Dermatophytes

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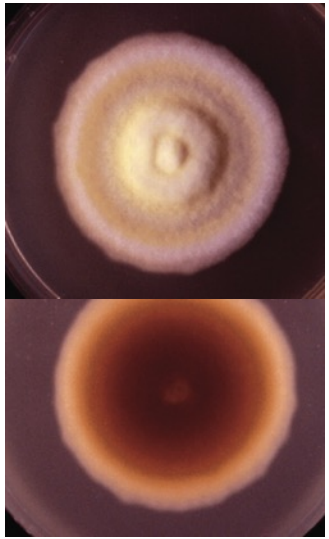
Arthroderma insingulare

Colonies usually flat to downy with a suede-like to granular texture resembling *T. mentagrophytes.* The surface colour may range from white to cream, buff to yellow, or greenish-yellow. Reverse pigmentation is usually yellowish-brown although some variants have a deep rose red reverse. Microconidia are large, clavate or pedicellate, usually exhibiting transition forms to more or less abundant lateral macroconidia. Macroconidia are clavate to cylindrical with rounded ends, smooth and thin-walled, and are 2-6 celled. Chlamydoconidia, hyphal spirals, racquet mycelium and antler hyphae may also be present.



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Arthroderma uncinatum

Colonies usually flat, powdery, cream to tan to orange-tan in colour, with a blackish-purple submerged fringe and reverse. Macroconidia are numerous, smooth, thick-walled, elongate, cigar-shaped, with up to 9 or 10 septa.

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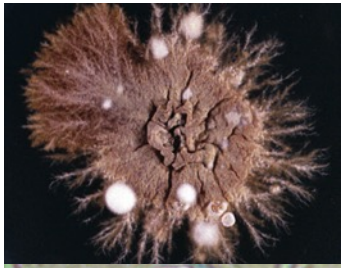
Epidermophyton floccosum

Macroconidia are smooth, thin-walled and cigar shaped, often produced in clusters growing directly from the hyphae. Numerous chlamydoconidia are formed in older cultures. No microconidia are formed.



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Lophophyton gallinae

Colonies flat with a suede-like texture and are white with a pinkish tinge. Some cultures show radial folding. An orange-pink "strawberry-coloured" reverse pigment is usually present. Macroconidia when present are usually 5-6 celled, thin to thick-walled, slightly echinulate, cylindrical to clavate with narrow base and blunt tip, 15-60 x 6-10 µm. Microconidia are ovoidal to pyriform in shape.

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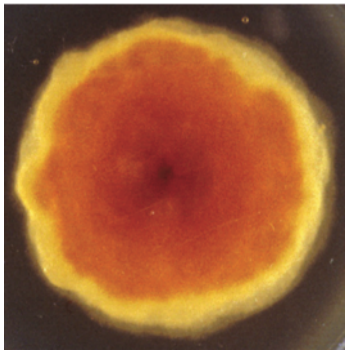
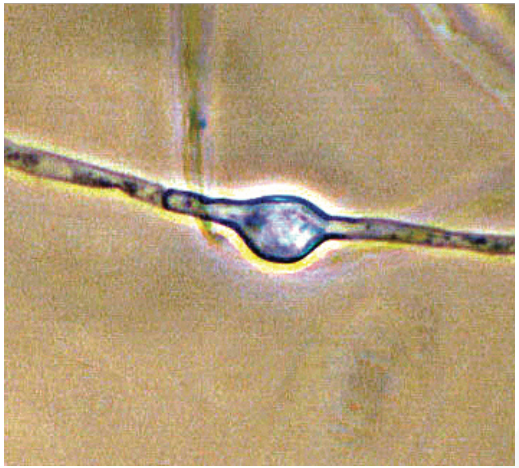
Microsporum audouinii

Macroconidia and microconidia rarely produced, most cultures are sterile or produce only occasional thick-walled terminal or intercalary chlamydoconidia. When present macroconidia may resemble those of *M. canis* but are usually longer, smoother and more irregularly fusiform in shape.

Growth on Rice Grains: Very poor or absent, usually being visible only as a brown discolouration. This is one of the features which distinguish *M. audouinii* from *M. canis.*





Colonies are flat, spreading, greyish-white to light tan-white in colour, and have a dense suede-like to downy surface, suggestive of mouse fur in texture.

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Microsporum canis

Macroconidia are typically spindle-shaped with 5-15 cells, verrucose, thick-walled and often have a terminal knob, 35-110 x 12-25 µm. A few pyriform to clavate microconidia are also present.

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Microsporum ferrugineum

Colonies slow growing, waxy to glabrous, cream to buff coloured with no reverse pigment. No microconidia or macroconidia are produced. However, irregular branching hyphae with prominent cross walls ("bamboo hyphae") and chlamydoconidia are seen.

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Nannizzia fulva

Colonies flat, suede-like, tawny-buff to pinkish-buff in colour with a yellow brown reverse. Macroconidia thin-walled, elongate, ellipsoidal (closely resemble those of *M. gypseum),* except they are longer and more bullet-shaped (clavate) with 3 to 6 septa.

