# **KIN MING (CLEMENT) TSUI**



## **CANDIDATE STATEMENT**

Currently I am the Principal Scientific Officer in National Centre for Infectious Diseases, Singapore. I have appointment as Assistant Professor in Nanyang Technological University, Singapore, and University of British Columbia, Canada. My work focuses on molecular epidemiology of infectious diseases and antimicrobial resistance, and clinical metagenomics. My research interests include ecology, evolution, and genomics of microbial pathogens to humans and plants.

In 2018-2021, I worked in Sidra Medicine and Weill Cornell Medicine-Qatar, where I was leading genomic projects on pathogens causing candidemia, and multidrug-resistant bacteria. I completed a PhD from University of Hong Kong. In 2003-2005, I was awarded the Croucher Fellowship to study fungal evolution in Vancouver. I performed postdoctoral research at Westmead Hospital, Australia, and BCCDC Public Health Laboratory, Canada. I am on the editorial board of Fungal Genetics and Biology, Molecular Ecology and Molecular Ecology Resources.

If given an opportunity to be COMS At-Large Councilor, I would be glad to contribute my time and efforts in making the difference for the ASM and the community.

### **CURRICULUM VITAE**

Kin-Ming (Clement) TSUI Principal Scientific Officer National Center for Infectious Diseases, Tan Tock Seng Hospital Singapore Tel | +65 63577281; Email | <u>clementsui@gmail.com</u>

Expertise: Public Health Microbiology, Pathogen Genomics, Bioinformatics, Evolutionary Genetics, Epidemiology

## **EDUCATION**

University, Nation	Degree	Subject Area/Program	Dates
University of Hong Kong, Hong Kong	PhD	Mycology and Ecology	Sep 1996 - Nov 2000
University of Hong Kong, Hong Kong	BSc	Environmental Science	Sep 1993 - Jun 1996

### CURRENT POSITION AND PROFESSIONAL EXPERIENCE

<b>University/Organization</b>	Department/Unit	Position	Dates
Nanyang Technological University,	Lee Kong Chian School of	Adjunct Assistant	2022-
Singapore	Medicine	Professor	
National Centre for Infectious	Infectious Diseases Research	Principal Scientific	2022-
Diseases/ Tan Tock Seng Hospital,	Laboratory	Officer	
Singapore			
Sidra Medicine, Qatar	Pathology Sciences,	Molecular Scientist	2018-2021
	Department of Pathology		
Weill Cornell Medicine - Qatar	Department of Pathology and	Assistant Professor	2018-2021
	Laboratory Medicine		
British Columbia Provincial Health	BC Centre for Disease Control	Research Associate	2013 - 2017
Service Authority/ University of	Public Health Laboratory/		
British Columbia (UBC), Canada	Faculty of Medicine		
University of British Columbia,	Department of Forest &	Research Associate	2008 - 2013
Canada	Conservation Sciences		
Westmead Hospital, Australia	Centre for Infectious Diseases	Research Officer	2006 - 2007
	and Microbiology		
University of British Columbia,	Department of Botany	Postdoctoral Fellow	2003 - 2005
Canada			
City University of Hong Kong,	Department of Biology and	Research Assistant	2002 - 2003
Hong Kong	Chemistry		

# OTHER PROFESSIONAL EXPERIENCE

- 1. Affiliate Assistant Professor, Faculty of Medicine, University of British Columbia, Canada, (2019-present)
- 2. CAS PIFI Visiting Scientist, Institute of Microbiology, CAS, Beijing, China (2019-2020, 2022-2023)
- 3. Visiting Scientist, Beijing Forestry University, Beijing, China (2018)

- 4. **Visiting Scientist**, Institute of Dermatology, Chinese Academy of Medical Sciences/ Peking Union Medical College, Nanjing, China (2015)
- 5. Sessional Lecturer, University of British Columbia, Canada (2011)

## SCHOLARLY AND PROFESSIONAL ACTIVITIES

#### **Research Support**

Granting Agency	Subject	Amount	Dates	Principal Investigator (PI)	Role
NCID Catalyst Grant	Identification and characterization of drug resistant SARS-CoV-2 isolates from COVID patients on antiviral therapy	US\$35,000	2022-2023	Conrad Chan	Co-I
Qatar National Research Fund	Implementing clinical metagenomics-based infectious disease diagnostics at Sidra Medicine	US\$ 500,000	2020-2023	Mohammad Hasan/Patrick Tang	Co-PI
Qatar National Research Fund	Molecular and genomic epidemiology of invasive, multi drug resistant Gram- negative bacteria in the State of Qatar	US\$ 699,900	2020-2023	Ali Sultan	Co-PI
Sidra Medicine Research	Whole genome sequencing to improve the diagnosis, treatment and management of candidiasis in Qatar	QAR 750,000 (US\$208,000)	2020-2022	Kin Ming Tsui	PI
Sidra Medicine Research	Implementing clinical metagenomics-based infectious disease diagnostics at Sidra Medicine	QAR 985,231 (US\$273,000)	2020-2021	Mohammad Hasan	Co-PI
Sidra Medicine Research	Molecular epidemiology of antibiotic resistance at Sidra Medicine	QAR 500,000 (US\$138,000)	2018-2019	Andres Perez- Lopez	Co-I
Sidra Medicine Research	Clinical validation of a Next Generation Sequencing (NGS)-based approach for the diagnosis of central nervous system infections	QAR 500,000 (US\$138,000)	2017-2018	Mohammad Hasan	Co-I
Sidra Medicine Research	The Sidra Hospital Microbiome Project	QAR 999,667 (US\$277,500)	2017-2018	Patrick Tang	Co-I
Thailand BIOTEC Project Grant	Molecular Systematics of <i>Phaeoisaria</i> in Freshwater Habitats	CAD\$ 7,500	2008-2009	Somsak Sivichai	Co-I
Croucher Foundation Hong Kong	Molecular Systematics of Aquatic helicosporous Fungi	CAD\$ 86,000	2003-2005	Kin Ming Tsui	PI
Hong Kong Research Grant Council	The Molecular Phylogeny of <i>Dictyosporium</i> spp.	CAD \$15,000	2002-2003	Kevin Hyde	Co-I

