=GenBank EF137917 D1D2]. Culture conditions: physiological reactions (Inglis et al., Mycologia 84:555-570, 1992) // molecular systematics: reclassification in *Moniliella* proposed (Rosa CA, Jindamorakot S, Limtong S, Nakase T, Lachance MA, et al, Int J Syst Evol Microbiol.;59:425-429, 2009).
- 10176 spoiled mini doughnut (aw 0.81) Japan H. Tsubouchi & H. Kato /S.-I. Udagawa SUM 3208 [=S-1430]. Biodeteriogen/biodegradation: processed food (Tsubouchi & Kato, Jpn. J. Food Microbiol. 19:1-5, 2002).

Trichosporonoides oedocephalis Haskins et Spencer

- 3922 (T *Trichosporonoides oedocephalis*) brood cell, comb domestic honeybee Davis, Calif. 1962 /R. Haskins PRL 2176 [=ATCC 16958 =CBS 649.66 =QM 8824 =GenBank AF335521 D1D2]. Culture conditions: physiological reactions (Inglis et al., *Mycologia* 84:555-570, 1992) // molecular systematics: reclassification in *Moniliella* proposed (Rosa CA, Jindamorakot S, Limtong S, Nakase T, Lachance MA, et al, *Int J Syst Evol Microbiol.*;59:425-429, 2009).
- 3923 brood cell in comb of domestic honeybee Davis, Calif. 1962 /R. Haskins PRL 2176.

Trichosporonoides sp.

- 7332 alfalfa leafcutter bee cadavers J. Bissett (85M-72E) /DAOM 192803.

Trichosporonoides spathulata de Hoog

- 4547 (T *Trichosporonoides spathulatus*) ghee India (=Unilever 4-922) /CBS 241.79 [=GenBank AF335526 D1D2]. Culture conditions: physiological reactions (Inglis et al., *Mycologia* 84:555-570, 1992) // molecular systematics: reclassification in *Moniliella* proposed (Rosa CA, Jindamorakot S, Limtong S, Nakase T, Lachance MA, et al, *Int J Syst Evol Microbiol.*;59:425-429, 2009).

Trichothecium roseum (Persoon) Link

- 225 plate contaminant Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael.
- 343 skin ex sole, foot Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 364 skin? Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
- 3015 swab, scalp Edmonton, Alta. T. Jones 22 Jan 1969 /T. Jones.
- 4789 coyote dung Lesser Slave Lake Alta (C) R.S. Currah L. Sigler Jul 1983 /C) R.S. Currah L. Sigler.
- 6680 arm, female 35 yr /H. Congly 1361M.
- 7839 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility St. Lina, Alta. S.P. Abbott (OHS 39) 10 Dec 1993 /S.P. Abbott (OHS 39) [=GenBank DQ676599 rpb2H =GenBank DQ676623 tef1H =GenBank DQ676574 tri5H =GenBank DQ680065 SSU]. Molecular systematics: presence of trichothecene biosynthetic pathway gene trichodiene synthase (tri5) (Koster B, Wong B, Straus N, Malloch D, *Mycol Res* 113:877-886, 2009).
- 9960 shed dorsal skin ex boa constrictor (*Boa constrictor*), male 10 yr Dakota Zoo, Bismarck, ND UAMH (UW052B-I) 31 Jan 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. *Herpetol. Med. Surg.* 13:10-15, 2003).

Trichurus cylindricus Clem. & Shear

- 9834 lung, female 70 yr Arlington, TX 2000 /Texas Dept. of Health BY 1622. Cycloheximide: resistant // benomyl: resistant.

Trichurus dendrocephalus Udagawa, Horie & Abdullah

- 1383 Richardson's ground squirrel (*Spermophilus richardsonii*) Edmonton, Alta. J.W. Carmichael 8 Aug 1962 /J.W. Carmichael.
- 5372 (T *Trichurus dendrocephalus*) soil date palm plantation Basrah City, Iraq S. Abdullah Jul 1983 /S.-I. Udagawa NHL 2927.

Trichurus spiralis Hasselbring

- 3585 steamed decomposing mushroom compost Spruce Grove, Alta L. Sigler 8 Mar 1973 /L. Sigler.
- 4093 contaminant in tray sawdust & straw used for growing *Lentinus edodes* British Columbia R.J. Bandoni 2 Feb 1978 /R.J. Bandoni.
- 4094 basidiomycete detritus in moisture chamber Preston Lowe /T.M. Hammill 210-72.

- 7259 ex growth pouch with alfalfa seeds in growth chamber Nisku, Alta. M. Matlock 25 Nov 1992 /M. Matlock.
- 7892 ex nail, female 35 yr, DE- New Zealand /A. Woodgyer 94.600.
- 8689 airborne contaminant of wheat-straw agar plate Ottawa, Ontario R.A. Shoemaker /DAOM 147400. Cycloheximide: resistant (MYC).
- 8690 egg of gypsy moth (*Lymantria dispar*) Ottawa, Ontario M.I. Timonin /DAOM 190434. Cycloheximide: resistant (MYC).
- 8691 air Ottawa, Ontario M.E. Elliott (MEE 42-I-342B) 1942 /DAOM 196858. Cycloheximide: resistant (MYC).
- 8836 sputum, male 63 years Alberta Prov. Lab Southern Alberta 11-Dec-1996 /R. Rennie MY 251. Benomyl: resistant (2 ppm).
- 8843 soil Japan T. Ito (1726-7) 1989 /T. Ito IFO 32272. Cycloheximide: resistant (MYC).
- 8882 soil, on roots of potato (*Solanum tuberosum*) Nicosia, Cyprus R.M. Nattrass (285) Oct 1932 /W. Untereiner MUCL 9829 [=CBS 336.32].
- 8911 paper Bihar, India D.S. Attili Sep 1992 /C.Y. Umino CCT 3035 [=IMI 145114]. Benomyl: resistant (2 ppm).
- 9319 air Edmonton, Alta J.P. Tewari 1995 /J.P. Tewari.
- 9405 finger nail Alberta Provincial Laboratory for Southern Alberta 21 Aug 1998 /R. Rennie MY 5540.
- 9919 shed mid dorsal skin ex Gila monster (*Heloderma suspectum*), 7 yr John Ball Zoological Garden, Grand Rapids MI UAMH (UW025B-D) 05 Dec 2000. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. *Herpetol. Med. Surg.* 13:10-15, 2003).
- 10714 heavy mold on wooden packing crate and paper liner originating from India L. Sigler 31-10-05.

Trichurus terrophilus Swift & Povah

- 1348 seed of sorghum Kansas C.T. Rogerson (S.129) 1955 /DAOM 45913 [=IMI 96753].
- 8848 timber of *Eucalyptus saligna* South Africa TRL8-FPRL (S590) 1951 /T. Ito IFO 7660 [=IMI 46251 =LSHB BB344 =CBS 448.51]. Cycloheximide: resistant (MYC).
- 8912 soil under primary Amazonian forest Belem, PA, Brazil L. Pfenning Dec 1993 /C.Y. Umino CCT 3815. Benomyl: resistant (2 ppm).
- 8976 soil under white pine (*Pinus strobus*) Huron National Forest, Michigan NRRL isolate 19 Jul 1962 /NRRL A-11628. Benomyl: resistant (2 ppm).
- 9141 soil France A. Russo /CBS 646.70. Benomyl: resistant (2 ppm).

Trigonopsis variabilis Schachner

- 1580 C.L. Kramer K5.

Trimmatostroma salicis Corda

- 7505 twig of willow (*Salix sp.*) Redwater, Alberta S.P. Abbott (SA-M82) 29 Jul 1993 /R.S. Currah RC 93-17.

Trimmatostroma salinum Zalar, de Hoog & Gunde-Cimerman

- 4457 microcolonies ex quartz chlorite vein rock Ormiston Gorge, Alice Springs, Austr. May 1980 /J.T. Staley Aus-2.

Tripaspermum myrti (Lind) Hughes

- 2645 soil, mixed wood Guelph, Ontario Jun 1965 /G.L. Barron 10324.
- 8642 toenail Toronto, Ont. 9 Jun 1996 /R.C. Summerbell FR 1767.
- 9956 thoracentesis, female 28 yr Texas 2001 /Texas Dept. of Health BY 367. Mesophilic: good growth @ 30C, NG @ 37C.

Tritirachium dependens Limber

- 9830 aorta valve Ottawa, ON Jul 2000 /R. Rennie MY 4285. Cycloheximide: slightly sensitive // pigment: rose-brown // mesophilic: NG @ 37C.

Tritirachium oryzae (Vincens) de Hoog

- 3334 J.W. Carmichael 25 Feb 1970 /J.W. Carmichael.
 6026 air hospital post-construction Toronto R.C. Summerbell 14 Jul 1987 /R.C. Summerbell BB 384.
 8380 sputum, male 53 yr Saskatchewan H. Congly 1995 /H. Congly 2159M-95.
 8764 D. Malloch.
 9708 ex air RCS sample, basement cellar Lethbridge, AB L. Sigler (HC 1-1-J) 17 Jan 2000 /L. Sigler (HC 1-1-J).
 10127 gut, coffee berry borer (*Hypothenemus hampei*) on artificial diet El Colegio de la Frontera Sur (ECOSUR), Chiapas, Mexico J. Perez 2 Jul 2001 /F. Vega DI-TD R50-6. Pigment: red/brown.

Tritirachium rectidentatum Matsushima

- 5087 carbonated beverage Puerto Rico /C. Betancourt 6.

***Troposporella* sp.**

- 8122 ex roots of *Catasetum maculatum* (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 28 May 1991 /R.S. Currah K224b. Mycorrhizae: root endophyte epiphytic orchid *Catasetum maculatum*.

Truncatella angustata (Pers. ex Lk.) Hughes

- 1003 spleen, deer mouse Fort Vermillion, Alta J.W. Carmichael Aug 1959 /J.W. Carmichael.
 5943 contaminant ex Warcup's cellulose UAMH A. Smreciu 2 Sep 1987 /A. Smreciu.

***Tuber* sp.**

- 8324 mycorrhizal root tips of 2-3 yr old *Pinus strobus* (Eastern White Pine) seedlings in tree nursery Ontario Ministry of Natural Resources Nursery, St. Williams, Ont. M. Kronick-Ursic Sep 1994 /R.L. Peterson. Mycorrhizae: ectomycorrhizal on *Pinus strobus* in field & in pot culture (Schelkle, Ursic et al., Mycorrhiza 6:431-440, 1996).

Tubercularia vulgaris Tode: Fries (morph *Nectria cinnabarina*)

- 7178 ex sporodochium on Ribes twig Ministik Lake near New Sarepta, Alta. S.P. Abbott (SA 639) 16 May 1992 /S.P. Abbott (SA 639).

Tubeufia clintonii (Peck) Barr

- 7237 ex stromata of UAMH 7236 *Diatrype stigma* Lake Manitouwabing, Parry Sound Dist., Ont. W. Untereiner 30 May 1992 /W. Untereiner 82 [=GenBank AY856892 LSU =GenBank AY916492 ITS =MUCL 41721]. Culture conditions: sporulates on CMA @ 22 C // molecular systematics: helicoid anamorphs of *Tubeufia* and allied genera (Tsui CKM, Sivichai S, Berbee ML, Mycologia 98:94-104, 2006); phylogeny of helicosporous fungi (Tsui CK, Berbee ML, Mol Phylogenet Evol 39:587-597, 2006).

Tulasnella calospora (Boud.) Juel (morph *Epulorhiza repens*)

- 9845 young second lateral root of three year old Western prairie fringed orchid *Platanthera praeclara* seedling Blustem Prairie, Clay County, Minnesota J. Sharma /J. Sharma Blu 61 [=GenBank DQ068773 ITS]. Mycorrhizae: symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara* (Sharma J, Zettler LW, Van Sambeek JW, Eilersieck MR, C.J. Starbuck CJ, Am Midl Nat 149:104-120, 2003); survey of mycobionts of federally threatened orchid *Platanthera praeclara* (Sharma J, Zettler LW, Van Sambeek JW, Symbiosis 34: 145-155, 2003); ITS sequence DQ068773 listed as *Ceratobasidium* species // molecular systematics: *Tulasnella calospora* clade (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).

Tulasnella calospora see ***Epulorhiza repens******Tulasnella irregularis*** Warcup & P.H.B. Talbot (morph *Epulorhiza anamorph*)

- 11541 single peloton in root ex mature flowering epiphytic Florida butterfly orchid, *Encyclia tampensis*, growing on live oak Florida Panther National Wildlife Refuge, lime rock road leading to McBrides Pond, Collier Co., FL with H. Ray, J. McCormick (C) L.W. Zettler 29-Jun-2011 /L. Zettler 353. Mycorrhizae: symbiotic germination of South Florida epiphytic orchids (*Encyclia tampensis*, *Epidendrum nocturnum*) (Zettler LW, Corey LL, Jacks AL, Gruender LT, Lopez AM, Lankesteriana 13:119-128, 2013); orchid endophyte epiphytic *Encyclia tampensis* // molecular systematics: identified as *Tulasnella irregularis* by ITS sequencing (Zettler LW, Corey LL, Jacks AL, Gruender LT, Lopez AM, Lankesteriana 13:119-128, 2013).
 11542 single peloton in root ex mature flowering epiphytic Florida butterfly orchid, *Encyclia tampensis*, growing on live oak Florida Panther National Wildlife Refuge, lime rock road leading to McBrides Pond, Collier Co., FL with H. Ray, J. McCormick (C) L.W. Zettler 29-Jun-2011 /L. Zettler 355. Mycorrhizae: symbiotic germination of South Florida epiphytic orchids (*Encyclia tampensis*, *Epidendrum nocturnum*) (Zettler LW, Corey LL, Jacks AL, Gruender LT, Lopez AM, Lankesteriana 13:119-128, 2013); culture appears identical to UAMH 11541 but isolated from different region of the root (fide L.W. Zettler); orchid endophyte epiphytic *Encyclia tampensis*.
 11543 ex small seedling that grew immediately beneath mature epiphytic Florida butterfly orchid, *Encyclia tampensis*, growing on live oak Florida Panther National Wildlife Refuge, lime rock road leading to McBrides Pond, Collier Co., FL with H. Ray, J. McCormick (C) L.W. Zettler 29-Jun-2011 /L. Zettler 354. Mycorrhizae: symbiotic germination of South Florida epiphytic orchids (*Encyclia tampensis*, *Epidendrum nocturnum*) (Zettler LW, Corey LL, Jacks AL, Gruender LT, Lopez AM, Lankesteriana 13:119-128, 2013); orchid endophyte epiphytic *Encyclia tampensis* // molecular systematics: identified as *Tulasnella irregularis* by ITS sequencing (Zettler LW, Corey LL, Jacks AL, Gruender LT, Lopez AM, Lankesteriana 13:119-128, 2013).