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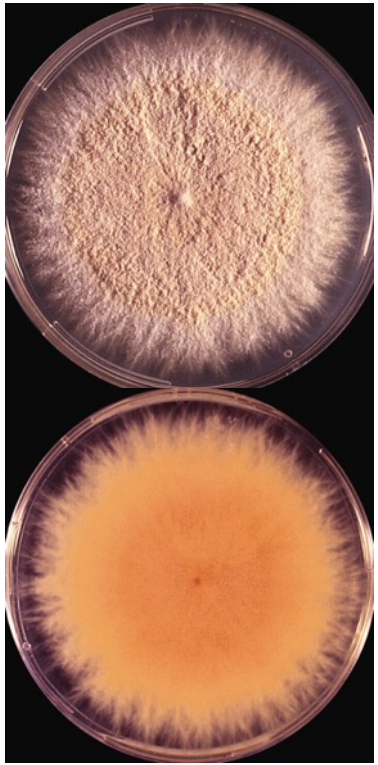
Nannizzia gypsea

Colonies suede-like to granular, with a to tawny-buff to pale cinnamon surface and a yellow-brown reverse. Macroconidia are typically 4-6 celled, ellipsoidal, thin-walled and verrucose.



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Nannizzia nana

Colonies flat, cream to buff coloured with a suede-like to powdery surface and a dark reddish-brown reverse with age. Macroconidia small, ovoid to pyriform with 1-3 cells, but mostly 2 cells, with relatively thin, finely echinulate (rough) walls, and broad truncate bases.

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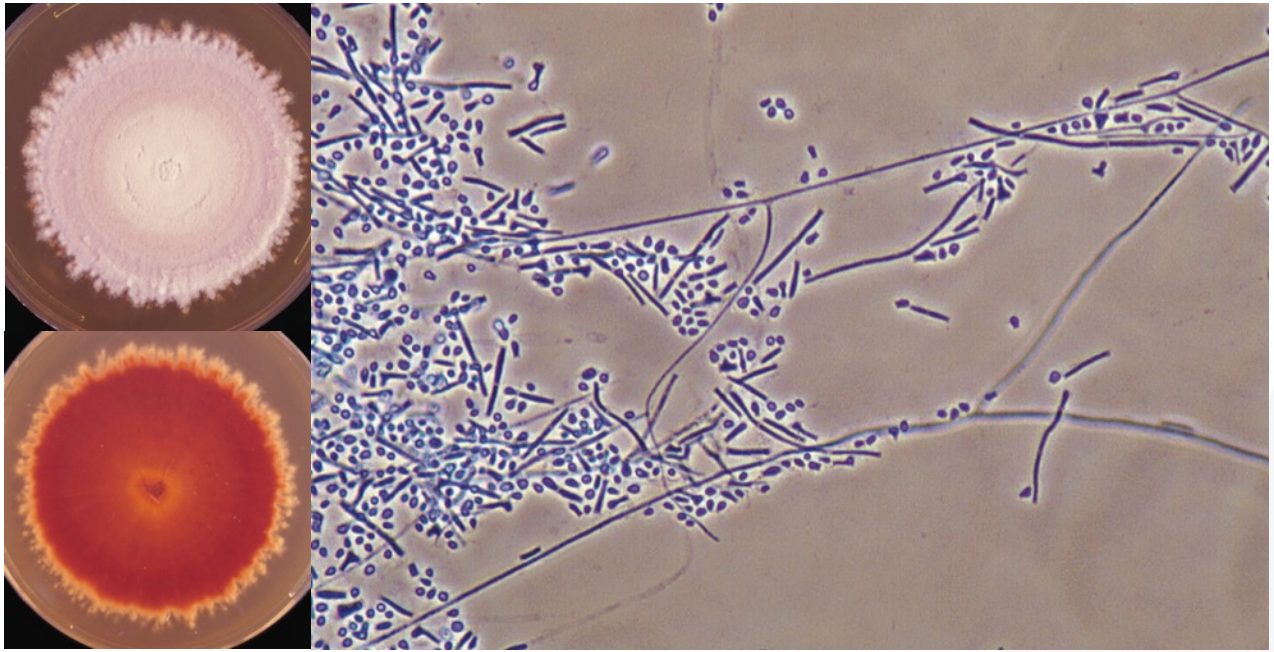
Nannizzia persicolor

Cultures flat, white to pinkish in colour, with a suee-like to granular texture and a peripheral fringe. Reverse pigmentation is orange to red. Abundant, spherical to pyriform microconidia. Macroconidia are only rarely produced.



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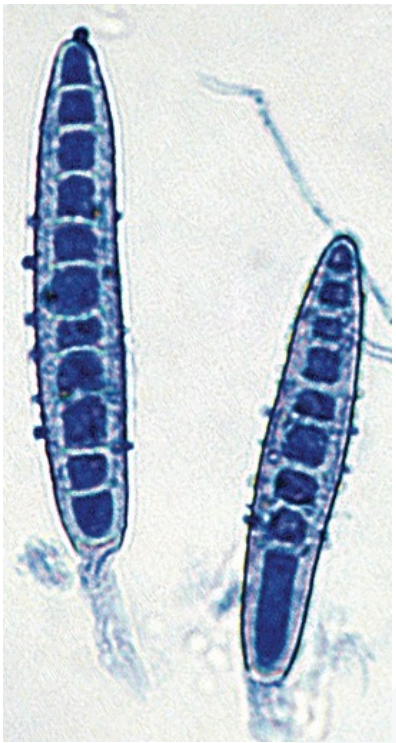
Paraphyton cookei

Colonies buff to pale brown, powdery to suede-like with radial grooves. Reverse pigment dark reddish brown. Numerous large, very thick-walled, echinulate (rough) elliptical macroconidia with predominantly 5-10 septa.