### A. Invited Speakers (International and local Conference)

- 2022 "Molecular epidemiology and antifungal resistance of *Candida* pathogens" **Tsui CKM**. Asian Mycological Congress 2022 (Bangkok, Thailand)
- 2022 "*Klebsiella* Genomic Epidemiology Revealed Potential Hospital Transmission and the Presence of Hybrid Resistance and Virulence Plasmid in Qatar" **Tsui CKM**. Workshop on Plasmids as Vehicles of Antimicrobial Resistance Spread. 21-25 Mar 2022. ICTP virtual meeting (Trieste, Italy)

- 2021 "Molecular characterization and epidemiology of multi-drug resistant Enterobacterales in Qatar". **Tsui KM**, Ben Abid F, Omrani A. Qatar Health 2021. Doha, Qatar.
- 2017 "*Fly without wings: genetic structure and adaptation of fungal pathogen and associates with bark beetle outbreak in the western Canada and USA*" **Tsui C**, Ojeda D, Feau N, Dhillon B, Hamelin R. American Phytopathological Society annual meeting, San Antonio, USA
- 2015 "Whole genome sequencing to investigate waterborne outbreaks of giardiasis in British Columbia"
   Tsui CKM, Miller R, Uyaguari-Diaz M, Tang P, Isaac-Renton J, Hsiao W, Prystajecky N. British Columbia Centre for Disease Control (BCCDC) 8th Annual Research Symposium, Vancouver, Canada.
- 2015 "Structural and phylogenetic analysis of laccases from *Fonsecaea*: a bioinformatic approach. Tsui CKM, Feng PY, Xi L, Stielow B, de Hoog S. International Society of Animal and Human Mycology Congress. Melbourne, Australia.
- 2014 "Population genomics of *Ophiostoma montium*, a bark beetle symbionts pathogenic to conifers. Mao JF, Dhillon B, **Tsui CKM**, Hamelin RC. International Mycological Congress 10. Bangkok, Thailand.
- 2013 "Mating Type Locus Evolution and Population Genetics of Fungi associated with beetle outbreak"
   Tsui C. 5th Meeting of the ISHAM Working Groups on Black Yeasts and on Chromoblastomycosis.
   Guangzhou, China.
- 2013 "Sexual Reproduction and the Evolution of Mating Type Locus in Sporothrix Species and related Ophiostomatoid Fungi" Tsui C. First International Meeting on Sporothrix and Sporotrichosis. Rio de Janerio, Brazil
- 2013 "Population Structure of Conifer Pathogens associated with the Mountain Pine Beetles analyzed by Bayesian Methods" Tsui CKM, 10th International Congress of Plant Pathology, Beijing, China
- 2012 *"Genomics for the Detection of Fungal Pathogens"* **Tsui CKM**, Hamelin RC, and the TAIGA Team. Canadian Phytopathological Society – BC Regional Meeting, Vancouver, Canada
- 2012 "Characterization of the Mating Type (MAT) Locus in the Ophiostomatoid Fungi Revealed the Footprint of Unequal Recombination" **Tsui CKM**, Hamelin RC. First Joint Congress on Evolutionary Biology, Ottawa, Canada
- 2011 *"The Evolution of 'Sex' in Fungi Associated with Mountain Pine Beetles"* **Tsui, C**. Forest Sciences Departmental Seminar. UBC, Vancouver, Canada
- 2010 "Population genetics of Grosmannia clavigera, a Pine Pathogen Associated with the Mountain Pine Beetle in Canada" Tsui CKM, Roe A, Rice A, Alamouti S, Sperling F, Cooke J, Bohlmann J, Breuil C, Hamelin RC. International Mycological Congress, Edinburgh, UK.
- 2010 "Genetic Structure of Grosmannia clavigera, a Fungal Pathogen Associated with the Mountain Pine Beetles" **Tsui C**. Departmental Seminar. UBC, Vancouver, Canada.
- 2009 "Population Genetics of Grosmannia clavigera, a Pine Pathogen Associated with Mountain Pine Beetle" Tsui CKM, Hamelin RC. Asian Mycological Congress, Taichung, Taiwan.
- 2009 "Padlock Probes and Hyperbranched Rolling Circle Amplification for Rapid Differentiation of Pathogenic Fungi in Forest Pest Epidemics" **Tsui** C. Asian Mycological Congress, Taichung, Taiwan.
- 2008 *"Cryptococcus gattii environmental findings in BC"* Bartlett K, Ge C, **Tsui CKM**. *Cryptococcus gattii* in BC and the Pacific Northwestern US Annual Meeting, Vancouver, Canada.