***Tulasnella* sp.**

- 11779 ex roots of mature (flowering) terrestrial orchid, *Tylostigma nigrescens* Tsinahabeomby (grassland/prairie) site, Madagascar (C) L.W. Zettler 01-May-2013 /L. Zettler 56-2. Mycorrhizae: orchid endophyte *Tylostigma nigrescens* // molecular systematics: Blast match highest ITS similarity (98.7%) to uncultured *Tulasnellaceae* JF691303 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul6.
 11780 ex roots of mature (flowering) terrestrial orchid, *Tylostigma nigrescens* Tsinahabeomby (grassland/prairie) site, Madagascar (C) L.W. Zettler 01-May-2013 /L. Zettler 56-4. Mycorrhizae: orchid endophyte *Tylostigma nigrescens* // molecular systematics: OTU tul6; Blast match highest ITS similarity (98.7%) to uncultured *Tulasnellaceae* JF691303 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14).
 11781 ex roots of mature (flowering) terrestrial orchid, *Tylostigma nigrescens* Tsinahabeomby (grassland/prairie) site, Madagascar (C) L.W. Zettler 01-May-2013 /L. Zettler 56-9. Mycorrhizae: orchid endophyte *Tylostigma nigrescens* // molecular systematics: Blast match highest ITS similarity (98.7%) to uncultured *Tulasnellaceae* JF691303 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S,

- Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul6.
- 11782 ex roots of mature (flowering) terrestrial orchid, *Tylostigma nigrescens* Tsinahabeomby (grassland/prairie) site, Madagascar (C) L.W. Zettler 01-May-2013 /L. Zettler 56-10. Mycorrhizae: orchid endophyte *Tylostigma nigrescens* // molecular systematics: Blast match highest ITS similarity (98.7%) to uncultured Tulasnellaceae JF691303 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul6.
- 11783 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-2. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (99.5%) to uncultured Tulasnellaceae JF691348 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul3.
- 11784 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-7. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: OTU tul4; Blast match highest ITS similarity (98.8%) to uncultured Tulasnellaceae JF691515 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14).
- 11785 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-8. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (98.8%) to uncultured Tulasnellaceae JF691515 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul4.
- 11786 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-9. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (99.5%) to uncultured Tulasnellaceae JF691348 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul3.
- 11788 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-12. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (99.5%) to uncultured Tulasnellaceae JF691348 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul3.
- 11789 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-13. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: OTU tul3; Blast match highest ITS similarity (99.5%) to uncultured Tulasnellaceae JF691348 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14).
- 11790 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-16. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (99.5%) to uncultured Tulasnellaceae JF691348 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul3.
- 11792 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-27. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (99.5%) to uncultured Tulasnellaceae JF691348 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul3.
- 11793 ex roots of terrestrial orchid *Cynorkis purpurea* seedling, adjacent to stream, moist soil Antsirakambiaty (dense forest remnant) site, Madagascar (C) L.W. Zettler 03-May-2013 /L. Zettler 69-31. Mycorrhizae: orchid endophyte *Cynorkis purpurea* // molecular systematics: Blast match highest ITS similarity (99.5%) to uncultured Tulasnellaceae JF691348 (Yokoya K, Zettler LW, Kendon JP, Bidartondo MI, Stice AL, Skarha S, Corey LL, Knight AC, Viswambharan S, Mycorrhiza Epub 2015 Mar 14); OTU tul3.
- Tympanis* sp.** (morph *Sirodothis* sp.)
- 9233 spruce wood in mill yard High Level, Alta. T. Lumley (TCL 062) Apr 1997 /Y. Hiratsuka NOF 2352. Pigment: rose-orange.
- 9234 spruce wood in mill yard High Level, Alta. T. Lumley (TCL 063) Apr 1997 /Y. Hiratsuka NOF 2353. Pigment: orange-brown.
- 9235 spruce wood in mill yard Manning, Alta. T. Lumley (TCL 064) Apr 1997 /Y. Hiratsuka NOF 2354. Pigment: orange-brown.
- 9236 spruce wood in mill yard High Level, Alta. T. Lumley (TCL 065) Apr 1997 /Y. Hiratsuka NOF 2355.
- 9237 spruce wood in mill yard Manning, Alta. T. Lumley (TCL 066) Apr 1997 /Y. Hiratsuka TCL 066.
- Tympanis spermatiospora*** see ***Sirodothis populnea***
- Typanosporium* sp.**
- 2086 California bay tree Salt Creek Calif. P. Martin Aug 1961 /P. Martin 787. Hyperparasite: phialosporic parasite on *H. mummularium* v. *merrillii*.
- Tyrannosorus pinicola*** (Petri & Fisher) Untereiner & Malloch (syn. *Capronia pinicola*; morph *Helicodendron pinicola*)
- 8419 (T *Capronia pinicola*) wood of *Pinus* sp. from a river Pakistan O. Petri /W. Untereiner CBS 124.88 [=ETH 9185 =IMI 308599 =CBS 124.88 =GenBank L35294]. Pigment: brown // molecular systematics: Herpotrichiellaceae (Untereiner et al., Mycol. Res. 99:897-913, 1995) // systematics/taxonomy: pseudothecia production (Untereiner, Mycologia 86:290-295, 1994).
- Tyromyces fissilis*** (Berk. & Curt.) Donk (syn. *Polyporus fissilis*)
- 2567 contaminant, sputum /C.W. Emmons B 27-33.
- 4240 patient with pulmonary disease Mayo Clinic, Rochester, Minn. G.D. Roberts Jul 1979 /G.D. Roberts.
- 9185 bronch wash Memorial Laboratories, Jacksonville, FL /M.G. Rinaldi UTHSC 97-1275. Cycloheximide: sensitive // crystals // benomyl: tolerant // mesophilic: NG @ 37C.
- 9228 dikaryon isolate ex *Acer rubrum* London Ranger District, Cumberland National Forest, Kentucky 29 Jul 1963 /H. Burdsall CS-63-53-19-A-R.
- 9229 haploid isolate /H. Burdsall FP 105742 ss3.

Ulocladium atrum Preuss

- 293 Dr. Munroe.
 378 skin? Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 398 mouldy ceilings painted with casein paint Holyrood School Apr 1955 /J.W. Carmichael.
 1758 Douglas Fir Alomitos Bay, Calif. C.J. Anastasiou (A-8) 11 Dec 1961 /C.J. Anastasiou C 15.
 1803 leaves of dogwood Edmonton, Alta. J.W. Carmichael 9 Oct 1963 /J.W. Carmichael.
 3234 turkey corrals Chino, Calif. J.W. Carmichael 17 Feb 1969 /J.W. Carmichael.
 5232 contaminant ex *Suillus tomentosus* (M176) UAMH R. Currah 4 Sep 1985 /R. Currah.
 6998 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 13) Aug 1990 /D. Inglis (MR 13).
 7597 pure growth on damp cardboard base of lamp Edmonton, Alta. L. Sigler 27 Mar 1994 /L. Sigler.
 7840 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Brooks, Alta. S.P. Abbott (OHS 417) 11 Mar 1994 /S.P. Abbott (OHS 417) [=GenBank AY625072 ITS]. Pigment: black // application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004).
 11179 ex gametophyte of moss *Ditricum flexicaule* forefield of Saskatchewan Glacier, Banff National Park, Alta. M. Day 2009 /R.S. Currah 17DfgPDA1 [=GenBank HM101093 ITS]. Biodeteriogen/biodegradation: in vitro decomposition of the moss *Hylocomium splendens* (Day MJ, Currah RS, Can J Microbiol 57:389-391, 2011).

Ulocladium botrytis Preuss

- 382 J.W. Carmichael 1955 /J.W. Carmichael.
 1681 rotting stuffed owl's wing feathers Port Coquitlam, B.C. J.W. Carmichael 20 Jun 1963 /J.W. Carmichael.
 4193 barley in field Stonyplain, Alta. S. Davies 1978 /S. Davies. Culture conditions: sporulates on tap water agar in window.
 6133 dry soil, open scrub forest S.E. of Kariba, Chara region, Zimbabwe (C) J. Krug /R. Khan TRTC 50932 [=CBS 166.88].
 7841 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Grimshaw, Alta. S.P. Abbott (OHS 78) 2 Dec 1993 /S.P. Abbott (OHS 78) [=GenBank AY625070 ITS]. Pigment: black // culture conditions: sporulates on tap water agar in window // application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004).

Ulocladium chartarum (Preuss) Simmons

- 5703 manila fibre Switzerland, St. Gallen /CBS 199.67 [=IMI 116369 =ATCC 18045 =QM 8610 =MUCL 18565]. Culture conditions: sporulates on tap water agar in window // application: Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska).
 7707 ex indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Camp Creek, Alta. S.P. Abbott (OHS 395) 24 Mar 1994 /S.P. Abbott (OHS 395). Culture conditions: sporulates on tap water agar in window.

Ulocladium consortiale (Thumen) Simmons

- 339 skin, middle finger Edmonton, Alta. J.W. Carmichael 1955 /J.W. Carmichael.
 2656 contaminant, skin from face Edmonton, Alta. J.W. Carmichael Sep 1966 /J.W. Carmichael.
 7842 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Brooks, Alta. S.P. Abbott (OHS 412) 11 Mar 1994 /S.P. Abbott (OHS 412) [=GenBank AY625071 ITS]. Pigment: black // culture conditions: sporulates on tap

water agar in window // application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004).

- 7843 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Girouxville, Alta. S.P. Abbott (OHS 415) 21 Mar 1994 /S.P. Abbott (OHS 415).

Ulospora bilgramii (Hawksworth, Booth & Morgan-Jones) Hawksworth, Malloch & Sivanesan (syn. *Neotestudina bilgramii*)

- 7566 *Cassia siamea* Jodhpur University, India K.S. Bilgrami 1974 /W. Untereiner IMI 120811.

Umbelopsis isabellina (Oudem.) W. Gams

- 154 Cutter 874.
 1683 rotting stump Port Coquitlam, B.C. 18 Jun 1963 /Cutter.
 5163 ex roots *Orchis rotundifolia* Grassi Lakes, Alta. R. Currah 3 Jul 1985 /R. Currah. Biodiversity: orchid endophyte.
 7282 ex substrate roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov., Costa Rica K. Richardson 17 Oct 1991 /R.S. Currah K369g.
 7302 peat UAMH, Alta. S.P. Abbott (SA-M243) 27 Jan 1993 /S.P. Abbott (SA-M243). Cycloheximide: resistant.
 8719 ATCC 42613 [=NRRL 1757]. Benzylic hydroxylase (Tetrahedron Asymmetry 4:1353-1364); chiral isothiocyanato sulfoxides (Tetrahedron Asymmetry 6:1569-1574); (+)-(3R)-ethyl 3-hydroxy-3-(3,4-dimethoxyphenyl) propionate (Tetrahedron Asymmetry 7:1077-1088, 1996); (S)-4-hydroxy-alpha-lapachone (Can. J. Chem. 73:1399-1405, 1995). Application: hydroxylation of ethyl benzene (Tetrahedron Lett. 26:6409-6412, 1985); hydroxylation of progesterone (J. Ind. Microbiol. 10:195-197, 1992); sulfoxidation of thioanisole (J. Ind. Microbiol. 10:195-197, 1992); oxidation of organic sulfides (Can. J. Chem. 63:1118-1120, 1985); oxidation of alkyl benzylic sulfides & bibenzyl (Can. J. Chem. 69:1989-1993, 1991); reduction of chromanone & thiochromanone to chroman-4-ol & thiochroman-4-ol (Tetrahedron Asymmetry 2:335-338, 1991); transformation of organophosphines (Xenobiotica 23:519-524, 1993); conversion of olefins to vicinal diols (Biocatalysis 10:65-76, 1994) // systematics/taxonomy: scanning electron microscopy illustrations (O'Donnell, Zygomycetes in culture, Univ. Georgia, Athens, GA, pp. 128-129, 1979).

Umbelopsis nana (Linnemann) von Arx (syn. *Mortierella nana*)

- 3886 (*T. Pseudogymnoascus caucasicus*) forest soil Lake Riza, Caucasus, USSR O. Fassatiava /G.F. Orr O-1295 [=ATCC 28808 =CBS 373.67 =NRRL 6079]. Cellulolytic.