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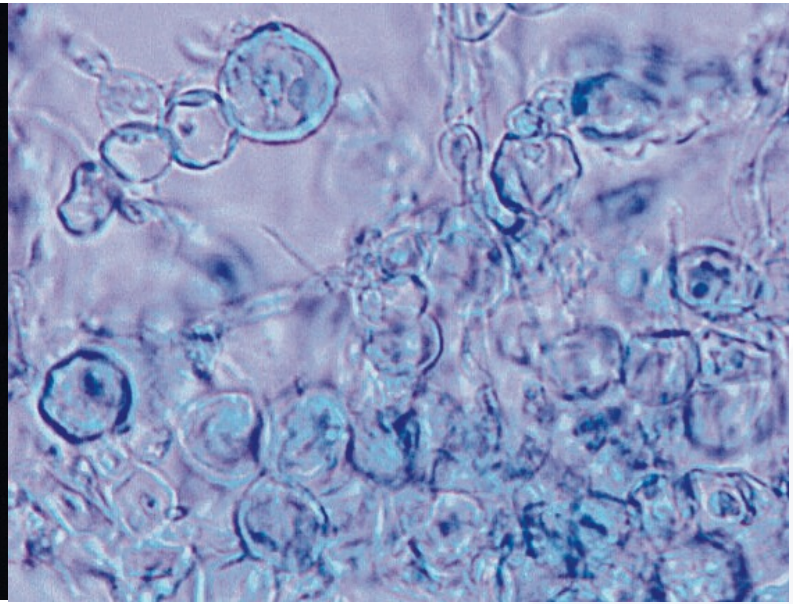
Trichophyton concentricum

Colonies slow growing, raised and folded, glabrous becoming suede-like, mostly white to cream coloured, but sometimes orange-brown coloured, often deeply folded into the agar. Reverse is buff to yellow-brown to brown in colour. Chlamydoconidia are often present in older cultures. Microconidia and macroconidia are not usually produced.



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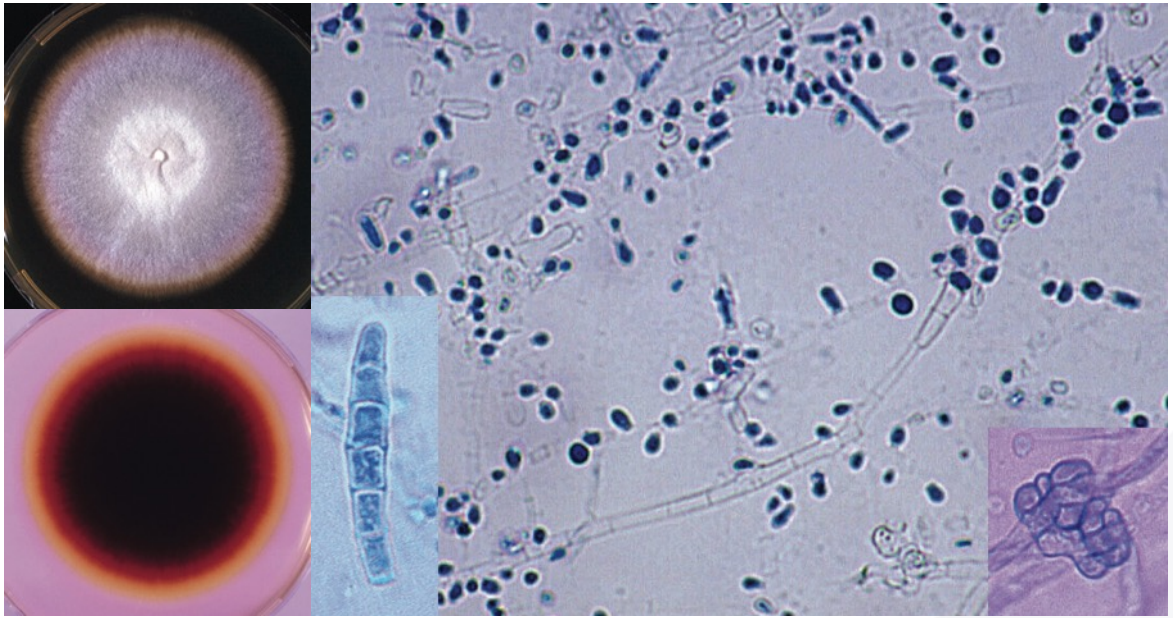
Trichophyton equinum

Colonies usually flat, white to buff coloured, suede-like to downy in texture, and usually have a deep-yellow submerged fringe and reverse which later becomes dark red in the centre. Microconidia clavate to pyriform, macroconidia rarely produced, but when present are clavate, smooth, thin-walled and of variable size. Occasional nodular organs and chlamydoconidia may be present.