- 2008 "Population Genetics of Grosmannia clavigera, a Pine Pathogen Associated with the Mountain Pine Beetle" Tsui CKM, Alamouti S, Bohlmann J, Bernier L, Breuil C, Hamelin RC. Canadian Phytopathological Society-Pacific Division Annual Meeting, Victoria, Canada.
- 2008 "Population Genetics of Grosmannia clavigera, a Pine Pathogen with Mountain Pine Beetle" **Tsui** CKM, Alamouti S, Bohlmann J, Breuil C, Hamelin RC. The Tria Project – the Inaugural International Scientific Workshop, Vancouver, Canada.
- 2006 "Evolution and Phylogenies of Labyrinthulomycetes Inferred from Protein Coding Genes" **Tsui CK**M, Marshall W, Yokoyama R, Honda D, Craven KL, Lippmeier JC, Berbee ML. International Mycological Congress, Cairns, Australia.
- 2005 *"Evolution and Phylogenetic Relationships of Helicosporous Hyphomycetes"* **Tsui CKM**, Berbee ML. Annual Meeting of Mycological Society of America, Hilo, Hawaii, USA.
- 2004 "Molecular Systematics of Helicosporous Hyphomycetes" **Tsui CKM**, Berbee ML. The IV Asia-Pacific Mycological Congress, Chiang Mai, Thailand.
- 1999 "Ecological and Taxonomic Diversity of Lignicolous Fungi in Streams in Hong Kong" Tsui CKM, Hyde KD, Hodgkiss IJ. 7th International Marine and Freshwater Mycology Symposium, City University of Hong Kong, Hong Kong.
- 1998 "Ecological Studies on Tropical Lignicolous Freshwater Fungi" Tsui CKM, Hyde KD, Ho WH, Wong SW, Yuen TK, Hodgkiss IJ. Annual Meeting of Mycological Society of America, Puerto Rico, USA.
- B. Other Presentations (Presenting Author is Underlined).
  - 1. <u>Chibwe K</u>, Sundararaju S, Zhang L, **Tsui C**, Tang P, Ling F. Microbial community composition and variation in a tertiary care pediatric hospital. Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference, June 28-30, 2022, St Louis, USA.
  - 2. <u>Nguyen M</u>, **Tsui C**, Tang P, Perez-Lopez A, Hsiao W. Global contextualization and comparative genomics of extended spectrum beta-lactamase producing *E. coli*. RECOMB-CG 2022. May 19-21, 2022, La Jolla, USA.
  - 3. **Tsui CKM**, Ben Abid F, McElheny C, Almuslamani M, Al Khal A, Omrani A, <u>Doi Y</u>. Molecular epidemiology of multidrug-resistant *Klebsiella pneumoniae* and *K. quasipneumoniae* in Qatar. ID Week Sep 2021.
  - Pena-Diaz, S, Rens C, Henok S, Shapira T, Chao JD, Pfeifer T, Tsui CKM, Sorrentino F, Narula G, Lopez A, Bojang A, Zheng X, Richter A, <u>Av-Gay Y</u>. Host Targeted Drug therapy in TB. JPIAMR Therapeutics workshop – Feeding the antimicrobial pipeline. Session 5: Non-traditional antimicrobials. April 20-22, 2021 (online)
  - Salah H, Sundararaju S, Dalil L, Salameh S, Al-Wali W, Tang P, Ben Abid F, <u>Tsui CKM</u>. Molecular epidemiology of *Candida auris* in Qatar using whole genome sequence data. *Candida* and Candidiasis 2021 online meeting. 21-26 March 2021.
  - <u>Tsui CKM</u>, Ben Abid F, Omrani A, McElheny CL, Almuslamani M, Al Khai A, Doi Y. Molecular Characterization and epidemiology of Multi-drug resistant Enterobacterales in Qatar. Antimicrobial Resistance – Genomes, Big Data and Emerging Technologies (Virtual Conference), 4-6 Nov 2020.
  - 7. <u>Perez Lopez A,</u> Dalil L, Al Mana H, Sundararaju S, **Tsui CKM**, Suleiman M, Hasan MR, Roscoe D, Tang P. Evaluation of eazyplex SuperBug CRE to detect extended-spectrum-beta-lactamases directly

from positive pediatric blood culture bottles. European Society for Paediatric Infectious Diseases Virtual Meeting, 26-29 Oct 2020.