Umbelopsis ramanniana (A. Møller) W. Gams

- 1682 rotting stump Port Coquitlam, B.C. J.W. Carmichael 18 Jun 1963 /J.W. Carmichael.
 3894 oil-spilled soil Norman Wells NWT /D. Westlake.
 5154 contaminant ex root cortex *Corallorhiza lufide* Edson Forest, Alta. (C) R. Currah (0-93-cort-b) 24 Jul 1985 /C) R. Currah (0-93-cort-b).
 7285 ex peat UAMH, Alta S.P. Abbott (SA-M244) 13 Mar 1992 /S.P. Abbott (SA-M244).
 10449 leaf of *Sphagnum fuscum* 5 k E of Perryvale, Alta. A. Tsuneda 19-6-00 /R.S. Currah N-4.
 10450 leaf of *Sphagnum fuscum* 5 k E of Perryvale, Alta. A. Tsuneda 17-7-00 /R.S. Currah 1-a.
 10451 leaf of *Sphagnum fuscum* 5 k E of Perryvale, Alta. A. Tsuneda 20-9-99 /R.S. Currah N-1. Systematics/taxonomy: identified originally as *Umbelopsis ramanniana* var. *angulispora*.

***Umbelopsis* sp.**

- 11125 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula*

- papyrifera) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 23-May-2007 /G. Kernaghan ARSL 230507.15 [=GenBank HQ157862 ITS]. Thermotolerant: grows better @ 30C than @ 35C // molecular systematics: as *Umbelopsis* sp. I in Kernaghan & Patriquin (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11194 ex *Cenococcum geophilum* mycorrhizae of paper birch (*Betula papyrifera*) Duparquet Lake (FERLD), Quebec (C) G. Patriquin G. Kernaghan 23-May-2007 /G. Kernaghan ARSL 230507.20 (c) [=GenBank HQ157863 ITS]. Molecular systematics: Blast match highest ITS similarity (97%) to *Umbelopsis ramanniana*; as *Umbelopsis* sp. II in Kernaghan & Patriquin (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- 11205 ex *Cenococcum geophilum* mycorrhizae of white spruce (*Picea glauca*) Duparquet Lake (FERLD), Que. (C) G. Patriquin G. Kernaghan 23-May-2007 /G. Kernaghan ARSL 180507.11 [=GenBank HQ157958 ITS]. Molecular systematics: Blast match highest ITS similarity (91%) to *Umbelopsis isabellina*; as *Umbelopsis* sp. I in Kernaghan & Patriquin (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011) // mycorrhizae: boreal root endophyte ex *Cenococcum geophilum* root tip (Kernaghan G, Patriquin G, *Microb Ecol* online 8-Apr-2011).
- Uncinocarpus orissi* see *Aphanoascus orissae*
- Uncinocarpus queenslandicum*** (Apinis & R.G. Rees) Sigler (syn. *Apinisia queenslandica*, *Brunneospora reticulata*, *Orromyces spiralis*; morph *Chrysosporium queenslandicum*)
- 4319 (T *Apinisia queenslandica*) feathers ex domestic fowl Cunnumala, Austr. Apinis & Rees 1965 /CBS 280.77 [=IMI 121675 =GenBank AB075358 LSU =GenBank AJ315173 SSU =GenBank AJ390394 ITS]. Thermotolerant: opt. 37C; revision of *Uncinocarpus* (Sigler et al., *Can. J. Bot.* 76:1624-1636, 1998); growth equivalent at 30 & 35C // systematics/taxonomy: revision of *Uncinocarpus* (Sigler et al., *Can. J. Bot.* 76:1624-1636, 1998) // molecular systematics: Blast match ITS 100% similarity with AJ390394 *Uncinocarpus queenslandicus* IMI121675 (same strain) (fide UAMH 2012).
- 4872 sewage sludge, anaerobically digested /K. Ulfing 9. Systematics/taxonomy: revision of *Uncinocarpus* (Sigler et al., *Can. J. Bot.* 76:1624-1636, 1998) // thermotolerant: growth equivalent at 30 & 35C // molecular systematics: Blast match 100% ITS similarity with AJ390394 *Uncinocarpus queenslandicus* IMI121675 (same strain).
- 5704 (T *Brunneospora reticulata*) arable soil Segria, Spain Sep 1980 /J. Guarro FMR 784 [=UAMH 9130 holotype =IMI 315744 =GenBank AJ315175 SSU]. Thermotolerant: opt. 37C; revision of *Uncinocarpus* (Sigler et al., *Can. J. Bot.* 76:1624-1636, 1998); growth equivalent at 30 & 35C // systematics/taxonomy: revision of *Uncinocarpus* (Sigler et al., *Can. J. Bot.* 76:1624-1636, 1998) // molecular systematics: Blast match 98% ITS similarity with *Uncinocarpus queenslandicum* (fide UAMH 2012).
- 6289 right great toenail; DE negative for filaments Stratford, Ont. 19 Jul 1988 /R.C. Summerbell F 7298.88. Thermotolerant: growth slightly faster at 35C than at 30C // molecular systematics: Blast match 100% ITS similarity with AJ390394 *Uncinocarpus queenslandicum* IMI 121675 = UAMH 4319 T (fide UAMH 2012).
- Uncinocarpus reesii*** Sigler & Orr (morph *Malbranchea an. Uncinocarpus reesii*)
- 160 lungs ex *Sylvilagus auduboni* Texas C.W. Emmons 1949 /C.W. Emmons C3716 [=GenBank L27991 (SSU) =GenBank AJ292092 (chitin synthase) =GenBank AJ291970 partial tcrP gene =GenBank L28069 (chitin synthase) =GenBank AJ292106 (OMPD)] Did not mate with wild type or single ascospore isolates (3915, 3916). Molecular systematics: phylogeny of *Coccidioides immitis* & *Malbranchea* spp (Pan, Sigler & Cole, *Microbiology* 140:1481-1494, 1994); genealogies based on genes coding for orotidine 5(prim) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001) // systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 1273 soil Venezuela Pollak (5770) /L. Ajello 45-36-62 Did not mate with wild type or single ascospore isolates (3915, 3916). Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 1704 soil S.W. of Greenfield, Calif. G.F. Orr 1960 /G.F. Orr O-2080 [=GenBank AAIW00000000 =GenBank AJ291973 partial tcrP gene =GenBank AJ292093 (chitin synthase) =GenBank AAIW01000001 to AAIW01000582 whole genome =GenBank AAIW01000583 mitochondrial =GenBank AJ292108 (OMPD)] +. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: genealogies based on genes coding for orotidine 5(prim) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001); proline-rich antigen (PRA) gene (Johannesson H, Vidal P, Guarro J, Herr RA, Cole GT, Taylor JW, *Mol Biol Evol* 21:1134-1145, 2004); genome sequence under the number 1704 (Broad Institute (http://www.broad.mit.edu/annotation/genome/uncinocarpus_reesii/Info.html)).
- 1706 soil S. Calif. G.F. Orr 1957 /G.F. Orr O-482a [=GenBank AJ291971 partial tcrP gene =GenBank AJ292094 chs1 =GenBank AJ292107 (OMPD)] Did not mate with wild type or single ascospore isolates (3915, 3916). Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: genealogies based on genes coding for orotidine 5(prim) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001).
- 1955 soil Argentina E. Varsavsky 1961 /G.F. Orr O-3597 [=GenBank AJ292109 (OMPD)] Did not mate with wild type or single ascospore isolates (3915, 3916). Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: genealogies based on genes coding for orotidine 5(prim) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001).
- 2002 soil Italy E. Varsavsky 1964 /G.F. Orr EV1-14 [=GenBank AB040701 (SSU) =GenBank AY536464 (hxA) =GenBank AY536459 (glnA) =GenBank AY536454 (gapdh) =GenBank AY536449 (pra)] -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: phylogeny of onygenalean fungi (Sugiyama & Mikawa, *Mycoscience* 42:413-421, 2001); genealogies based on genes coding for orotidine 5(prim) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001); comparison with *Coccidioides* (Johannesson H, Vidal P, Guarro J, Herr RA, Cole GT, Taylor JW, *Mol Biol Evol* 21:1134-1145, 2004).
- 2050 soil Italy /E. Varsavsky I-79 -. Systematics/taxonomy:

- mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001).
- 2845 feathers Australia R.G. Rees (F143) 1967 /G.F. Orr O-3406 [=NRRL A-14871 =QM 9335] self-fertile. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 2847 soil ex fabric bait of Szathmary Hungary G.F. Orr 1967 /G.F. Orr O-3513 [=GenBank AJ291972 partial tcrP gene] +. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001); proline-rich antigen (PRA) gene (Johannesson H, Vidal P, Guarro J, Herr RA, Cole GT, Taylor JW, *Mol Biol Evol* 21:1134-1145, 2004).
- 2852 soil Italy E. Varsavsky 1964 /G.F. Orr I26 -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 2854 soil ex Szathmary fabric-bait Hungary G.F. Orr 1967 /G.F. Orr SZ 284 +. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 2855 soil ex Szathmary fabric-bait Hungary G.F. Orr 1967 /G.F. Orr SZ303 +. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 2862 feathers Australia R.G. Rees 1965 /G.F. Orr F122 [=GenBank AJ292094 (chitin synthase) =GenBank AJ292093 =GenBank AJ291974 partial tcrP gene =GenBank AJ292110 (OMPD)] -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001).
- 2991 R.S. Pore 707 +. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 2992 clinical source W. Virginia /R.S. Pore 718 Did not mate with wild type or single ascospore isolates (3915, 3916). Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3257 soil /H.C. Gugnani S673 -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3258 soil /H.C. Gugnani S1038 -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3484 feathers Australia R.G. Rees (F122) /G.F. Orr O-3144 [=NRRL A-14870] self fertile. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3485 feathers Australia /G.F. Orr O-3047 -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3573 soil Italy E. Varsavsky (i-26) /G.F. Orr O-3407 Did not mate with wild type or single ascospore isolates (3915, 3916). Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3703 soil Dugway, Utah /G.F. Orr O-1281 +. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001).
- 3819 soil Italy E. Varsavsky (I5) /G.F. Orr O-3344.
- 3820 soil Italy E. Varsavsky (I15) /G.F. Orr O-3233.
- 3843 feathers ex *Corvus monedula* Krivogastani, S.R. Macedonia, Yugoslavia Z. Hubalek 18 May 1968 /Z. Hubelak 193 D [=O-1296].
- 3846 nest of *Carduelis cannabina* Valtice, S. Moravia, Czech. Z. Hubalek 16 May 1970 /Z. Hubelak 539 A [=O-1304].
- 3880 (T *Uncinocarpus reesii*) single ascospore isolate A (-) ex UAMH 2845 Edmonton, Alta. L. Sigler Jul 1975 [=IMI 211204 =CBS 121.77 =ATCC 34533 =GenBank AY176724 =GenBank AJ271566 ITS =GenBank AJ271419 ITS =GenBank NR_111092 ITS] - mating type UAMH 3881. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976) // molecular systematics: phylogeny of onygenalean fungi (Untereiner, Scott, Naveau, Currah & Bachewich, *Stud. Mycol.* 47:25-35, 2002).
- 3881 (T *Uncinocarpus reesii*) single ascospore isolate E (+) ex UAMH 2845 Edmonton, Alta. L. Sigler Jul 1975 [=ATCC 34534 =CBS 120.77 =IMI 211205 =NCMH 370 =GenBank U29394] + mating type 3880. Molecular systematics: human pathogenic fungi & relatives (Bowman & Taylor, *The Fungal Holomorph*, (Reynolds & Taylor, eds.), CAB International, 1993; Bowman et al., *Mol. Phylogenetics Evolution* 6:89-96, 1996; Desjardins CA, Champion MD, Holder JW, Muszewska A, Goldberg J, Bailão AM, Brigido MM, Ferreira MES, Garcia AM, et al, *PLoS Genetics*, 2011 Epub Oct) // systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3883 single ascospore isolates B (-) ex UAMH 2845 Edmonton, Alta. L. Sigler Jul 1975 -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3884 single ascospore isolate C (-) ex UAMH 2845 Edmonton, Alta. L. Sigler Jul 1975 -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3915 monascospore isol. (E) ex UAMH 2002 x 2847 Edmonton, Alta. L. Sigler Aug 1975 +. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3916 monascospore isol. (A) ex UAMH 2002 x 2847 Edmonton, Alta. L. Sigler Aug 1975 -. Systematics/taxonomy: mating studies (Sigler & Carmichael, *Mycotaxon* 4:462-471, 1976).
- 3918 soil Etna, Italy /G.F. Orr O-1322. Molecular systematics: geneologies based on genes coding for orotidine 5(prime) monophosphate decarboxylase, chitin synthase & human T-cell reactive protein (Koufopanou, Burt, Szaro & Taylor, *Mol. Biol. Evol.* 18:1246-1256, 2001).
- 4689 (T *Chrysosporium hirundo*) ex nest of *Hirundo rustica* USSR /CBS 668.78.
- 8533 Rt ear, female 63 yr Ontario 1996 /R.C. Summerbell FR 767.
- 9998 shed skin ex Honduran milksnake (*Lampropeltis triangulum hondurensis*), male Pueblo Zoo, Pueblo, CO UAMH (UW088B-A) 26 Mar 2001. Biodiversity: reptile cutaneous mycobiota (Pare JA, Sigler L, Rypien KL, Gibas CF, J. *Herpetol. Med. Surg.* 13:10-15, 2003).

Uncinocarpus uncinatus see *Gymnoascus uncinatus**Ustilago bullata* Berkeley

- 1740 ex *Bromus* UBC, Vancouver R. Bandoni (RJB 2224) /R.J. Bandoni B 9.

Ustilago hordei (Pers.) Lagerh.

- 7082 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 651) Aug 1990. Culture conditions: Yeast Biochemical Card used for physiological profile // molecular systematics: Blast match 100% ITS similarity to *Ustilago hordei*.

Ustilago hypodytes (Schlecht.) Fr.

- 6282 on *Agropyron repens* Benson, U.K. C. Ingold Sep 1986 /IMI 309764.

Ustilago scitaminea Syd. (syn. *Sporisorium scitamineum*)

- 4861 sugar cane /J. Comstock #2, 821-29 -.