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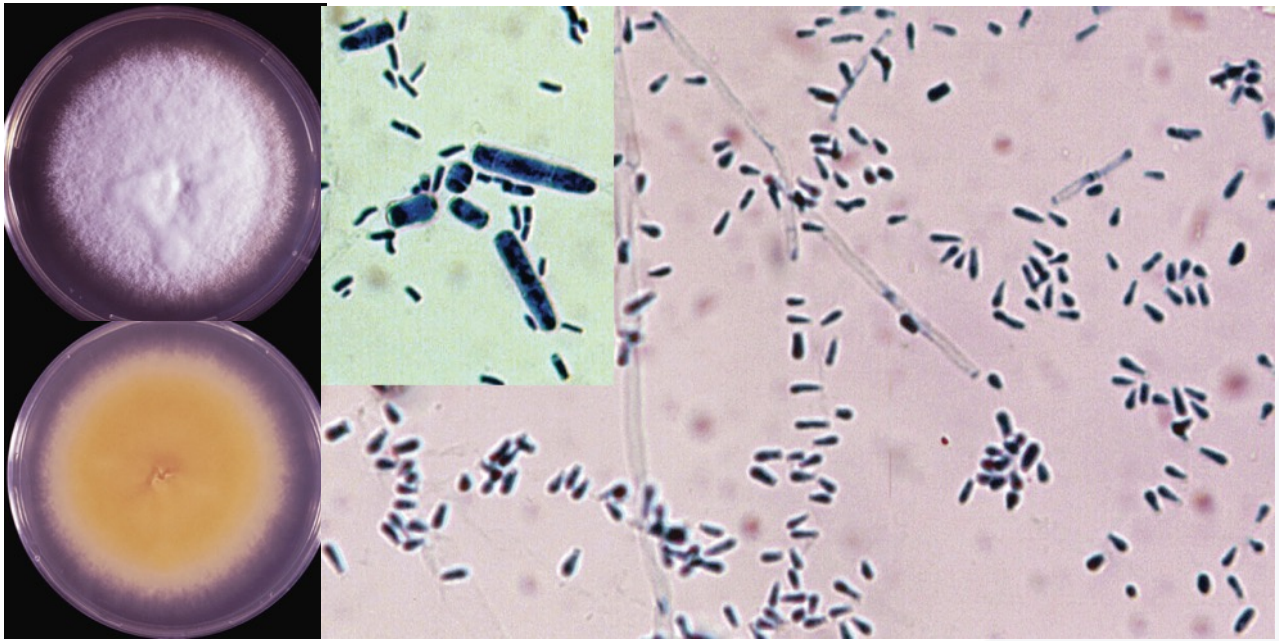
Trichophyton erinacei

Colonies white, flat, powdery, sometimes downy to fluffy with a brilliant lemon yellow reverse. Numerous large clavate microconidia are borne on the sides of hyphae. Macroconidia are smooth-walled, 2-6 celled, clavate, variable in size, and may have terminal appendages.



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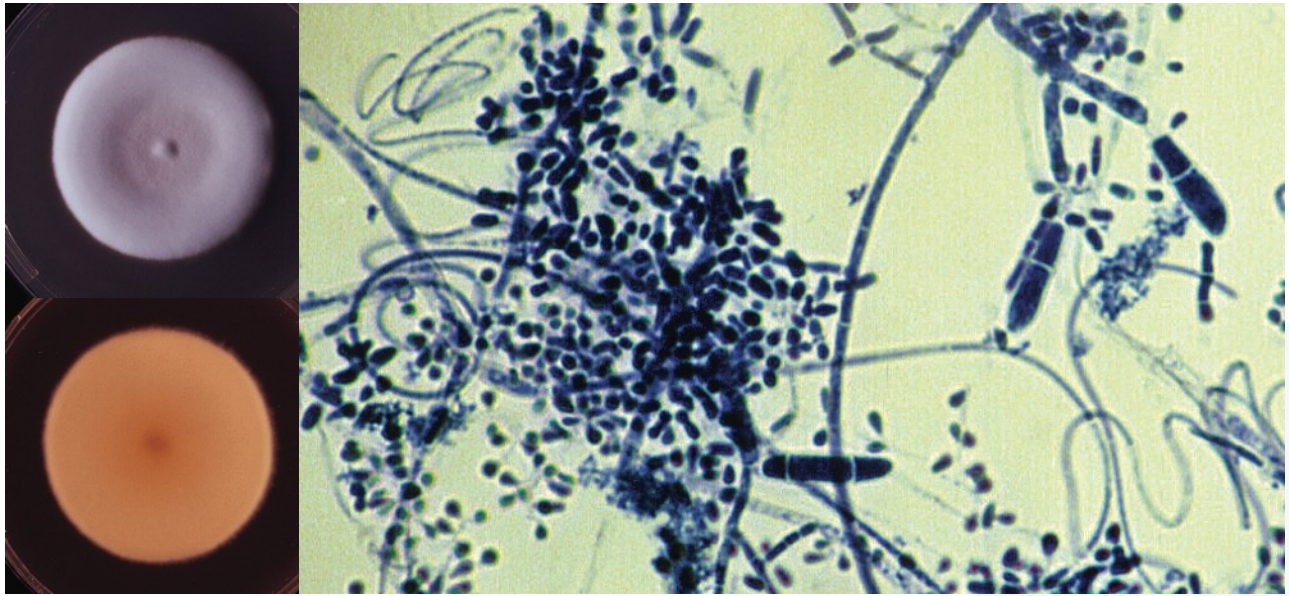
Trichophyton interdigitale

Colonies flat, white to cream in colour with a powdery to suede-like surface and yellowish and pinkish brown reverse pigment, often becoming a darker red-brown with age. Numerous subspherical to pyriform microconidia, occasional spiral hyphae and spherical chlamydospores are present. Occasional slender, clavate, smooth-walled, multiseptate macroconidia may also be present.