- 8. <u>Perez Lopez A,</u> Sundararaju S, **Tsui CKM**, Al Mana H, Suleiman M, Roscoe D, Hasan MR, Tang P. Molecular characterization of carbapenemase-producing Enterobacteriaceae in the pediatric population in Qatar. European Society for Paediatric Infectious Diseases Virtual Meeting, 26-29 Oct 2020.
- <u>Tsui, CKM</u>, Sorrentino F, Narula G, Bojang A, Lopez A, Zheng X, Remuinan-Blanco MJ and Av-Gay Y. Intracellular drug targets in *Mycobacterium tuberculosis* revealed by a chemogenetic approach. 30<sup>th</sup> ECCMID 2020 abstract book. (Meeting cancelled due to COVID-19).
- <u>Hasan MR</u>, Sundararaju S, Tang P, **Tsui CKM**, Perez-Lopez A, Janahi M, Tan R, Tilley P. Validation of a metagenomics-based approach for pathogen detection in cerebrospinal fluid for the diagnosis of central nervous system infections. International Conference on Clinical Metagenomics, 17-18 Oct 2019, Geneva, Switzerland.
- 11. Ben Abid F., Doi Y, Omrani AS, Deshmukh A, McElheny CL, Bachman WC, Louise FE, **Tsui KM**, Almaslamani M, Al Khal A, Al Bishawi AAA, Mushtaq K, Mohamed Hamed MM, Butt AA. Clinical and Molecular Characteristics of Carbapenem-resistant Enterobacteriaceae in Qatar: A retrospective and prospective observational study. ID week, 2-6 Oct, 2019, Washington, DC, USA.
- <u>Tsui CKM</u>, Sundararaju S, Al Mana H, Hasan MR, Tang P, Perez Lopez A. Genomic epidemiology of extended-spectrum beta-lactamase producing *Klebsiella pneumoniae* and *Escherichia coli* isolated from children in Qatar. The 12th International Meeting on Microbial Epidemiological Markers (IMMEM XII), 18-21 Sep 2019, Dubrovnik, Croatia.
- 13. <u>Tsui CKM</u>, Sundararaju S, Al Mana H, Hasan MR, Thomas E, Tang P, Perez Lopez A. Genomic characterization of extended-spectrum beta-lactamase producing *Escherichia coli* and *Klebsiella pneumoniae* isolated from children. 6<sup>th</sup> Applied Bioinformatics and Public Health Microbiology Conference, 5-7 Jun 2019, Wellcome Sanger Institute, Huxton, UK.
- Perez Lopez A, Sundararaju S, Tsui CKM, Al Mana H, Hasan MR, Suleiman M, Thomas E, Dobson S, Roscoe D, Tan Rusang, Tang P. Molecular characterization of extended-spectrum beta-lactamase in *Escherichia coli* and *Klebsiella pneumoniae* in the pediatric populations in Qatar. ESPID Annual Meeting, 6-11 May 2019, Ljubljana, Slovenia.
- 15. <u>Tsui CKM</u>, Sundararaju S, Al Mana H, Hasan MR, Thomas E, Tang P, Perez Lopez A. Genomic characterization of extended-spectrum beta-lactamase producing *Escherichia coli* and *Klebsiella pneumoniae* isolated from children in Sidra Medicine. ECCMID 2019, 13-16 Apr 2019, Amsterdam, The Netherlands.
- Tsui CKM, Sundararaju S, Al Mana H, Hasan MR, Thomas E, Tang P, Perez Lopez A. Genomic characterization of extended-spectrum beta-lactamase producing *Escherichia coli* and *Klebsiella pneumoniae* isolated from children in Sidra Medicine. Functional Genomics Symposium, 8-10 Dec 2018, Qatar.
- Sundararaju S, Tsui CKM, Rawat A, Perez Lopez A, Tang P, Thomas E, Hasan MR. Metagenomic Next Generation Sequencing of Cerebrospinal Fluid for the diagnosis of Central Nervous System Infections. Functional Genomics Symposium, 8-10 Dec 2018, Qatar.
- <u>Tsui CKM</u>, Miller R, Uyaguari-Diaz M, Tang P, Chauve C, Hsiao W, Isaac-Renton J, Prystajecky N Whole Genomic Sequencing of *Giardia* isolates reveal zoonotic transmission in giardiasis outbreaks. ASMNGS Conference. 23-26 Sep 2018, Sheraton Tysons Corner, VA, USA

- Falardeau J, Tsui C, Wang S. Phylogenetic characterization of *Listeria monocytogenes* isolates collected from surface waters used for irrigation in the Lower Mainland of British Columbia, Canada. Annual Meeting of International Association for Food Protection. Salt Lake City, 2018.
- 20. <u>Xu W</u>, Liang G, Li D, **Tsui C**, Liu W. Implication of mating type genes on virulence of *Mucor irregularis*. International Union of Microbiological Societies meeting, Jul 2017, Singapore
- 21. <u>Narula G</u>, **Tsui CKM**, Av-Gay Y. Target identification of anti-tubercular compounds effective against intracellular *Mtb*. Pac-TB Meeting. Mar 2017, San Francisco, USA.
- 22. <u>Teixeira MM</u>, Souza RC, Barker BM, **Tsui KM**, Stielow B, Gonzaga LP, Gorbushina A, Vicente VA, Almeida SR, Vasconcelos ATR, Felipe MSS, Cuomo C, de Hoog GS. Evolution of MAT locus in black fungi. International Society of Animal and Human Mycology Congress. May 2015, Melbourne, Australia.
- 23. <u>Tsui C</u>, Hsiao W, Crisan A, Ho J, Tang P, Isaac-Renton J, Prystajecky N. Whole genome sequencing to understand waterborne outbreaks of giardiasis in British Columbia. British Columbia Centre for Disease Control (BCCDC) 7th Annual Research Symposium in Vancouver. Nov 2014, Vancouver, Canada.
- 24. <u>Lee MK</u>, **Tsui C**, McCabe M, Eisler D, McNabb A, Hsiao W, Morshed M. Exploring the NGS analysis pipeline for Lyme disease causing agent. British Columbia Centre for Disease Control (BCCDC) 7th Annual Research Symposium in Vancouver, Nov, 2014, British Columbia, Canada.
- 25. **Tsui** C, Hsiao W, Crisan A, Ho J, Tang P, Isaac-Renton J, <u>Prystajecky N</u>. Investigation of Waterborne Outbreaks of Giardiasis by Whole Genome Sequencing. 5th International *Giardia* and *Cryptosporidium* Conference, IGCC-5. May 2014, Sweden.
- 26. <u>Tanguay P</u>, Bergeron M-J, **Tsui CKM**, Brar S, Lamarche J, Hamelin RC. The origin of a new race of *Cronartium ribicola*, virulent on previously immune blackcurrant cultivars, and rapidly spreading in Eastern North America. American Phytopathological Society Annual Meeting. Aug 2013, Texas, USA.
- 27. <u>Tanguay P</u>, Bergeron M-J, **Tsui CKM**, Hamelin RC. Molecular evidence for the origin of a new virulent race of *Cronartium ribicola* rapidly spreading in Eastern North America Forest pest management forum. Dec 2012, Ottawa, Canada.
- 28. <u>Herath P</u>, **Tsui CKM**, Dhillon B, Bilodeau G, Beauseigle S, Lai B, Fung J, Liu C, Feau N, Kope H, Zeglen S, Hamelin RC. Incidence of *Septoria musiva* and *Septoria populicola* on *Populus trichocarpa* provenances. Canadian Phytopathological Society – BC regional meeting. 25-26 Oct 2012. Vancouver, Canada.
- 29. <u>**Tsui CKM**</u>, Hamelin RC. Evolution of mating type genes in Ophiostomatales (Ascomycetes) revealed the presence of unequal recombination. European Conference of Fungal Genetics, Mar 2012. Marburg, Germany.
- 30. <u>Brar S</u>, **Tsui C**, Hamelin RC. Landscape Genetics of *Cronartium ribicola*. 59<sup>th</sup> Annual Western International Forest Disease Work Conference, Oct 2011. Leavenworth, Washington State, USA.
- 31. <u>Farfan L</u>, **Tsui CKM**, El-Kassaby YA, Hamelin RC. Population genetic analysis of *Leptographium longiclavatum*, a fungal pathogen associated with mountain pine beetles. American Phytopathological Society Annual Meeting 2011. Aug 2011. Honolulu, Hawaii, USA.
- 32. <u>Baschien C</u>, **Tsui CKM**, Gulis, V, Marvanová L. The molecular phylogeny of aquatic hyphomycetes with affinity to the Leotiomycetes. 6th International Meeting on Plant Litter Processing in Freshwaters. 26-30, July 2011. Cracow, Poland.