- 4862 sugar cane /J. Comstock #3, 821-29 -.
 4863 sugar cane /J. Comstock #4, 821-29 -.
 4864 sugar cane /J. Comstock #5, 821-29 -.
 4865 sugar cane /J. Comstock #6, 822-7-B +.
 4866 sugar cane /J. Comstock #1, 822-10 -.
 4867 sugar cane /J. Comstock #7, 822-29-A +.

Valsa sordida see *Cytospora chrysosperma*

Vanrija antarctica see *Pseudozyma antarctica*

Variable white taxon see *Meliniomyces variabilis*

Varicosporium elodeae W. Kegel

- 9447 ex roots of *Vaccinium membranaceum* Priest Lake, Idaho B. McCracken (PL4aiH) /B. McCracken 7. Pigment: pale brown // culture conditions: non sporulating on deposit; sporulates well on CMA // biodiversity: ericoid root associated fungus.
 9449 ex roots of *Vaccinium membranaceum* Priest Lake, Idaho B. McCracken (PL4B) /B. McCracken 13. Culture conditions: non sporulating on deposit; sporulates well on CMA // biodiversity: ericoid root associated fungus.
 9450 ex roots of *Vaccinium membranaceum* Mount Spokane State Park, Washington B. McCracken (MS1ciD) /B. McCracken 24. Biodiversity: ericoid root associated fungus.

Venturia inaequalis (Cooke) Winter (morph *Spilocaea pomi*)

- 7420 scab ex apple (*Malus 'Rescue'*) Edmonton, Alta. S.P. Abbott (SA-M81) 16 Sep 1993 /S.P. Abbott (SA-M81).

Venturia tremulae Aderh. (morph *Fusicladium radiosum*)

- 9885 shoot blight of aspen (*Populus tremuloides*), single conidium isolate Jasper National Park (lat 53, long 118), AB P. Chow /P. Blenis PR 6. Cellulolytic: probably cellulolytic, cello not damaged but most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).
 9886 shoot blight of aspen (*Populus tremuloides*), single conidium isolate Redwater (lat 54, long 113), AB P. Chow /P. Blenis PR 10. Cellulolytic: probably cellulolytic, cello not damaged but most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).
 9887 shoot blight of aspen (*Populus tremuloides*), single conidium isolate Redwater (lat 54, long 113), AB P. Chow /P. Blenis PR 11. Cellulolytic: probably cellulolytic, cello not damaged but most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).
 9888 shoot blight of aspen (*Populus tremuloides*), single conidium isolate west of Manning (lat 57, long 119), AB P. Chow /P. Blenis ASB 03. Cellulolytic: cello damaged & most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).
 9889 shoot blight of aspen (*Populus tremuloides*), single conidium isolate Alder Flats (lat 53, long 115), AB P. Chow /P. Blenis ASB 11. Cellulolytic: cello damaged & most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).
 9890 shoot blight of aspen (*Populus tremuloides*), single conidium isolate British Columbia (lat 58, long 123) P. Chow /P. Blenis ASB 13. Cellulolytic: cello damaged & most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).

- 9891 shoot blight of aspen (*Populus tremuloides*), single conidium isolate Whitecourt (lat 54, long 116), AB P. Chow /P. Blenis ASB 17. Cellulolytic: cello damaged & most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).
 9892 shoot blight of aspen (*Populus tremuloides*), single conidium isolate Reno, nr Peace River (lat 56, long 117), AB P. Chow /P. Blenis ASB 22. Cellulolytic: cello damaged & most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001).
 9893 shoot blight of aspen (*Populus tremuloides*), single conidium isolate Grande Prairie (lat 55, long 119), AB P. Chow (F1) /P. Blenis ASB 45. Cellulolytic: cello damaged & most of colony growth underneath // plant pathogen: experimental methods for screening for resistance to aspen shoot blight (Blenis & Chow, Can. J. Plant Pathol. 23:149-157, 2001) // molecular systematics: Blast match 100% ITS similarity to AY671910 *Venturia tremulae* (fide UAMH 2012).

Veronaea botryosa Cif. & Montemart.

- 9743 skin lesion, Chinese male, 12 yr with itchy patches, crusted nodules & ulcerating lesions on face & extremities 6 years after abrasion on rt. elbow, DE+ China /CDC B 5937.
 10374 subcutaneous nodule at IV insertion site ex heart transplant recipient Houston, TX /M.G. Rinaldi UTHSC 02-2331. Mesophilic: strongly inhibited @ 35C // human/animal pathogen: subcutaneous phaeocephomycosis in heart transplant patient (Sutton DA, Rinaldi MG, Kielhofner M, J Clin Microbiol 42:2843-2846, 2004).
 11735 ex kidney of farmed white sturgeon (*Acipenser transmontanus*); histopathology + for intralesional pigmented hyphae and yeast-like structures Veterinary Medical Teaching Hospital, University of California, Davis, CA 2012 /D.A. Sutton R-4827. Human/animal pathogen: disseminated mycoses in farmed sub-adult white sturgeon (*Acipenser transmontanus*) (Mok MY, Groff J, Reilly C, Byrne BA, Sutton DA, Wickes BL, Campbell L, Weber ES, Am Assoc Vet Lab Diagn, San Diego, CA, Abstr, 2013).

Veronaea musae see *Ramichloridium musae*

Verpa bohemica (Krombholz) Schroeter

- 8017 ex ascocarp Alberta S. Davies /S. Davies FC-324. Edible: mushroom // pigment: brown.
 8018 ex ascocarp Alberta S. Davies /S. Davies FC-325. Edible: mushroom // pigment: brown.

Verpa conica Swartz:Persoon

- 7410 multiascospore germination ex fruiting body under *Salix* sp. Devonian Botanic Garden, Devon, Alta. S.P. Abbott (SA 798) 30 May 1993 /S.P. Abbott (SA 798). Pigment: brown.

Verticicladiella abietina see *Leptographium abietinum*

Verticicladiella antibiotica see *Leptographium antibioticum*

Verticicladiella procera see *Leptographium procerum*

Verticillium albo-atrum Reinke & Berthold

- 5393 alfalfa strain /W.A. Ayer [=GenBank AF108493 =GenBank AF108476 =GenBank KM275468 ITS]. Molecular systematics: Blast match 100% ITS similarity to *Verticillium albo-atrum* strain ATCC MYA-4576; phylogeny in *Verticillium* (Bidochka MJ, St Leger RJ, Stuart A, Gowanlock K, Microbiology 145:955-963, 1999).

Verticillium an. Hypomyces tremellicola see *Hypomyces tremellicola*

Verticillium balanoides see *Haptocillium balanoides*

Verticillium chlamydosporum var. *catenulatum* see *Pochonia chlamydosporia* var. *catenulata*

Verticillium dahliae Klebahn

- 679 DAOM 60445.
1423 tomato stem, greenhouse Ottawa A. Bolton (620) 1962 /DAOM 87833.
5360 L. Browne 6 [=GenBank AF108486 =GenBank AF108478]. Plant pathogen: eggplant, tomato, potato.
5366 L. Browne 1. Plant pathogen: eggplant, tomato, potato.
9347 elm wood Edmonton, Alta. J.P. Tewari 1997 /J.P. Tewari EW 27T1-2.

Verticillium fungicola (Preuss) Hassebr.

- 895 brown spot disease in mushrooms /L.R. Kneebone [=GenBank AF108498 =GenBank AF108470]. Hyperparasite.

Verticillium lamellicola see *Simplicillium lamellicola*

Verticillium lecanii see *Lecanicillium lecanii*

Verticillium leptobactrum Gams

- 5951 serially washed mycorrhiza of *Picea mariana* Burt Lake, Burt Twp., Timiskaming Dist., Ont. (C)L. Ippolito/D. Malloch Aug 1981 /R.C. Summerbell Ippolito 49A-2 [=GenBank AF108494 =GenBank AF108481]. Mycorrhizae: microhabitat (Summerbell, Can. J. Bot. 67:1085-1095, 1989).

Verticillium microsporium see *Tolypocladium microsporium*

Verticillium nigrescens Pethybr.

- 1752 Eastern white pine Alometos Bay, Calif. C.J. Anastasiou (A2) 11 Dec 1960 /C.J. Anastasiou C17.
5196 ex open fracture wound, Rt foot ?New York /M. Kemna M1092-85.
6687 contaminant ex lyophil of UAMH 5218 UAMH A. Flis Jul 1990 /A. Flis [=GenBank AF108500 =GenBank AF108473]. Molecular systematics: phylogeny of insect pathogenic *Verticillium* species (Bidochka, MJ et al., Microbiology 145:955-963, 1999).

Verticillium psalliotae see *Lecanicillium psalliotae*

Verticillium sp.

- 808 CBS.

Verticillium suchlasporium var. *catenulatum* see

Pochonia suchlasporia var. *catenata*

Verticillium tenerum see *Acrostalagmus luteoalbus*

Verticillium tenuissimum Corda

- 2638 soil, mixed wood Guelph, Ontario Nov 1964 /G.L. Barron 10290.

Verticimonosporium ellipticum Matsushima

- 6559 wood chip Algonquin Park, Ont. (C) P. Martin 29 Sep 1989 /G. Thorn Lisa 12 [=CBS 441.90].

Virgaria nigra (Link) Nees

- 3759 soil under mixed wood Guelph, Ontario G.L. Barron 1964

/IMI 109884 [=CBS 179.65 =ATCC 16076].

Viridispora alata (Samuels) Samuels & Rossman (syn.

Nectria alata; morph *Penicillifer bipapillatus*)

- 7281 ex roots of epiphytic orchid *Dichaea standleyi* La Selva, Heredia Prov., Costa Rica K. Richardson 8 Oct 1991 /R.S. Currah K333e. Pigment: brown // mycorrhizae: root endophyte epiphytic orchid *Dichaea standleyi*.

Volucrispora aurantiaca see *Tricellula aurantiaca*

Volutella ciliata Alb. & Schw. ex Fr.

- 1135 soil Edmonton, Alta. J.W. Carmichael 13 Sep 1961 /J.W. Carmichael.
1366 soil from greenhouse plants Edmonton, Alta. J.W. Carmichael 23 Jul 1962 /J.W. Carmichael.
1418 soil & detritus Edmonton, Alta. J.W. Carmichael 23 Jul 1962 /J.W. Carmichael.
7806 ex soil Edmonton, Alta. T. Lumley 22 Nov 1994 /T. Lumley.
8837 indoor air of bathroom ex RCS strip Vancouver, BC S.P. Abbott (SA-M162) 9-Dec-1996 /S.P. Abbott (SA-M162).

Volutella colletotrichoides Chilton

- 1813 dogwood leaf Edmonton, Alta. J.W. Carmichael 11 Oct 1963 /J.W. Carmichael.

Volutella minima Hohn. (morph *Cosmospora consors*)

- 8518 bronchial washings, rt upper lobe, male The Methodist Hospital, Houston, TX 1996 /M.G. Rinaldi UTHSC 96-339.

Volutella sp.

- 766 soil cow pasture (baited with turkey feathers) Edmonton, Alta. J.W. Carmichael 21 Jul 1959 /J.W. Carmichael.

Volvariella volvacea (Bull.:Fries) Singer

- 8028 ex S. Nagy /S. Davies FC-384. Edible: mushroom // culture conditions: cold sensitive; does not survive below 15C, recommended growth @24-30C; no clamps; degenerate.
8181 ex Hong Kong Agriculture /S. Davies FC-378. Edible: cultivated mushroom // culture conditions: cold sensitive; does not survive below 15C, recommended growth 24-30C; no clamps; degenerate.

Wallemia ichthyophaga see *Wallemia sebi*

Wallemia sebi (Fr.) von Arx (syn. *Wallemia ichthyophaga*)

- 172 plate contaminant Edmonton, Alta. J.W. Carmichael 1954 /J.W. Carmichael. Osmophilic.
191 contaminant ex fingernails Edmonton, Alta. 12 Jun 1954 / . Osmophilic.
1064 soil San Nicholas Island G. Orr /G.F. Orr O-2048. Osmophilic.
2651 moldy white bread 1962 /G.B. Ouellette 10004. Antifungal antibiotic (Wilson et al. Anton v. Leeuw. 35:529-532, 1969). Osmophilic // application: antifungal activity (Wilson K, Padhye AA, Carmichael JW, Ant v Leeuw 35:529-532, 1969).
2757 soil Edmonton, Alta. A. Padhye Sep 1967 /A. Padhye [=JCM 11231]. Antifungal antibiotic (Wilson et al, Anton v. Leeuw. 35:529-532, 1969). Osmophilic // application: antifungal activity (Wilson K, Padhye AA, Carmichael JW, Ant v Leeuw 35:529-532, 1969).
2817 peat soil, cedar swamp Puslinch, Ont. G.C. Bhatt May 1964 /G.C. Bhatt GCB 1635. Osmophilic.
4972 plate contaminant ex cereal agar UAMH L. Sigler 30 May 1984 /L. Sigler. Osmophilic.
5082 bread Edmonton, Alta. L. Sigler 5 May 1985 /L. Sigler. Osmophilic.
5868 cerebrospinal fluid, male California 1986 /CDC 87-017591. Osmophilic.
6689 maple syrup Fanny Bay, B.C. J.W. Carmichael Jul 1990 /J.W.