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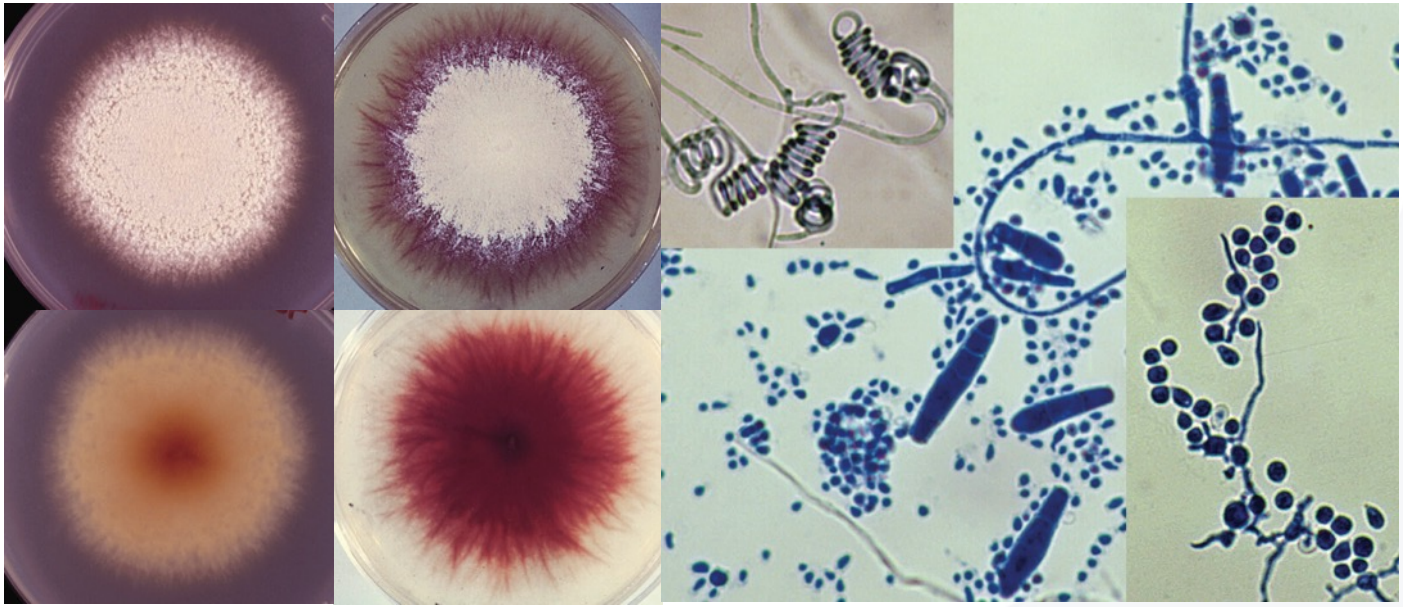
Trichophyton mentagrophytes

Colonies flat, white to cream in colour, with a powdery to granular surface. Reverse pigmentation is usually a yellow-brown to reddish-brown colour. Microconidia smooth-walled, and are predominantly spherical to subspherical in shape, however occasional clavate to pyriform forms may occur. Varying numbers of spherical chlamydoconidia, spiral hyphae and smooth, thin-walled, clavate shaped, multicelled macroconidia may also be present.



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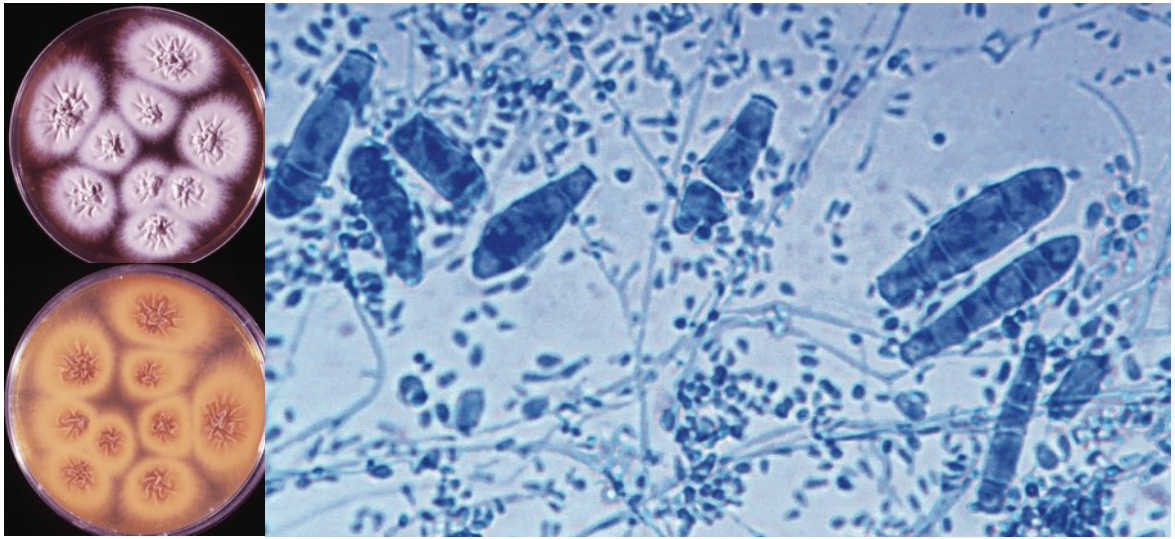
Trichophyton quinckeanum