- 33. <u>Tsui CKM</u>, Farfan L, El-Kassaby YA, Hamelin RC. Contrasting population genetics of *Grosmannia clavigera* and *Leptographium longiclavatum*, pine pathogens associated with mountain pine beetle. Emerging fungal diseases of animals and plants. 25-29 Jun.2011. Roscoff, France.
- 34. <u>Tsui CKM</u>, Wang B, Kaocharoen S, Meyer W. Padlock probe and rolling circle amplification for rapid detection and separation of *Cryptococcus neoformans/ gattii* species complex. The Challenge of Low Prevalence Infectious Diseases: Towards an International Research Agenda. 14-16 Apr 2011, Vancouver.
- 35. <u>Brar S</u>, **Tsui C**, Hamelin RC. Population Genetics of *Cronartium ribicola*. 58th annual Western International Forest Disease Work Conference. Oct 2010. Valemount, British Columbia, Canada.
- 36. <u>**Tsui CKM**</u>, Hamelin RC. Population genetics of *Grosmannia clavigera*, a pine pathogen associated with mountain pine beetle. International Mycological congress. Aug.2010, Edinburgh, Scotland.
- 37. <u>**Tsui CKM**</u>. Padlock probes and hyperbranched rolling circle amplification for rapid identification of pathogenic associated with mountain pine beetle. Forest Sciences Research day. 8 Mar 2010. UBC.
- 38. <u>Hamelin RC</u>, Feau N, **Tsui CKM**, Kope H, Zegle S. DNA barcoding of *Septoria* species from leaf spots and stem cankers of *Poplar* in British Columbia, Canada to assess risk of spread. Annual meeting of American Phytopathological Society. Aug 2009. Portland, USA
- 39. <u>Tsui CKM</u>, Wang B, Khadempour L, Bohlmann J, Breuil C, Hamelin RC. Padlock probes and hyperbranched rolling circle amplification for rapid identification of pathogenic associated with mountain pine beetle. Annual meeting of American Society for Microbiology. 17-21 May 2009. Philadelphia, USA.
- 40. Feau N, Darlu J, Brar S, <u>Tsui CKM</u>, Kope H, Zegle S, Hamelin RC. DNA barcoding of *Septoria* species from leaf spots and stem cankers of *Poplar* in British Columbia, Canada to assess risk of spread. Fungal Genetic Conference 25. 17-21 Mar 2009. Asilomar, USA.
- 41. <u>DiGuistini S</u>, Alamouti S, Lee S, Khadempour L, **Tsui CKM**, Jones S, Bohlmann J, Hamelin RC, Breuil C. From genes to genomes, *Grosmannia clavigera* the mountain pine beetle-vectored pine pathogen. Canadian Phytopathological Society-Pacific Division Annual Meeting. Nov 2008. Victoria, Canada.
- 42. Massoumi Alamouti S, <u>Tsui CKM</u>, DiGuistini S, Bernier L, Bohlmann J, Breuil C, Hamelin RC. SNPs and microsatelllites for *Grosmannia clavigera*, a pine pathogen associated with the mountain pine beetle. International congress of plant pathology. 23-29 Aug 2008, Torino, Italy.
- 43. <u>DiGuistini S</u>, <u>Alamouti S</u>, Lee S, Khadempour L, **Tsui CKM**, Jones S, Bohlmann J, Hamelin RC, Breuil C. From genes to genomes, *Ophiostoma clavigerum* the mountain pine beetle-vectored pine pathogen. Forest Sciences Research day. Mar 2008. UBC, Canada.
- 44. <u>**Tsui CKM**</u>, Daniel H-M, Meyer W. Evolution and phylogeny of *Candida* spp. inferred from multigene analyses. Fungal Genetic Conference 24. 20-24 Mar 2007, Asilomar, USA.
- 45. <u>Meyer W</u>, Trilles L, Jover-Botella A, **Tsui CKM**, Ngamskulrungroj P, Escandon P, Casteneda E. A global molecular epidemiological survey shows that the Vancouver Island outbreak strain is closely related to Latin American *Cryptococcus gattii* VGII isolates. Fungal Genetics Conference 24. 20-24 Mar 2007, Asilomar, USA.
- 46. <u>Meyer W</u>, Kaocharoen S, Trilles L, Jover-Botella A, Escandon P, Casteneda E, **Tsui CKM**, Hagen F, Boekhout T Highly virulent strains of *Cryptococcus gattii* VGII emerged in Latin America to cause an outbreak on Vancouver Island, Canada. International Conference on Yeast Genetics and Molecular Biology. 1-6 Jul 2007, Melbourne, Australia.