- Carmichael. Pigment: brown // osmophilic.
- 7897 ex dust sample from concrete vent in school Northern Saskatchewan S.P. Abbott (SA-M261) 7 Mar 1995 /S.P. Abbott (SA-M261) [=GenBank AY625073 ITS]. Walleminone, tryptophan, tryptophol acetate, phenylacetic acid, p-hydroxybenzoic acid (Desroches TC, McMullin DR, Miller JD, Indoor Air Epub Jan 29, 2014); wallimidione (1-benzylhexahydroimidazo [1,5-a] pyridine-3,5-dione). Pigment: dark grey // osmophilic // application: quantitative PCR analysis of house dust (Meklin T, Haugland RA, Reponen T, Varma M et al, J Environ Monit 6:615-620, 2004); Cited in patent US20120129718 Qualitative/Quantitative Detection of Fungal Species (A. Cywinska); identification of metabolites including walleminone, a new compound wallimidione and a human antigenic cellulase (Desroches TC, McMullin DR, Miller JD, Indoor Air Epub Jan 29, 2014).
- Wangiella dermatitidis* see *Exophiala dermatitidis*
- Warcupiella spinulosa* (Warcup) Subramanian (syn. *Sporophormis spinulosa*; morph *Aspergillus warcupii*)
- 5014 (T *Aspergillus spinulosus*) jungle soil Brunei, Borneo 1957 /J.I. Pitt FRR 2199 [=NRRL 4376 =UAMH 6624 =GenBank EF669706 ITS =GenBank EF669698 Cal =GenBank EF669680 BetaTub =GenBank EF669666 RPB]. Thermophilic: opt. 37C.
- 6624 (T *Aspergillus spinulosus*) Raper & Fennell WB 4376, ex jungle soil, Berakas-Muara, Brunei, Borneo, from K. Raper, 10-57 (as Warcup A41/4) /M. Christensen WB 4376 [=ATCC 16919 =CBS 512.65 =IMI 75885 =UAMH 5014 =Herb. IMI 75885].
- Wardomyces aggregatus* Malloch
- 9394 (T *Wardomyces aggregatus*) dung of carnivore Wycamp Lake, Emmet Co., Michigan, USA D. Malloch 3 Aug 1967 /CBS 251.69 [=TRTC 45325]. Benomyl: resistant (2 ppm).
- Wardomyces an. Microascus giganteus* see *Microascus giganteus*
- Wardomyces anomalus* Brooks & Hansford
- 1397 air cell of (hens?) egg Ottawa W.I. Illman 1947 /DAOM 75633 [=IMI 32064 =ATCC 15229 =CBS 299.61].
- 1547 G.L. Barron 10405.
- 8275 indoor air ex RCS strip from honeybee (*Apis mellifera*) overwintering facility Grimshaw, Alta S.P. Abbott (OHS 309) 21-Mar-1994 /S.P. Abbott (OHS 309) [=IFO 33054].
- 9533 soil, mixed woods Guelph, Ontario G. Barron (10404) 11 Dec 1961 /NRRL A-11322. Cycloheximide: resistant (MYC).
- Wardomyces columbinus* (Demelius) Hennebert
- 4443 coyote dung Elkwater, Alta. R. Currah Sep 1980 /R.S. Currah 116.
- 7847 indoor air ex RCS strip, from *Apis mellifera* (honeybee) overwintering facility Scandia, Alta. S. Abbott (OHS 209) 24 Jan 1994 /S. Abbott (OHS 209) [=IFO 33055]. Pigment: dark grey // cellulolytic.
- 7888 ex soil, municipal landfill site Poczesna, Poland K. Ulfig 30 May 1994 /K. Ulfig IEIA 752.
- 8881 decaying wood Germany K. Kuhlwein (308-1) 1963 /W. Untereiner MUCL 4052 [=MUCL 3198 =CBS 449.63].
- Wardomyces dimerus* see *Wardomyces simplex*
- Wardomyces humicola* Hennebert & Barron
- 1527 (T *Wardomyces humicola*) greenhouse soil Guelph, Ont G.L. Barron Apr 1961 /G.L. Barron 10403 [=ATCC 15232 =CBS 369.62 =DAOM 75655 =IMI 98886 =UAMH 3085].
- 3085 (T) greenhouse soil Guelph, Ont. G.L. Barron 1961 /IMI 98886 [=ATCC 15232 =CBS 369.62 =DAOM 75655 =UAMH 1527].
- 7311 soil Edmonton, Alta. R. Sandre 16 Oct 1992 /R. Sandre.
- 8489 well decayed wood (stage 4 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta. 1-22B) T. Lumley (EI-01-S4F 13-Sep-1995 /R.S. Currah EI-01-S4F, 1-22B). Cycloheximide: resistant.
- 8630 horse dung in spruce (*Picea glauca*/ *P. mariana*) forest Fish Lake near Nordegg, Alta S.P. Abbott (SA-M133) 14-Jun-1996 /S.P. Abbott (SA-M133). Benomyl: resistant (2ppm) // cycloheximide: resistant.
- 8752 debris of red squirrel (*Tamiasciurus hudsonicus*) midden under white spruce (*Picea glauca*) Fish Lake near Nordegg, Alta S.P. Abbott (SA-M151) 14-Nov-1996 /S.P. Abbott (SA-M151) [=IFO 33056].
- 9368 extremely well decayed wood (stage 5 decay), white spruce log (*Picea glauca*) Elk Island National Park, Alta T. Lumley (EI-02-S5A) 19 Sep 1998 /R.S. Currah EI-02-S5A. Cycloheximide: resistant (MYC).
- 9459 dung of bison (*Bison bison*) in spruce (*Picea glauca*) forest Elk Island National Park, Alta S.P. Abbott (SA-M283) 7 Jan 1999 /S.P. Abbott (SA-M283).
- 11611 swab ex fur of living female bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 31 C.1 fur ox [=Untereiner WUC W31]. Biodiversity: mycobiota of bat caves.
- Wardomyces inflatus* (Marchal) Hennebert
- 1528 (T *Wardomyces inflatus*) soil, mixed wood Guelph, Ont. G.L. Barron Nov 1960 /G.L. Barron 10401 [=DAOM 75502].
- 8488 dry, rotted wood (stage 2 decay), aspen log with hollow core (*Populus tremuloides*) Elk Island National Park, Alta. T. Lumley (EI-13-S3D) 19-Aug-1995 /R.S. Currah EI-13-S3D. Cycloheximide: resistant.
- 8875 lung, northern flying squirrel (*Glaucomys sabrina*) Lac La Biche, Alta. J. Csotonyi 31-Jan-1997 /R.S. Currah J31/21-1MT.
- 8879 (T *Trichosporium inflatum*) humic soil under tomato (*Lycopersicon esculentum*) in greenhouse Heverlee, Belgium G.L. Hennebert and E. Delvaux Jan 1959 /W. Untereiner MUCL 669 [=CBS 367.62 =DAOM 84715].
- 8880 soil under tomato (*Lycopersicon esculentum*) in greenhouse Heverlee, Belgium G.L. Hennebert and E. Delvaux Nov 1958 /W. Untereiner MUCL 668 [=IMI 99752 =ATCC 15230 =CBS 448.63 =DAOM 84714].
- 9215 roots of white spruce (*Picea glauca*) seedling on nurse log Elk Island National Park, Alta 1-29A) T. Lumley (EIS-19-1 29 Jan 1997 /R.S. Currah TCL 074.
- 9433 soil Edmonton, Alta M. Piercey 22 Oct 1998 /M. Piercey. Benomyl: resistant (2 ppm).
- 9534 soil of kangaroo rat burrow near Portal, Arizona D.T. Wicklow (143) 17 Sep 1987 /NRRL A-28069. Cycloheximide: resistant (MYC).
- 9763 lung wedge, female 33 yr Texas, USA /Texas Dept. of Health BY 158.
- 11612 swab ex skin of living male bat (*Myotis lucifugus*) White Cave, New Brunswick K.J. Vanderwolf 24-Mar-2010 /K.J. Vanderwolf Bat 100 C.2 skin ox [=Untereiner WUC W100]. Biodiversity: mycobiota of bat caves.
- 11613 swab ex skin of living bat (*Myotis septentrionalis*) Kitts Cave, New Brunswick K.J. Vanderwolf 02-Feb-2010 /K.J. Vanderwolf Bat 34 C.3 skin ox [=Untereiner WUC W34]. Biodiversity: mycobiota of bat caves.
- Wardomyces moseri* W. Gams
- 9393 (T *Wardomyces moseri*) dead petiole of palm (*Mauritia minor*) east of Villavicencio, Dep. Meta, Colombia W. Gams 1980 /CBS 164.80. Benomyl: resistant (2 ppm).

Wardomyces ovalis W. Gams

- 8800 horse nasal swab UK M.T. Archer 1978 /IMI 217208.
 8894 (T *Wardomyces ovalis*) wheat field soil Kiel, Kitzberg, Schleswig-Holstein, Germany K. Domsch Mar 1963 /W. Untereiner MUCL 6031 [=CBS 234.66 =IMI 117372].

Wardomyces pulvinatus (Marchal) Dickinson

- 8492 Japan TI 159 /T. Nakase JCM 1939 [=IFO 8908 =DAOM 107465].
 8877 decaying wood Nancy, France O. Reisinger 1965 /W. Untereiner MUCL 7886.
 8878 (T Isotype of *Wardomyces papillata*) wheat field soil County Carlow, Ireland C. Dickinson (D-274) May 1962 /W. Untereiner MUCL 6081 [=IMI 98294 =CBS 112.65].

Wardomyces simplex Sugiyama et.al. (syn. *Wardomyces dimerus*)

- 1259 peat soil Bradford Marsh, Ont. G.L. Barron 1960 /DAOM 75752. Cycloheximide: resistant (MYC).
 8491 (T *Wardomyces simplex*) milled rice (*Oryza sativa*) Japan J. Sugiyama (MR-329-1) /T. Nakase JCM 1937 [=ATCC 22254 =CBS 546.69 =IMI 141555 =IFO 8909].
 8876 (T *Wardomyces dimerus*) wheat field soil Kiel, Kitzberg, Schleswig-Holstein, Germany W. Gams (C-908) May-1964 /W. Untereiner MUCL 6388.

Wardomycesopsis an. Microascus singularis see *Microascus singularis***Wardomycesopsis humicola** (Barron) Udagawa & Furuya

- 2641 (T *Scopulariopsis humicola*) soil Guelph, Ontario Aug 1964 /G.L. Barron OAC 10260 [=ATCC 16691 =CBS 487.66].
 4960 sand ex Tyrrhenian sea L. Volterra /CDC 84-032086.
 4961 sand ex Tyrrhenian sea L. Volterra /CDC 84-032091.
 8884 litter of *Acacia karoo* Potchefstroom, South Africa M.C. Papendorf (224) 1966 /W. Untereiner MUCL 8802.

Westerdykella dispersa (Clum) Cejp & Milko

- 11810 ex tissue left arm, male 12 yr, with pre-B-cell acute lymphoblastic leukemia after HLA-matched bone marrow transplant; histopathology + hyphae Germantown, MD 5-May-2012 /S. Zhang F00382.1 [=GenBank KM008550 D1D2 =GenBank KM008551 ITS =UTHSCSA DII4-299]. Human/animal pathogen: first report of *Westerdykella dispersa* as a cause of an angioinvasive fungal infection in a neutropenic host (Sue PK, Memon W, Milstone AM, Zelazny AM, Fahle GA, Gibas CFC, Sutton DA, Wiederhold NP, Zhang SX, J Clin Mycol 52(12):4407-4411, 2014).

Westerdykella multispora see *Pycnidophora multispora***Westerdykella ornata** Stolk

- 5820 desert soil Arizona D. Wicklow (136) 1987 /D. Malloch.

Whetzelinia sclerotiorum see *Sclerotinia sclerotiorum***Wickerhamomyces anomalus** (E.C. Hansen) Kurtzman,

Robnett & Basehoar-Powers (syn. *Pichia anomala*; morph *Candida beverwijkiae*)
 124 Univ. California /.

Wickerhamomyces silvicola (Wick.) Kurtzman, Robnett & Basehoar-Powers (syn. *Pichia silvicola*)

- 5485 frass in *Dendroctonus ponderosae* gallery in *Picea engelmannii* Whitney Creek Area, Blairmore, Alta. 8, 9) L. Sigler (BSF5 Sep 1983 [=NRRL Y12870]. Biodiversity: mountain pine beetle galleries.
 5486 base *Dendroctonus ponderosae* gallery in *Pinus contorta*

Whitney Creek, Blairmore Alta. L. Sigler (BSF16) Sep 1983 /L. Sigler (BSF16) [=NRRL Y12873]. Biodiversity: mountain pine beetle galleries.