Colonies flat or slightly raised and folded, white to cream, suede-like in texture with a pale yellow-brown to pinkish brown reverse. Numerous microconidia, predominantly slender clavate when young, are borne laterally along the sides of hyphae. Occasional to moderate numbers of smooth-walled, multiseptate, clavate macroconidia may be present.



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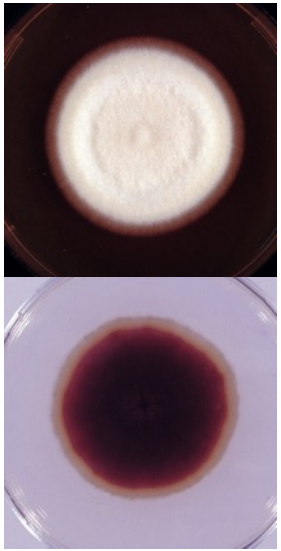
Trichophyton rubrum

Colonies flat to slightly raised, white to cream, suede-like to downy, with a yellow-brown to wine-red reverse. Most cultures show scanty to moderate numbers of slender clavate to pyriform microconidia. Macroconidia when present are smooth, thin walled and cylindrical in shape. On primary isolation some cultures may lack reverse pigmentation and fail to produce microconidia.



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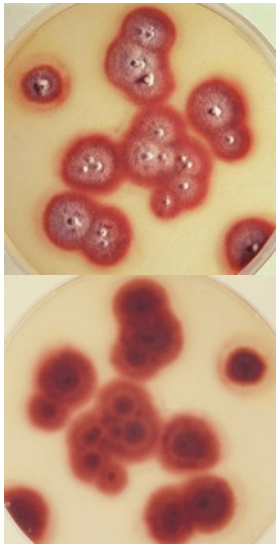
Trichophyton rubrum

Colonies flat to slightly raised, white to cream, suede-like to downy, with a yellow-brown to wine-red reverse. Most cultures show scanty to moderate numbers of slender clavate to pyriform microconidia. Macroconidia when present are smooth, thin walled and cylindrical in shape. On primary isolation some cultures may lack reverse pigmentation and fail to produce microconidia.



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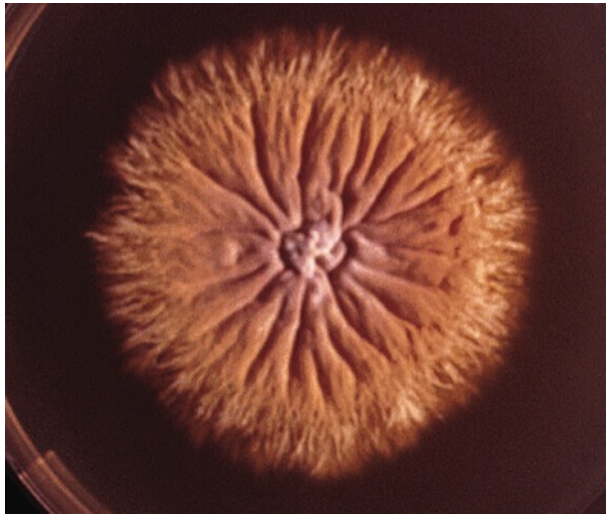
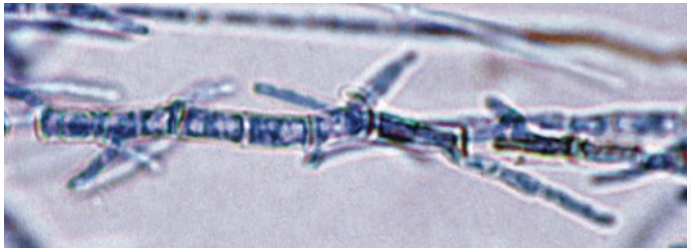
Trichophyton soudanense

Colonies often slow-growing with a flat to folded, suede-like surface. Surface mycelium and reverse pigment range from white to pink, deep apricot-orange to deep red in colour. Most cultures do not produce conidia; the hyphae may show reflexive or right-angle branching. Some strains will produce pyriform microconidia and chlamydoconidia maybe found in older cultures.