- 47. <u>**Tsui CKM**</u>, Daniel H-M, Meyer W. Evolution and phylogeny of *Candida* spp. inferred from multigene analyses. Annual meeting of the Australian Society for Microbiology. 9-13 Jul 2007, Adelaide, Australia.
- 48. <u>Meyer W</u>, Trilles L, Jover-Botella A, **Tsui CKM**, Ngamskulrungroj P, Escandon P, Casteneda E. A global molecular epidemiological survey shows that the Vancouver Island outbreak strain is closely related to Latin American *Cryptococcus gattii* VGII isolates. International Mycological Congress 8. 15-20 Aug 2006, Cairns, Australia.
- 49. <u>**Tsui CKM**</u>, Sivichai, S, Berbee ML. *Aquaphila* has phylogenetic affinity in Tubeufiaceae inferred from rDNA sequences. International Mycological Congress 8. 15-20 Aug 2006, Cairns, Australia.
- 50. <u>**Tsui CKM**</u>, Meyer W. Using RPB1 and RPB2 to improve the phylogenetic inference among *Candida* spp. International Mycological Congress 8. 15-20 Aug 2006, Cairns, Australia.
- 51. Kong F, <u>Tsui CKM</u>, Sun Y, Huynh M., Halliday C, Zeng X, Maszewska K, Porter G, Sorrell T, Meyer W. Establishment of a quality controlled internal transcribed spacer (ITS) sequence database as basis for routine clinical diagnostics of human fungal pathogens. International Mycological Congress 8. 15-20 Aug 2006, Cairns, Australia.
- 52. <u>**Tsui CKM**</u>, Marshall, W, Yokoyama R, Honda, D, Berbee ML. Multi-gene phylogenies and evolution of Labyrinthulomycetes. 23rd Fungal Genetics Conference. 15-20 Mar 2005, Asilomar, USA.
- 53. <u>Marshall W</u>, **Tsui CKM**, Berbee ML. Diversity of fungal-like protist in the guts of marine invertebrates. 23rd Fungal Genetics Conference. 15-20 Mar 2005, Asilomar, USA.
- 54. <u>**Tsui CKM**</u>, Berbee ML. Molecular systematics of helicosporous hyphomycetes. 2004 Annual meeting of Mycological Society of America. 17-21 July 2004, Asheville, North Carolina, USA.
- 55. <u>**Tsui CKM**</u>, Hyde KD, Hodgkiss IJ. Longitudinal and temporal distribution of freshwater ascomycetes and dematiaceous hyphomycetes in the Lam Tsuen River, Hong Kong. 2001 Annual meeting of Mycological Society of America. 25-29 August 2001, Salt Lake City, Utah, USA.
- 56. Ho WWH, Wong WSW, <u>Tsui CKM</u>, Hyde KD. A new family of freshwater ascomycetes. CBS Symposium. Mycology in 21st Century – Morphology, DNA and the phylogeny and taxonomy of the fungi. 11-12 May 2000, Amsterdam, Netherlands.
- 57. <u>Tsui CKM</u>, Cai L, Hyde KD, Zhang KQ. A preliminary survey of freshwater fungi on submerged wood and Phragmites in freshwater habitats in Yunnan, China. Asian Mycological Congress 2000. 9-13 July 2000, University of Hong Kong, Hong Kong.
- <u>Tsui CKM</u>, Hyde KD, Hodgkiss IJ. The effects of pollution on aquatic fungi. XVI International Botanical Congress. 1-7 August 1999, St. Louis, USA.
- <u>Tsui CKM</u>, Hyde KD, Hodgkiss IJ. Biodiversity and distribution of fungi on submerged wood in streams, in Hong Kong. Asia-Pacific Mycological Conference on Biodiversity and Biotechnology. 6-9 July 1998, Hua Hin, Thailand.

# C. Other

- **JGI Genome project co-investigator** 'Comparative genome sequencing of *Labyrinthulomycetes* species to provide insights into their biosynthetic pathways and role in global carbon cycling' 2009 2012
- D. Conference Participation (Organizer, Speaker)

- **Plenary Speaker** Asian Mycological Congress 2022, 3-5 August 2022, Thailand Science Park, Thailand
- Session Chair, Joint Programming Initiative on Antimicrobial Resistance (JPIAMR) Regional Workshop Asia 2019, Sungkyunkwan University, Suwon, South Korea
- Instructor, China Netherlands International Medical Mycology Course 2019, Suzhou, China
- **Speaker**, ESCMID Postgraduate Technical Workshop. Antifungal Resistance in *Candida* and *Aspergillus*: from clinic to clinical laboratory. 19-21 Sep 2018, Delhi, India
- **Instructor**, International Symposium on Fungal Infection; China Netherlands International Medical Mycology Course 2017, Suzhou, China
- **Invited Speaker**, Symposium on 'Troubled Ecosystems and novel pathogens', American Phytopathological Society. Aug 2017, San Antonio, Texas USA
- **Symposium Organizer**, Symposium on 'Molecular Diagnostics of Fungal Pathogens.' International Mycological Congress 10. Aug 2014, Bangkok, Thailand.
- **Organizer and Speaker**, Symposium on the 'Current Methods in Population Genetics and Evolution', International Congress of Plant Pathology. Aug 2013, Beijing, China.
- **Organizer and Speaker**, Special Interest Group (SIG) meeting on 'Molecular diagnostics of fungi/novel techniques in detection of fungi from environment.' International Mycological Congress 9. Aug 2010, Edinburgh, UK.
- **Invited Speaker**, Symposium on the "Biology of the Stramenopiles." International Mycological Congress 8. Aug 2006, Cairns, Australia.
- **Organizer**, Symposium on the proferred session 'Fungal Phylogeny." International Mycological Congress 8. Aug 2006, Cairns, Australia.
- **Organizer and Speaker**, Symposium on the 'Ecology of Freshwater Fungi'. IV Asia-Pacific Mycological Congress. Nov 2004, Chiang Mai, Thailand.
- Organizer, Asian Mycological Congress, Jun 2000, Hong Kong.