Wilcoxina mikolae var. mikolae (Yang & Wilcox) Yang & Korf (syn. *Tricharina mikolae*, *E-strain a*; morph *Complexipes moniliformis*)

- 6693 (T *Tricharina mikolae*) polyspore isolate ex apothecia in pots with forest soil & *Pinus resinosa* seedlings SUNY, Syracuse, NY C.S. Yang (CSY 14) Oct 1982 /K. Egger A01231 [=ATCC 52685 =CSY 14 =CUP 61636 =DAOM 187901 =IMI 281167 =GenBank AY219841 (ITS)]. Mycorrhizae: ectendomycorrhizae (Yang & Korf, Mycotaxon 23:457-481, 1985); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990) // pigment: brown.
 6694 polyspore isolate ex apothecium CUP 60689 under mosses in 3 yr old burned soil Btwn Wilp & Klarenbeck, Gelderland, Netherlands (C) G. Piependroek-Groters (1284) 2 Oct 1990 /K. Egger A01405 [=ATCC 60192 =CSY 91 =CUP 61637 =DAOM 213601]. Mycorrhizae: ectendomycorrhizae (Yang & Korf, Mycotaxon 23:457-481, 1985); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
 6697 ex roots *Picea glauca*, in coal mine spoil amended with sewage Luscar, Alta. R.M. Danielson (RMD 2144) 1981 /K. Egger A01419 [=DAOM 213603 =RMD 2144 =GenBank U38571 =GenBank U38570]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
 6698 ex roots *Picea glauca*, coal mine spoil amended with sewage Luscar, Alta R.M. Danielson (RMD 2145) 1981 /K. Egger A01420 [=DAOM 213604 =RMD 2145]. Mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
 6699 ex roots *Picea glauca*, coal mine spoil without amendment Luscar, Alta R.M. Danielson (RMD 2154) 1981 /K. Egger A01424 [=DAOM 213607 =RMD 2154 =GenBank U38633]. Mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
 6700 ex roots *Picea glauca*, coal mine spoil without amendment Luscar, Alta R.M. Danielson (RMD 2155) 1981 /K. Egger A01425 [=DAOM 213608 =RMD 2155]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
 6701 ex roots *Picea glauca*, coal mine spoil amended with fertilizer Luscar, Alta R.M. Danielson (RMD 2158) 1981 /K. Egger A01427 [=DAOM 213610 =RMD 2158]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
 6702 ex roots *Picea glauca*, coal mine spoil amended with fertilizer Luscar, Alta R.M. Danielson (RMD 2159) 1981 /K. Egger A01428 [=DAOM 213611 =RMD 2159]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
 6703 ex roots *Pinus banksiana*, outplanting on Syncrude dyke Fort McMurray, Alta. R.M. Danielson (RMD 2394) /K. Egger A01441 [=DAOM 213613 =RMD 2394 =GenBank U38635]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); responses of ectomycorrhizal jackpine seedlings to salt and boron (Calvo Polanco M, Zwiazek JJ, Jones MD, MacKinnon MD, Trees

- 22:825-834, 2008); effects on growth and water relations of balsam poplar (Siemens JA, Zwiazek JJ, Mycorrhiza 18:393-401, 2008) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6704 ex roots *Pinus banksiana*, outplanting on Syncrude dyke Fort McMurray, Alta. R.M. Danielson (RMD 2196) 1982 /K. Egger A01442 [=DAOM 213614 =RMD 2396]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991).
- 6840 ex roots *Picea glauca*, coal mine spoil without amendment Luscar, Alta. R.M. Danielson (RMD 2165) 1981 /K. Egger A01431 [=DAOM 213615 =RMD 2165]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991) // pigment: brown.
- 6841 ex roots *Picea glauca*, coal mine spoil amended with fertilizer Luscar, Alta. R.M. Danielson (RMD 977) /K. Egger A01484 [=DAOM 193119 =RMD 977 =GenBank U38631]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6842 ex roots *Picea glauca*, control plot Luscar, Alta. R.M. Danielson (RMD 947) Oct 1978 /K. Egger A01485 [=CRBF 2 =DAOM 193118 =RMD 947 =GenBank U38630]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991) // pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6843 nursery soil West Virginia H. Wilcox (BDG-WV) /K. Egger A01787 [=BDG-WV =DAOM 213616 =GenBank U38637]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991) // pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6844 nursery North Carolina H. Wilcox (BDG-NC) /K. Egger A01788 [=BDG-NC =DAOM 213617]. Pigment: brown // mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991).
- 6845 nursery soil Mississippi H. Wilcox (BDG-MISS) /K. Egger A01789 [=BDG-MISSb =DAOM 213618 =GenBank U38636]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991) // pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6846 ex roots *Picea abies* Finland P. Mikola (E-57) /K. Egger A01790 [=DAOM 213621 =GenBank U38638]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990) // pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).

Wilcoxina mikolae* var. *tetraspora Wilcox, Yang & Korf
(syn. *E-strain c*; morph *Complexipes* an. *Wilcoxina mikolae* var. *tetraspora*)

- 6695 (T *Wilcoxina mikolae* v. *tetraspora*) ex forest soil nr *Pinus resinosa* seedlings in greenhouse SUNY, Syracuse, NY C.S. Yang (CSY 57) 14 Jul 1984 /K. Egger A01235 [=ATCC 60191 =CBS 423.85 =CSY 57 =CUP 60628 =DAOM 213627 =GenBank U38626]. Mycorrhizae: ectendomycorrhizae (Yang & Korf, Mycotaxon 23:457-481, 1985); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6696 (T *Wilcoxina mikolae* v. *tetraspora*) ex soil under *Pinus*

resinosa seedlings SUNY, Lafayette Experimental Station, Lafayette, NY H. Wilcox (CSY 50) 3 Oct 1983 /K. Egger A01234 [=CSY 50 =CUP 59893 =DAOM 213626 =GenBank U38563 =GenBank U38562]. Pigment: brown // mycorrhizae: ectendomycorrhizae (Yang & Korf, Mycotaxon 23:457-481, 1985); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).

Wilcoxina rehmii Yang & Korf (syn. *E-strain b*; morph *Complexipes* an. *Wilcoxina rehmii*)

- 6706 (T *Wilcoxina rehmii*) ex soil under pines Hierro, Canary Islands, Spain R. Korf et al (CSY 100) 8 Jan 1977 /K. Egger A01406 [=ATCC 60189 =CSY 100 =CUP MM-1421 =DAOM 213602 =GenBank U38567 =GenBank U38566]. Pigment: brown // mycorrhizae: ectendomycorrhizae (Yang & Korf, Mycotaxon 23:457-481, 1985); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6707 ex roots *Picea glauca*, coal mine spoil amended with peat Luscar, Alta. R.M. Danielson (RMD 2147) 1981 /K. Egger A01421 [=DAOM 213605 =RMD 2147 =GenBank U38632]. Mycorrhizae // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6708 ex roots *Picea glauca*, coal mine spoil amended with peat Luscar, Alta R.M. Danielson (RMD 2151) 1981 /K. Egger A01423 [=DAOM 213606 =RMD 2151]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
- 6709 ex roots *Picea glauca*, coal mine spoil amended with peat Luscar, Alta R.M. Danielson (RMD 2156) 1981 /K. Egger A01426 [=DAOM 213609 =RMD 2156]. Pigment: brown // mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991).
- 6710 ex roots *Pinus banksiana* in greenhouse, from muskeg peat stockpile Fort McMurray, Alta. R.M. Danielson (RMD 2385) 1982 /K. Egger A01440 [=DAOM 213612 =RMD 2385]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
- 6711 ex roots *Pinus banksiana* in greenhouse Fort McMurray, Alta. R.M. Danielson (RMD 2339) 1982 /K. Egger A01437 [=RMD 2339]. Pigment: brown // mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991); E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990).
- 6847 ex roots *Pinus banksiana*, in greenhouse from Canmore peat Canmore, Alta. R.M. Danielson (RMD 2222) 1982 /K. Egger A01432 [=DAOM 213620 =RMD 2222]. Mycorrhizae: DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991).
- 6848 ex roots *Pinus banksiana*, greenhouse from Canstar, fine overburden Fort McMurray, Alta. R.M. Danielson (RMD 2338) 1982 /K. Egger A01436 [=DAOM 213619 =RMD 2338 =GenBank U38634]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991) // pigment: brown // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6849 ex roots *Pinus banksiana*, peat amended oil sands Fort McMurray, Alta. R.M. Danielson (RMD 1302) Sep 1978 /K. Egger A01483 [=DAOM 193116 =RMD 1302]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991).

***Wilcoxina* sp.** (syn. *E-strain d*)

- 6857 ex roots *Pinus banksiana*, oil sand tailings amended with peat Fort McMurray, Alta. R.M. Danielson (RMD 2136) 1981 /K. Egger A01417 [=DAOM 213623 =RMD 2136 =GenBank U38569 =GenBank U38568]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991) // molecular systematics: E-strain mycorrhizal fungi (Egger, Can. J. Bot. 74:773-779, 1996).
- 6858 ex roots *Pinus banksiana*, oil sand tailings amended with peat Fort McMurray, Alta. R.M. Danielson (RMD 2141) 1981 /K. Egger A01418 [=DAOM 213622 =RMD 2141]. Mycorrhizae: E-strain (Egger & Fortin, Can. J. Bot. 68:1482-1488, 1990); DNA polymorphisms (Egger et al., Mycol. Res. 95:866-872, 1991).
- 8319 mycorrhizal root tips of 2-3 yr old *Pinus strobus* (Eastern White Pine) seedlings in tree nursery Ontario Ministry of Natural Resources Nursery, St. Williams, Ont. M. Kronick-Ursic Sep 1994 /R.L. Peterson E-strain. Pigment: brown // mycorrhizae: E strain, ectendomycorrhizal in field & pot culture (Schelke, Ursic et al., Mycorrhiza 6:431-440, 1996; Ursic, Peterson & Husband, Can. J. For. Res. 27:54-62, 1997).

Williopsis mrakii (Wickerham) Naumov & Vustin (syn.

Hansenula mrakii)
294 Dr. Munroe.

Williopsis saturnus Zender

- 5604 B. Kirsop NCYC 22.
5605 B. Kirsop NCYC 23.
5606 B. Kirsop NCYC 57.

Xanthothecium peruvianum see ***Arachnomyces peruvianus******Xepicula leucotricha*** (Peck) Nag Raj (syn. *Myrothecium leucotrichum*, *Myrothecium indicum*)

- 7438 skin, DE+ showing chlamydoconidia & arthroconidia, UAMH 7419 also isolated Edmonton, Alta. Stirrat Labs. 8 Jul 1993 /R. Rennie MY 2861B.

Xerocomus subtomentosus (L. ex Fr.) Quel.

- 5917 under *Pinus strobus* & *Picea glauca* Algonquin Park, Canisbay Twp, Nipissing District, Ont. L. Hutchison 3 Oct 1987 /L. Hutchison LH-32-87 [=TRTC LH-32-87]. Pigment: brown // mycorrhizae.

Xylaria arbuscula Sacc.

- 1679 Yosemite, Calif. /P. Martin 632.

Xylaria polymorpha (Pers. ex St. Amans) Greville

- 11518 ex *Acer saccharum* stump Alberta, MI S.C. Robinson Aug-2009 /S. C. Robinson SR001. Biodeteriogen/biodegradation: promoting fungal pigment formation in wood (Robinson SC, Tudor D, Cooper PA, Wood Science and Technology 2011 Epub 17 Jan.); influence of pH on pigment formation by lignicolous fungi (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013); zone line production and wood spalting (Robinson SC, Laks PE, The Open Mycology Journal 4:18-21, 2010); fungal pigment production for wood spalting applications (Robinson SC, Laks PE, Turnquist EJ, Materials 2:62-75, 2009; Robinson SC, Richter DL, Laks PE, Holzforschung 63:491-495, 2009; Robinson SC, Laks PE, Forest Products Journal 60:490-495, 2011).
- 11519 ex *Acer saccharum* stump Alberta, MI S.C. Robinson Aug-2008 /S. C. Robinson SR010.

Biodeteriogen/biodegradation: stimulation of fungal pigment production for commercial spalting applications (Robinson SC, Laks PE, Forest Products Journal 60:490-495, 2011); promoting fungal pigment formation in wood (Robinson SC, Tudor D, Cooper PA, Wood Science and Technology 2011 Epub 17 Jan.); zone line production and wood spalting (Robinson SC, Laks PE, The Open Mycology Journal 4:18-21, 2010); influence of pH on pigment formation by lignicolous fungi (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013).

- 11520 ex *Acer saccharum* stump Alberta, MI S.C. Robinson Aug-2009 /S. C. Robinson SR011. Biodeteriogen/biodegradation: fungal pigment production for wood spalting applications (Robinson SC, Tudor D, Cooper PA, Int Biodeter Biodegrad 65:1145-1149, 2011; Robinson SC, Tudor D, Cooper PA, Appl Microbiol Biotechnol 2011 Epub Sep 20); promoting fungal pigment formation in wood (Robinson SC, Tudor D, Cooper PA, Wood Science and Technology 2011 Epub 17 Jan.); zone line production and wood spalting (Robinson SC, Laks PE, The Open Mycology Journal 4:18-21, 2010); influence of pH on pigment formation by lignicolous fungi (Tudor D, Robinson SC, Cooper PA, Int Biodeter Biodegrad 80:22-28, 2013) // culture conditions: produced conidia on stroma in culture.
- 11649 on living *Ulmus americana* High Park, Toronto, ON D.Tudor Aug-2010 /D Tudor DT001 [=TRTC 167756].
- 11650 on decaying hardwood log Haliburton Forest, Haliburton, ON, Canada D.Tudor Jun-2010 /D Tudor DT15011 [=TRTC 167757].

***Xylaria* sp.**

- 9467 seed of orchid (*Paphiopedilum concolor*) Chiang Mai, Thailand S.P. Abbott (SA-M222) 30 Jan 1998 /S.P. Abbott (SA-M222).
- 11097 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVCB04. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // molecular systematics: Blast match 99% ITS similarity to *Xylaria* species (fide UAMH 2010).
- 11101 surface-sterilized section of *Hyptis verticillata* (Lamiaceae) Jamaica 2009 /P. Reese HVIHR07B. Biodiversity: endophyte of *Hyptis verticillata* (Lamiaceae) // crystals: on CER // molecular systematics: Blast match 95-97% ITS similarity with *Xylaria*, *Rosellinia*, *Xylariaceae* & unnamed endophytes (fide UAMH 2010).

Xylaria subterranea (Schw.) Ell. & Ev.

- 4454 stump of *Alnus rubra* Fanny Bay, B.C. J.W. Carmichael 30 Aug 1981 /J.W. Carmichael.

Xylogone ganodermorphthora Kang, Sigler, Lee & Yun (morph *Scytalidium ganodermorphthorum*)

- 10320 (T *Xylogone ganodermorphthora*) oak wood logs used for mushroom cultivation (*Ganoderma lucidum*) Gyeonggi Province, Korea H-J Kang 10-01 /H-J Kang H55 [=GenBank GQ272617 ITS =GenBank GQ290121 RPB2 =GenBank GQ280399 SSU =CBS 127676]. Pigment: yellow // biodeteriogen/biodegradation: Yellow rot pathogen of cultivated *Ganoderma lucidum* in Korea // molecular systematics: Classification of yellow rot pathogen of cultivated *Ganoderma lucidum* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).
- 10321 oak wood log or fruiting body of *Ganoderma lucidum* Shintanjin, Daejeon, Korea J.-G. Lee /H-J Kang H146 [=TPML 97003 =GenBank GQ272622 ITS =GenBank GQ290126 RPB2 =GenBank GQ280404 SSU]. Pigment: yellow // biodeteriogen/biodegradation: Yellow rot pathogen of cultivated *Ganoderma lucidum* in Korea (Lee JK, Choi GJ, Cho KY, Oh SJ, Park JS, Kor J Mycol 24:246-254, 1996) //

molecular systematics: Classification of yellow rot pathogen of cultivated *Ganoderma lucidum* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).