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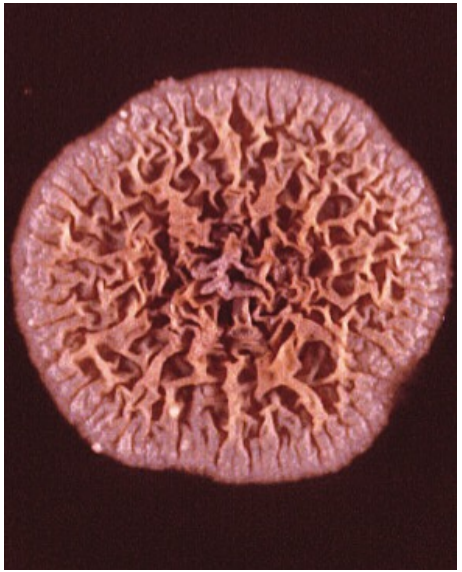
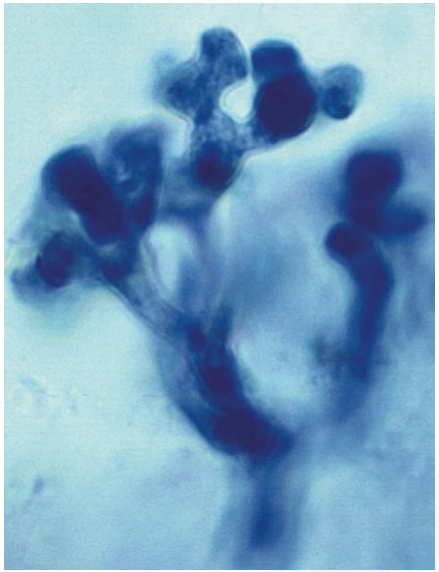
Trichophyton schonleinii

Colonies slow growing, waxy or suede-like with a deeply folded honey-comb-like thallus and some sub-surface growth. The thallus is cream coloured to yellow to orange brown. No reverse pigmentation is present. No macroconidia and microconidia are seen in routine cultures, however numerous chlamydoconidia may be present in older cultures. However, characteristic antler "nail head" hyphae also known as "favic chandeliers" may be observed.





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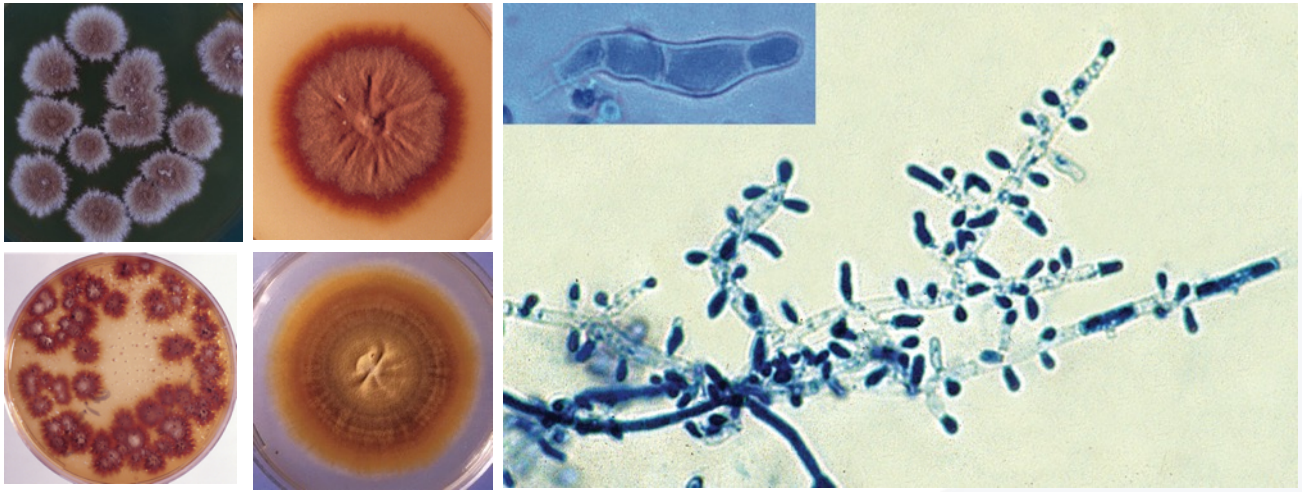
Trichophyton tonsurans

Colonies show considerable variation in texture and colour. They may be suede-like to powdery, flat with a raised centre or with radial grooves. The colour may vary from pale-buff to yellow, to dark-brown. The reverse colour varies from yellow-brown to reddish-brown to deep mahogany. Hyphae are relatively broad, irregular, much branched with numerous septa. Numerous characteristic microconidia varying in size and shape from long clavate to broad pyriform, are borne at right angles to the hyphae, which often remain unstained by lactophenol cotton blue. Very occasional smooth, thin-walled, irregular, clavate macroconidia may be present on some cultures.



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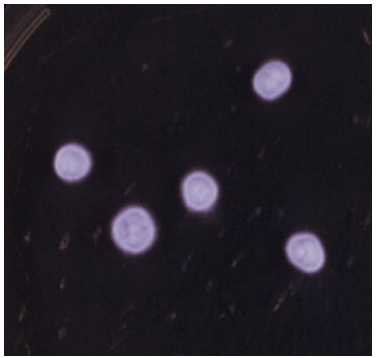
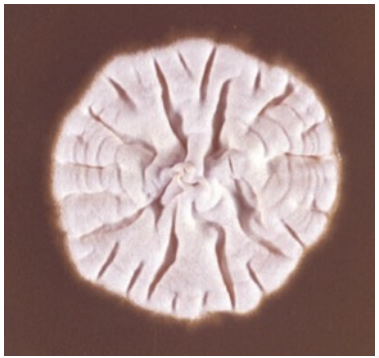
Trichophyton verrucosum

Colonies slow growing, small, button-or-disk-shaped, white to cream coloured, with a suede-like to velvety surface, a raised centre, and flat periphery with some submerged growth. Reverse pigment may vary from non-pigmented to yellow. Broad, irregular hyphae with many terminal and intercalary chlamydospores. Chlamydospores are often in chains. The tips of some hyphae are broad and club-shaped, and occasionally divided, giving the so-called "antler" effect. When grown on thiamine-enriched media, occasional strains produce clavate to pyriform microconidia borne singly along the hyphae. Macroconidia are only rarely produced, but when present have a characteristic tail or string bean shape.