### **TEACHING EXPERIENCE**

A. Courses Taught at UBC

Session	Course Number	Class		Hou	rs Taugh	t
		Size	Lectures	Tutorials	Labs	Other
2011/2012	BIOL323 (Structure and Reproduction of Fungi)	24	14	3	21	12 (field trip, mushroom show)

B. Graduate Students/Research Assistant Supervised

Student Name	Program Type	<b>Department/ Institution</b>	Year		Supervisory
			Start	Finish	Role

Zhang, Zhu	Biomedical Data Science Immersion Program	Nanyang Technological University	2022	now	Supervisor
Chen, Yuzhou	Biomedical Data Science Immersion Program	Nanyang Technological University	2022	now	Supervisor
Shi, Tianqi	LKC Medicine Scholarly Project Student	Faculty of Medicine, Nanyang Technological University	2022 (Aug)	2022 (Sep)	Co-supervisor
Sundararaju, S	Postdoctoral Fellow	Pathology/ Sidra Medicine	2019	2022	Supervisor
Liu, F	Associate Professor	Institute of Microbiology/ Chinese Academy of Science	2020	Now	Co-supervisor
Liang, J	Postdoctoral Fellow	Institute of Microbiology/ Chinese Academy of Science	2020	Now	Co-supervisor
Zhou, X	Graduate Student (PhD)	Institute of Microbiology/ Chinese Academy of Science	2020	Now	Co-supervisor
Gao, M	Graduate Student (PhD)	Institute of Microbiology/ Chinese Academy of Science	2019	Now	Co-supervisor
Huang, J	Graduate Student (PhD)	Clinical Laboratory/ Peking Union Medical College Hospital	2020	2022	Co-supervisor
Huang, C	Graduate Student (Master)	Dermatology and Venereology/ First Affiliated Hospital of Guangxi Medical University	2019	2020	Co-supervisor
Herath, P.	Research Assistant	Forest Sciences, UBC	2010	2013	Co-supervisor
Beauseigle, S.	Research Technician	Forest Sciences, UBC	2009	2013	Co-supervisor
Lai, B.	Research Assistant	Forest Sciences, UBC	2009	2012	Co-supervisor.
Brar, S.	Master Student	Forest Sciences, UBC	2008	2012	Co-supervisor.
Kaocharoen, S.	Exchange student	Westmead hospital, Australia	2006	2007	Co-supervisor
Chan, J.	Work-study student	Department of Ecology & Biodiversity, HKU	1999	2000	Co-supervisor

# C. Continuing Education Activities

- 2012 SciCon Mentor, Undergraduate Research Opportunities, UBC, Canada
- 2003-2005 Journal Club Organizer, Department of Botany, UBC, Canada
- 2002 Teaching Assistant, Microbial Physiology, City University of Hong Kong, Hong Kong
- 1996-1999 Teaching Assistant, University of Hong Kong, Hong Kong
- Attendance in Other Professional Training

2022 Singapore Antimicrobial Stewardship Training Course, Singapore
2021 PHA4GE, JPIAMR and CLIMB-BIG-DATA AMR Hackathon (7<sup>th</sup> Hackathon in Microbial Genomics Virtual meeting), 11-13 Oct 2021, UK
2021 Evolutionary Medicine Summer Institute. May24-28, Triangle Center for Evolutionary Medicine (TriCEM), Duke University, USA.

- 2020 Metabarcoding of microbial communities (Virtual), Physalia courses & training, Berlin, Germany
- 2020 Comparative Genomics (Virtual), Physalia courses & training, Berlin, Germany
- 2019 Food Safety Bioinformatics Hackathon, Quadram Institute of Bioscience, Norwich, UK
- 2017 Infectious Disease Genomic Epidemiology, Canadian Bioinformatics Workshop, Vancouver, Canada
- 2016 Analysis of Metagenomic data, Canadian Bioinformatics Workshop, Vancouver, Canada
- 2013 BCCDC PHL ASDT Bioinformatics Workshop, Vancouver, Canada
- 2012 Workshop on Software DAMBE. University of Ottawa, Ottawa, Canada
- 2011 Applied Phylogenetics for the Health Sciences. Simon Fraser University, Burnaby, Canada
- 2011 Business management in Biotechnology. Student Biotechnology Network (SBN), Vancouver, Canada

2011 Montreal Spring School of Population Genomics and Genetic Epidemiology. Universitè Montreal, Canada.

- 2011 Pichia pastoris fermentation workshop. UBC, Vancouver, Canada
- 2010 Exploratory Data Analysis and Statistics using R, Canadian Bioinformatics Workshop, Vancouver, Canada
- 2009 Microbial Genome Annotation, American Society of Microbiology, Philadelphia, USA

2008 3rd International *Phytophthora/Pythium* and Related Genera Workshop. August 23-24, Turin, Italy.