Xylogone sphaerospora Arx & Nilsson (morph *Scytalidium sphaerosporum*)

10840 (T *Xylogone sphaerospora*) ex pulpwood chip of *Pinus sylvestris* (Pinaceae) örnsköldsvik, Angermanland, Sweden T. Nilsson (No. E 7-2) Dec 1966 /CBS 186.69 [=ATCC 34392 =DSM 2684 =IMI 212121 =MUCL 11833 =CBS H-7906 =CBS H-7906 (TYPE, herbarium)]. Culture conditions: grow on cornmeal and oatmeal agar (fide CBS) // molecular systematics: comparison with *Xylogone ganodermophthora* (Kang HJ, Sigler L, Lee J, Gibas CFC, Yun SH, Lee Y, Mycologia 102:1167-1184, 2010).

Xylohypha bantiana see ***Cladophialophora bantiana***

Xylohypha curta (Cda.) Hughes

4536 rock with lichen, *Xanthoria elegans* Deem Hills, Phoenix, Arizona L. Linarez Mar 1982 /F. Palmer.
5513 rotten wood Gatineau Park, Gatineau Co. Que. S.J. Hughes 25 Nov 1960 /DAOM 71954.
7457 DAOM 154824.
8523 BAL Health Sciences Center, Winnipeg, Manitoba A.M. Kabani (#21364) Mar 1996 /R. Rennie MY 1153.

Xylohypha emmonsii see ***Cladophialophora emmonsii***

Xylohypha nigrescens (Pers. ex Fr.) Mason

5786 ex wood, *Quercus* sp. /K.J. Kwong-Chung [=CBS 546.76].
5984 ex wood *Fraxinus* sp. /K.J. Kwong-Chung [=CBS 909.70].

Yamadazyma scolyti (Phaff & Yoney.) Billon-Grand (syn. *Pichia scolyti*)

5478 base of *Dendroctonus ponderosae* bark beetle gallery in *Picea engelmannii* Whitney Creek Area, Blairmore, Alta. L. Sigler (BSF3) Sep 1983 [=NRRL Y12866]. Biodiversity: mountain pine beetle galleries.
5479 base of *Dendroctonus ponderosae* gallery in *Pinus contorta* Whitney Creek Area, Blairmore, Alta. L. Sigler (BSF17) Sep 1985 /L. Sigler (BSF17) [=NRRL Y12868]. Biodiversity: mountain pine beetle galleries.
5480 top of *Dendroctonus ponderosae* gallery in *Pinus contorta* Whitney Creek Area, Blairmore, Alta. L. Sigler (BSF22) Sep 1983 /L. Sigler (BSF22) [=NRRL Y12869]. Biodiversity: mountain pine beetle galleries.
5481 base of *Dendroctonus ponderosae* gallery in *Pinus contorta* Whitney Creek Area, Blairmore, Alta. L. Sigler (BSF37) Sep 1983 /L. Sigler (BSF37) [=NRRL Y12875]. Biodiversity: mountain pine beetle galleries.

***Yeast* sp.**

3255 contaminant ex trunk lesion Edmonton, Alta. J.W. Carmichael Aug 1969 /J.W. Carmichael.
4391 sterile transducer fluid Edmonton, Alta. M. Diadio 13 Mar 1981 /M. Diadio.
4406 acid coal pond water, pH 2.8-3.4 Utah F. Post May 1980 /F. Post. Low pH: opt. pH 2.8-3.4.

Zakatoshia erikssonii Gams

5965 (T *Zakatoshia erikssonii*) ex *Sistotrema brinkmannii* on fallen *Fagus sylvatica* Grazer Bergland, Styria, Austria (C)L. & N. Hallanger Nov 1981 /CBS 235.82. Hyperparasite: *Sistotrema brinkmannii*.

Zopfiella erostrata (Griffiths) Udagawa & Furuya

3058 dung Deep Creek, San Bernardino Mts., Calif. R.K. Benjamin

(D449) 10 May 1959 /R.K. Benjamin RSA 885. Cellulolytic.

Zopfiella karachiensis (Ahmed & Asad) Guarro

8734 garden soil Delhi, India J. Guarro 27 Oct 1995 /J. Guarro FMR 5768.
8735 garden soil Jaipur, India J. Guarro 30 Oct 1995 /J. Guarro FMR 5769.

Zopfiella latipes (Lundq) Malloch & Cain

8904 soil Delhi, India J. Guarro 27 Oct 1995 /J. Guarro FMR 5874.

Zopfiella leucotricha (Speg.) Malloch & Cain

8482 on *Phragmites* sp. Shatt al-Arad river, Basrah, Iraq S.K. Abdullah Mar 1995 /J. Guarro FMR 5544.

Zopfiella longicaudata (Cain) von Arx

8477 sheep dung Rutba, western desert, Iraq S.K. Abdullah Mar 1995 /J. Guarro FMR 5542 [=GenBank U40681 =GenBank U40615 =GenBank U40473].

Zopfiella macrospora Guarro & Calvo

5667 (T *Zopfiella macrospora*) soil Alt Urgell, Cataluna J. Guarro 5 Dec 1979 /J. Guarro FMR 175. Pigment: brown.

Zopfiella pleuropora Malloch & Cain

11614 swab ex skin of living male bat (*Myotis septentrionalis*) Glebe Mine, New Brunswick K.J. Vanderwolf 24-Feb-2010 /K.J. Vanderwolf Bat 60 skin [=Untereiner WUC M60]. Biodiversity: mycobiota of bat caves.

Zopfiella submersa Guarro, Al-Saadon, Gene & Abdullah

8582 (T) dead culms of *Phragmites* sp. submerged in river Euphrates River, De Qar, Iraq S.K. Abdullah & A.H. Al-Saadon 2 Jun 1994 /J. Guarro FMR 5646 [=CBS 698.96].
8583 dead culms of *Arundo donax* submerged in river Euphrates River, De Qar, Iraq S.K. Abdullah & A.H. Al-Saadon 26 Dec 1994 /J. Guarro FMR 5647 [=CBS 699.96].

Zopfiella tanzaniensis (Khan & Krug) Guarro, Cannon & Aa (syn. *Triangularia tanzaniensis*)

8633 (T *Triangularia tanzaniensis*) cow dung Kihurio, Tanzania H.D. Griffin & J.C. Krug (66-1726p) R.F. Cain 14 Aug 1966 /J.C. Krug TRTC 51981 [=ATCC 76357 =CBS 453.91 =IMI 174496]. Pigment: black.

Zopfiella tetraspora (Rai, Mukerji & Tewari) Ahmad

8756 garden soil Delhi, India J. Guarro 27 Oct 1995 /J. Guarro FMR 5770. Pigment: black.

Zygorrhynchus moelleri Vuill.

224 New Haven, Conn.? /Cutter 849.
296 Dr. Munroe.
1556 C.L. Kramer.

Zygosaccharomyces bisporus Naganishi

10950 pharmacy solution, PCCA simple syrup Foothills Medical Centre, Calgary, Alta. 2-Sep-2008 /R. Rennie MY 6857. Molecular systematics: BLAST match 99% D1D2 similarity to *Zygosaccharomyces bisporus* type and two other strains (fide UAMH 2008); BLAST match 98% ITS similarity to *Zygosaccharomyces bisporus* type and one other strain (fide UAMH 2008) // culture conditions: produced asci with one to two ascospores; API 20C no profile, trehalose negative; budding yeast, no mycelium // odor: fruity.

Zygosporium masonii Hughes

11525 dead leaves of *Daphniphyllum macropodum* Kyoto, Japan T. Matsushima MFC-1612 1965 /J. Vederas ATCC 20011.

Zygosporin A (Hayakawa S, et al. Anti-inflammatory substance, zygosporin A, and production thereof. US Patent 3,660,568 dated May 2 1972). Culture conditions: sporulates on oatmeal salts agar (fide UAMH 2011).

Zythiostroma pinastri see *Scoleconectria cucurbitula*

***Zythiostroma* sp.**

7464 ex *Populus tremuloides* (aspen poplar) Hinton, Alta. C. Myrholm (CF-90-1c-9c) 28 Sep 1990 /L. Hutchison NOF 1560.

Miscellaneous Organisms

Actinomadura maduræ (Vincent) Lechevalier &

Lechevalier
2956 H. Lechevalier N1070 (NCTC).

Actinomadura pelletieri (Laveran 1906) Lechevalier &

Lechevalier
2957 H. Lechevalier IMRU 408.

Bacillus brevis Migula

6938 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1231) Aug 1990 /D. Inglis (MR 1231). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6945 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 1413) Aug 1990 /D. Inglis (MR 1413). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus circulans Jordan

6926 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 1399) Aug 1990 /D. Inglis (MR 1399). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus coagulans Hammer

6937 *Megachile rotundata* (alfalfa leafcutting bee) larvae gut, post-defecation, instar IV-V Lethbridge, Alta. D. Inglis (MR 1384) Aug 1990 /D. Inglis (MR 1384). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus firmus Bredemann & Werner

6925 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1248) Aug 1990 /D. Inglis (MR 1248). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6934 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1259) Aug 1990 /D. Inglis (MR 1259). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6940 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1249) Aug 1990 /D. Inglis (MR 1249). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6957 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1246) Aug 1990 /D. Inglis (MR 1246). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus lentus Gibson

6944 *Megachile rotundata* (alfalfa leafcutting bee) larvae gut, post-defecation, instar II-III Lethbridge, Alta. D. Inglis (MR 1358) Aug 1990 /D. Inglis (MR 1358). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees

(*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus licheniformis (Weigmann) Chester

6933 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1254) Aug 1990 /D. Inglis (MR 1254). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus megaterium de Bary

6927 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1230) Aug 1990 /D. Inglis (MR 1230). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6935 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1260) Aug 1990 /D. Inglis (MR 1260). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6936 nectar ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1315) Aug 1990 /D. Inglis (MR 1315). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus pumilus Meyer & Gottheit

6929 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1268) Aug 1990 /D. Inglis (MR 1268). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6932 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1237) Aug 1990 /D. Inglis (MR 1237). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6939 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1245) Aug 1990 /D. Inglis (MR 1245). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6941 frass ex *Megachile rotundata* (alfalfa leafcutting bee) larvae, instar IV-V Lethbridge, Alta. D. Inglis (MR 1257) Aug 1990 /D. Inglis (MR 1257). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

6943 nectar ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1281) Aug 1990 /D. Inglis (MR 1281). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

Bacillus subtilis (Ehrenb.) Cohn

6930 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 1414) Aug 1990 /D. Inglis (MR 1414). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993).

***Bacillus thuringiensis* Berliner**

- 6931 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 1423) Aug 1990 /D. Inglis (MR 1423). Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 8108 production of natural insecticide (Bt crystals) Agriculture Canada (A-1.2/72) /S. Davies FC-414. Biocontrol: natural insecticide (Bt crystals).
- 8109 production of natural insecticide (Bt crystals) Agriculture Canada (GE-13.2) /S. Davies FC-415. Biocontrol: natural insecticide (Bt crystals).
- 8257 production of natural insecticide (Bt crystals) Agriculture Canada (HD-133) /S. Davies FC-413. Biocontrol: natural insecticide.

***Chlorella* sp.**

- 9871 sphagnum, originally mixed with UAMH 9870 Perryvale, AB A. Tsuneda 20 Sep 1999 /A. Tsuneda. Biodiversity: cohabitant with *Caponobotryella renispora* (UAMH 9870) and *Scleroconidioma sphagnicola* (UAMH 9731) (Tsuneda, Hambleton & Currah, *Rep. Tottori Mycol. Inst.* 41:1-12, 2003).

***Corynebacterium* sp. I**

- 6884 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1148) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 6885 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1203) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Corynebacterium* sp. II**

- 6886 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1149) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Corynebacterium* sp. III**

- 6889 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1167) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 6890 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1206) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Corynebacterium* sp. V**

- 6891 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1166) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 6892 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1183) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Corynebacterium* sp. VI**

- 6893 provisions for *Megachile rotundata* (alfalfa leafcutting bee) larvae Lethbridge, Alta. D. Inglis (MR 1391) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Dermatophilus congolensis* Van Saceghem**

- 3610 lesions ex wrist adult male M. Gordon (M 6446) /ATCC 14639.
- 4233 racoon hide /I. Salkin A39.

***Dermatophilus* sp.**

- 1948 skin scrapings ex feet, male 25 yr Edmonton, Alta. J.W. Carmichael 24 Feb 1964 /J.W. Carmichael [=UAMH 1949].
- 1949 skin scrapings ex feet, male 25 yr Edmonton, Alta. J.W. Carmichael 24 Feb 1964 /J.W. Carmichael [=UAMH 1948].
- 2376 scrapings ex foot, male Edmonton, Alta. J.W. Carmichael 19 Mar 1965 /J.W. Carmichael.
- 2915 skin scrapings ex foot female Edmonton, Alta. J.W. Carmichael 21 May 1968 /J.W. Carmichael.