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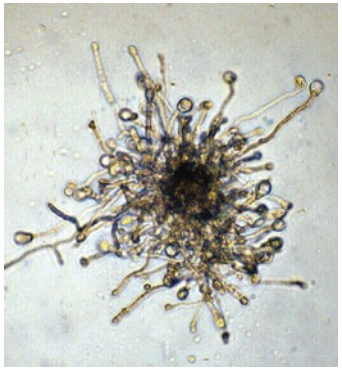
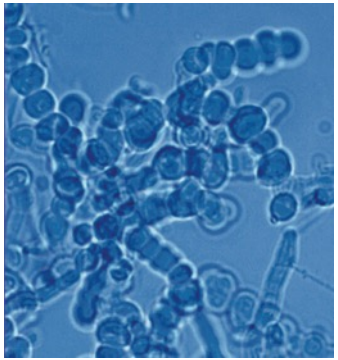
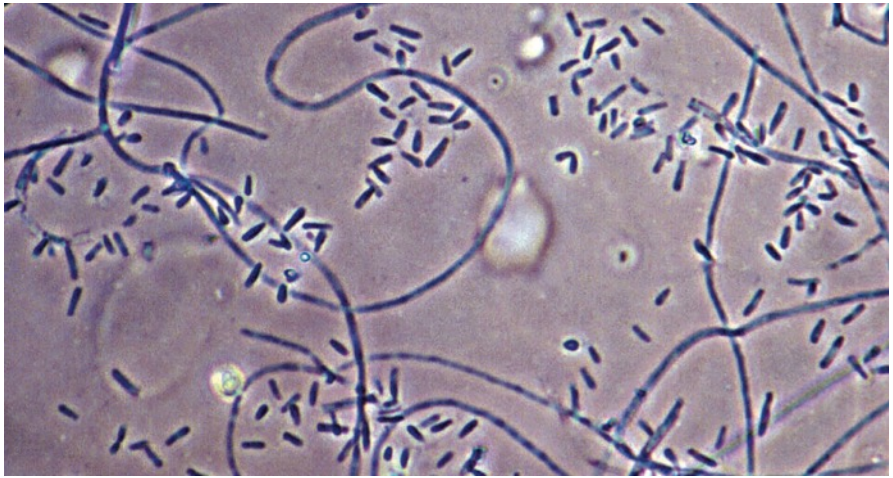
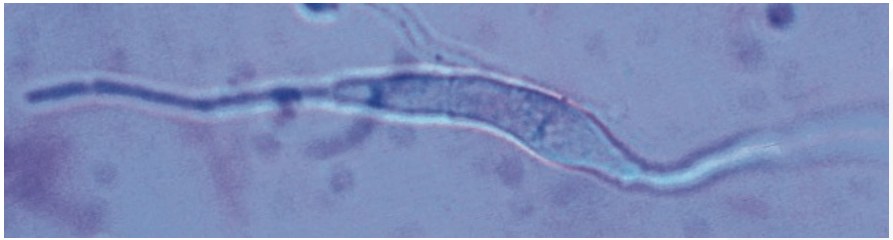
Trichophyton verrucosum









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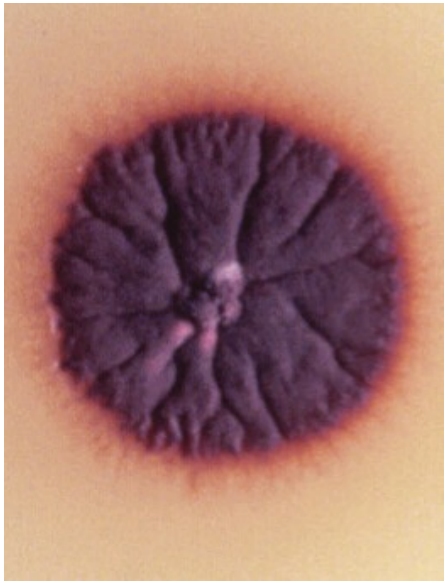
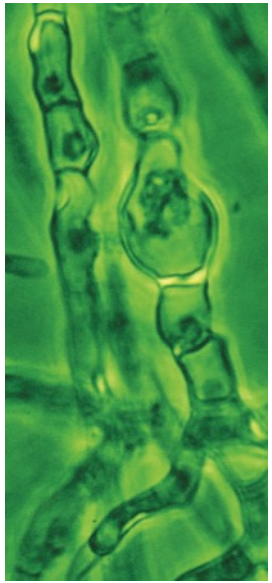
Trichophyton violaceum

Colonies are very slow growing, glabrous or waxy, heaped and folded and a deep violet in colour. Hyphae are relatively broad, tortuous, much branched and distorted. No conidia are usually seen, although occasional pyriform microconidia have been observed on enriched media. Numerous chlamydoconidia are usually present, especially in older cultures.





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