***Micrococcus* sp. I**

- 6894 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1155) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Micrococcus* sp. II**

- 6895 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1146) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).
- 6896 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1189) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Micrococcus* sp. III**

- 6897 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1201) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Micrococcus* sp. IV**

- 6898 pollen ex *Megachile rotundata* (alfalfa leafcutting bee) Lethbridge, Alta. D. Inglis (MR 1210) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, *Microb Ecol* 26:125-143, 1993).

***Micropolyspora faeni* Cross, Maciver & Lacey**

- 3601 A.S. Sekhon [=CDC W1694].

***Nannizziopsis barbata* Sigler, Hambleton & Pare**

- 11185 (*T. Nannizziopsis barbata*) ex skin of coastal bearded dragon (*Pogona barbata*) with deep ulcerative mycotic dermatitis; GMS + for hyphae; animal kept in outdoor enclosure South Penrith Veterinary Clinic, Penrith, NSW, Australia R. Johnson 10-Jun-2009 /R. Johnson 7015.1 [=GenBank JF323871 ITS =GenBank KF466861 SSU]. Human/animal pathogen: deep cutaneous mycosis in *Pogona barbata* (Case 5) (Johnson RSP, Sangster CR, Sigler L, Hambleton S, Pare JA, *Aust Vet J* 89:515-519, 2011) // keratinophilic: digests hairs with penetrating bodies // mesophilic: NG @ 35C (Tested three

times.) // molecular systematics: phylogeny of Nannizziopsis and reptile pathogens belonging to the CANV complex (Sigler L, Hambleton S, Pare JA, J Clin Microbiol 51:3338-3357, 2013).

Nocardia asteroides (Eppinger 1891) Blanchard

- 170 Univ. Michigan /; .
2955 H. Lechevalier IMRU 3318.
4246 ex lyophilized culture UAMH 2956 Edmonton, Alta. L. Sigler Jul 1979 /L. Sigler.
6309 bronchial washings, female 46 yrs H. Congly 1988 /H. Congly 2587M.
6675 bronchial washing, male 34 yr Saskatchewan H. Congly 1990 /H. Congly 1434M.
6810 bronchial washings, female 31 yr, HIV+ Saskatchewan H. Congly 1991 /H. Congly 2915M-90.
7110 ex brain biopsy, male 66 yr Saskatchewan H. Congly 1991 /H. Congly 2136M.91.
7111 ex pleural fluid, male 74 yr Saskatchewan H. Congly 1991 /H. Congly 3281M.91.
7112 ex thyroid abscess, female 89 yr Saskatchewan H. Congly 1991 /H. Congly 3709M.91.

Nocardia brasiliensis (Lindenberg) Pinoy

- 2953 H. Lechevalier IMRU 774A.
5887 leg Toronto, Ont. /J. Kane FR 1368.

Nocardia otitidis-caviarum Snijders

- 2951 H. Lechevalier NJC 1934.

Nocardia petroleophila Hirsch & Engel

- 4713 (T *Nocardia petroleophila*) soil P. Hirsch (78) /L. Goatcher 86 [=ATCC 15777 =GenBank X80596 16S].

Nocardia sp.

- 1096 NRRL A 10,053.

Nocardia transvalensis Pijper & Pullinger

- 2952 H. Lechevalier IMRU 3520.

Nocardiopsis dassonvillei (Brocq-Rousseau) Meyer

- 2954 (T *Nocardia dassonvillei*) /H. Lechevalier IMRU 509 [=ATCC 23218 =NCTC 10488 =GenBank CP002040 CHR1 complete =GenBank CP002041 CHR2 complete =DSM 43111].

Prototheca trispora (Ashf., Cif. & Dalm.) Cif. et al.

- 731 Ciferri (HMS-1154) /K. Tubaki NI 7676.

Prototheca wickerhamii Tubaki & Soneda

- 7488 skin, female 70 yr, DE - New Zealand 1993 /A. Woodgyer 93.410.

Pseudomonas fluorescens Migula

- 11620 ex petroleum-contaminated soil, growth temperature range <4C to 35C Lodgepole, Alta. J. Foght 1983 /J. Foght LP6a [=cLP6a]. Biodeteriogen/biodegradation: oil spill bioremediation agent efficacy tests; utilizes polycyclic aromatic hydrocarbons as a carbon source as well as conventional organic substrates (e.g. glucose, acetate) (Foght JM, Report EE-164 Environmental Protection Service, Environment Canada, ON, 1999); polycyclic aromatic hydrocarbon degrading bacterium (Adebusuyi AA, Foght JM, Appl Microbiol Biotechnol Epub Sep 2012; Adebusuyi AA, Smith AY, Gra MR, Foght JM, Appl Microbiol Biotechnol 95:757-766, 2012; Foght JM, Westlake DWS, Can. J. Microbiol. 37:924-932, 1991; Foght JM, Westlake DWS, Biodegradation 7:353-366, 1996; Adebusuyi AA, Foght JM, BMC Microbiol 11:252, 2011; Bugg T, Foght JM, Pickard MA, Gray MR, Appl Environ Microbiol 66:5387-5392, 2000;

Hearn EM, Gray MR, Foght JM, J Bacteriol 188(1):115-23, 2006; Hearn EM, Dennis JJ, Gray MR, Foght JM, J Bacteriol. 185(21):6233-6240, 2003); mechanisms for adhesion to an oil-water interface (Abbasnezhad H, Gray MR, Foght JM, Colloids and Surfaces B: Biointerfaces 62:36-41, 2008); adhesion to the hydrocarbon phase increases phenanthrene degradation (Abbasnezhad H, Foght JM, Gray MR, Biodegradation 22:485-496, 2011) // application: testing of polycyclic aromatic hydrocarbon degrading bacterium in commercial freshwater oil spill bioremediation (Foght JM, Semple K, Westlake DWS, Blenkinsopp S, Sergy G, Wang Z, Fingas M. J. Ind. Microbiol. Biotechnol. 21:322-330, 1998); stabilization of oil/water emulsions by hydrophobic bacteria (Dorobantu LS, Yeung AKC, Foght JM, Gray MR, 70:6333-6336, 2004).

Pseudomonas putida (Trevisan) Migula

- 10660 P. Reese [=ATCC 17484]. Mesophilic: grow at 26 C // biodeteriogen/biodegradation: degrades naphthalene.

Pseudomonas sp.

- 5554 coffee plant Costa Rica /W.A. Ayer A22. Biocontrol: inhibitory to *Mycena citricolor*.
5555 coffee plant Costa Rica /W.A. Ayer A30. Biocontrol: inhibitory to *Mycena citricolor*.

Streptomyces cellulosae (Krainsky) Waksman & Henrici

- 4951 Sharp & Dohme (MA 420) Merck /J. Vederas [=ATCC 12625]. Fungichromin (Can. Pat. 554,991; Noguchi & al., J. Am. Chem. Soc. 110:2938-2945, 1988).

Streptomyces filipinensis Ammann et al.

- 4943 (T *Streptomyces filipinensis*) soil U. of Illinois Waksman from Gottlieb /J. Vederas [=GenBank AY999913 SSU =ATCC 23905 =NRRL 2437 =CBS 309.56 =ISP 5112 =CBS 801.68 =DSM 40112 =JCM 4369]. Filipin, a polyene antibiotic (Phytopathol. 45:559-563, 1955).

Streptomyces flavofungini Uri & Bekesi

- 6125 (T *Streptomyces flavofungini*) desert sand Medimpex /J. Vederas [=ATCC 27430 =CBS 411.59 =CBS 672.72 =IFO 13371 =DSM 40366 =JCM 4753 =NRRL B-12307]. Flavofungin (Nature 181:908, 1958).

Streptomyces flavogriseus (Duche) Waksman and Lechevalier

- 6900 *Megachile rotundata* (alfalfa leafcutting bee) larvae gut, post-defecation Lethbridge, Alta. D. Inglis (MR 1347) Aug 1990. Biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993) // culture conditions: grows on both NA and PDA (fide UAMH 2010) // systematics/taxonomy: determined as *Streptomyces flavogriseus* (fide S. Chen, Ohio University, Athens, OH).

Streptomyces lavendulae (Waksman & Curtis) Waksman & Henrici

- 4615 granulomatous lung lesion, female 55 yr Saskatchewan /G.J. Hardy 5759.

Streptomyces maghwi Afzal, Nimer & Nazar

- 6124 (T *Streptomyces maghwi*) sandy soil Maghwa oil field Kuwait M. Afzal /J. Vederas [=CBS 211.83]. Roflamycocin (Afzal & al., Zeitschrift fur Allgemeine Mikrobiologie 23:411-418, 1983).

Streptomyces minutiscleroticus (Thirumalachar) Pridham
emend. Lanoot et al.

6128 (T *Streptomyces minutiscleroticus*) soil M. Thirumalachar (HACC 147) /J. Vederas [=ATCC 17757 =ATCC 19346 =CBS 231.65 =CBS 662.72 =IFO 13000 =IFO 13361 =NRRL B-12202 =DSM 40301 =JCM 3102 =JCM 4790 =NCIB 10996]. Aburamycin (Hindustan Antibiol. Bull. 8:6-9, 1965).

Streptomyces noursei Brown, Hazan & Mason

5365 (T *Streptomyces noursei*) soil Fauquier Country, VA, USA /J. Vederas [=ATCC 11455 =GenBank AY999827 16S =CBS 240.57 =DSM 40635 =JCM 4922 =NCIB 8593 =NRRL B-1714]. Nystatin.

Streptomyces pentaticus Umezawa et al.

4952 garden soil Nikken Chem. Co. Ltd. /J. Vederas [=ATCC 29801]. Pentamycin (J. Antibiot. 11:26-29, 1958).

Streptomyces rimosus Sobin & al.

6126 (T *Streptomyces rimosus*) soil /J. Vederas [=ATCC 10970 =ATCC 23955 =CBS 938.68 =CBS 437.51 =IFO 3390 =IFO 3441 =IFO 3725 =IFO 12907 =NRRL B-2234 =DSM 40260 =JCM 4667 =NCIB 8229 =NRRL B-2659]. Terramycin; rimocidin (Antibiot. Chemother. 1:289, 1951); oxytetracycline.

Streptomyces ruber (Krainsky) Waksman & Henrici

6127 S. Waksman /J. Vederas [=ATCC 3348 =CBS 137.20 =IFO 3110].

***Streptomyces* sp.**

2222 contaminant UCLA, Calif. P. Martin Nov 1962 /P. Martin 1201.
2950 sputum ex tuberculous patient /H. Lechevalier SUKA 1.
4684 litter under old Pinus Devonian Bot. Garden, Alta. L. Sigler Oct 1982 /L. Sigler.

Streptomyces violascens (Preobrazhenskaya & Sveshnikova)

Pridham et al. 1958

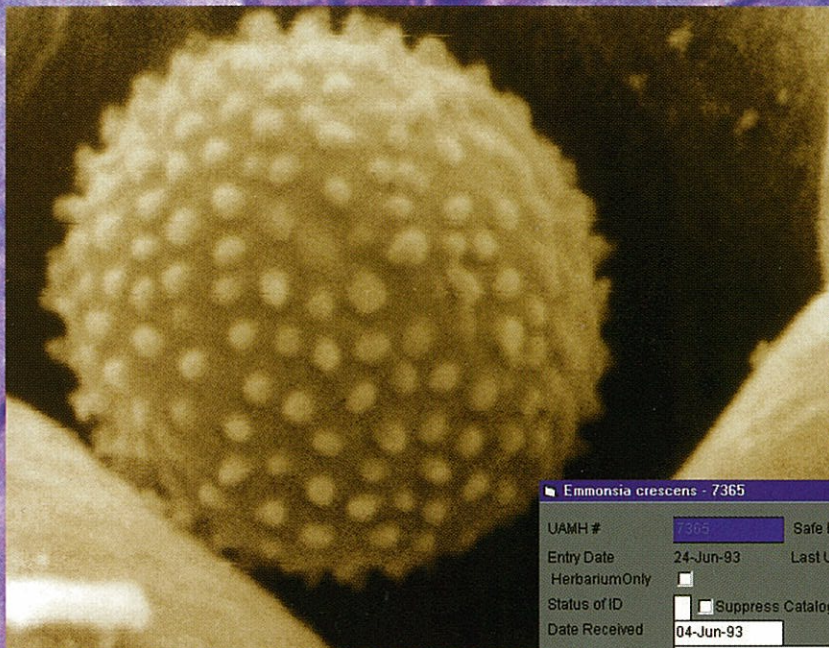
6909 *Megachile rotundata* (alfalfa leafcutting bee) larvae gut, post-defecation Lethbridge, Alta. D. Inglis (MR 1367) Aug 1990. Systematics/taxonomy: determined as *Streptomyces violascens* (fide S. Chen, Ohio University, Athens, OH) // biodiversity: aerobic microorganisms associated with alfalfa leafcutter bees (*Megachile rotundata*) (Inglis GD, Sigler L, Goettel MS, Microb Ecol 26:125-143, 1993) // culture conditions: grows well NA, does not grow on PDA (fide UAMH 2010).

Thermopolyspora polyspora Henssen

3603 G.N. Little B 3122.

Thermopolyspora vulgaris Tsiklinsky

3600 A.S. Sekhon [=CDC W1696].



Emmonsia crescens - 7365

UAMH # Safe Deposit

Entry Date 24-Jun-93 Last Update 21-Apr-97

HerbariumOnly

Status of ID Suppress Catalogue Print

Date Received

Incoming Name

Substrate

Location

Isolator/Collector

Isolation Date

Source Remarks

Sender Name

Sender Number

Sender Comment

Ex-Type Holotype

Type Name

Permit Required

Preservation Freeze Dry LN Oil Water Freezer Continuous

Liquid N₂ Rack #s

Buttons: Main Menu, New, Search, Update, Species, Cancel

Related Data: Characteristics, Cross Ref#, General, Compounds, Sexuality

Navigation: Other Strains, Next UAMH number is 8998, Next UAMH temporary number is -97065