- 2008 Project Management, Research Team Leadership and Management, Vancouver, Canada
- 2007 Application of Real-Time PCR for Environmental Testing, Adelaide, Australia
- 2007 Commercialization Retreat for Clinical Scientists, Merck Sharp & Dohme, Brisbane, Australia
- 2003 BIOL545. Phylogenetic workshop. UBC, Vancouver, Canada
- 2000 ISO 14001 Environmental Management System Implementation Course, Hong Kong Productivity Council, Hong Kong

#### D. Invited Guest Lectures/ Departmental Seminar

- 2021 "Molecular Epidemiology of Carbapenemase Producing Enterobacterales (CPE) in Qatar" 24 Jun, Infectious Disease Combined Activity, Hamad Medical Corporation, Doha, Qatar.
- 2021 "Genomics for epidemiology, antimicrobial resistance and novel drug targets in microbial pathogens" 14 May, Virtual seminar, Laboratory of Bacterial pathogenesis and antimicrobial resistance. NIAID, USA.
- 2021 "On the emergence of multidrug resistant pathogen Candida auris in Qatar" 11 Mar, Sidra Research Series. Sidra Medicine, Doha, Qatar.
- 2020 "Population structure and adaptation of fungi associated with mountain pine beetles in North America" 10 Nov, Beijing Forestry University, Beijing, China.
- 2020 "Fungi in Tree pathology: the population structure of Fungi associated with mountain pine beetles" Oct, Department of Environmental Science, Qatar University, Doha, Qatar.
- 2020 "On the emergence of Candida pathogens" 8 Mar, Weill Cornell Medicine- Qatar Grand Rounds, Doha, Qatar.
- 2019 "Application of Genomics in Microbial Pathogen Research" 9 Dec, Department of Microbiology, Chinese Academy of Science, Beijing, China.

- 2019 "Application of genomics in public health microbiology research" 6 Dec, Department of Biological Sciences, Seoul National University, Seoul, South Korea.
- 2019 "Whole genome sequencing for food borne pathogen investigation" Department of Food Science, University of British Columbia, Vancouver, Canada.
- 2019 "Tree pathology: case study on the population structure of fungi associated with mountain pine beetles" Oct, Department of Environmental Science, Qatar University, Doha, Qatar.
- 2019 "Application of Genomics in Clinical Microbiology and Pathogen Research" May, Guiyang Public Health Center, Guiyang, China
- 2019 "Genomics approach to study antimicrobial resistance and novel drug targets in bacterial pathogens" April, Department of Biological Sciences, Carnegie Mellon University in Qatar, Doha, Qatar
- 2019 "Genomics analysis and spread of emerging pathogens to plants and human" Mar, Department of Biological and Environmental Sciences, Qatar University, Doha, Qatar
- 2019 "*The Application of Genomics in Clinical Microbiology and Pathogen Research*" February, Pathology Grand Rounds; Research Seminar Series. Sidra Medicine, Doha, Qatar
- 2018 "Genetic structure and adaptation of fungi associated with mountain pine beetle outbreaks in Canada and USA". October, Department of Microbiology, Beijing Forestry University, Beijing; Institute of Microbiology, Chinese Academy of Science, Beijing, China
- 2017 "Genomic epidemiology of giardiasis in British Columbia, Canada" Department of Public Health, Faculty of Medicine, Chinese University of Hong Kong, China
- 2016 "Genomic Analysis as a tool for understanding Microbial Pathogen Dynamics and Transmission". Department of Dermatology, Sun Yat-sen Hospital, Guangzhou, China
- 2015 "Population Dynamics and Sexual Reproduction of microbial pathogens in Canada". Department of Dermatology, Chinese Academy of Medical Science, Nanjing, China
- 2015 "*Evolution and population dynamics of fungal pathogens*". Shanghai Key Laboratory of Molecular Medical Mycology, Institute of Dermatology, Shanghai Changzheng Hospital, Shanghai, China
- 2014 "New Tools in Population Genetics: Assess Disease Outbreaks from Trees to Humans" Department of Life Science, Tunghai University, Taichung, Taiwan.
- 2014 "Population Dynamics and evolution of fungal pathogens associated with bark beetles in Canada". Department of Plant Pathology, National Chung Hsing University, Taichung, Taiwan.
- 2013 "Population Genetics: Assess Disease Outbreaks from Trees to Humans" Biology Department Seminar. Trinity Western University, Langley, BC, Canada.
- 2013 "Genome and Population Genetics of the Mountain Pine Beetle-Fungal Symbiont Grosmannia clavigera. Laboratório de Biologia Molecular, Universidade de Brasília. Brasilia, Brazil.
- 2013 "Population genetics and mating type gene evolution of fungi associated with the mountain pine beetle" Seminar. Institute of Microbiology, Chinese Academy of Science, Beijing, China.
- 2013 *"Population Genetics of Conifer Pathogens Vectored by the Bark Beetles"* Department Seminar. Department of Plant and Environmental Protection Services, University of Hawaii in Manoa, USA.
- 2012 *"Evolution of Mating Type Genes in Grosmannia and Related Species"* Invited Seminar. University of Guelph, Canada.
- 2012 "Population Genetics of Fungal Pathogens Associated with Mountain Pine Beetles in Canada" Invited Seminar. Julius Kuehn Institute (JKI) - Federal Research Centre for Cultivated Plants. Braunschweig, Germany.

2012 "Population Structure and Mating-Type Gene Evolution of Grosmannia clavigera (Ophiostomatales), a Conifer Pathogen Associated with the Mountain Pine Beetle" Invited Seminar.

Biodiversity and Conservation Biology, Swiss Federal Research Institute WSL, Switzerland.

- 2011 "Molecular Diagnostics and Population Biology of Fungal Pathogens Associated with Bark Beetles" Invited seminar. Food and Environment Research Agency, York, UK.
- 2011 "Population Genetics of Fungal Pathogens Associated with Mountain Pine Beetles in Canada" Invited Seminar. Agriculture and Agri-food Canada, Ottawa, Canada.
- 2011 "Population Genetics of Fungal Pathogens Associated with Mountain Pine Beetles in Canada" Invited Seminar. Department of Plant Pathology and Microbiology, National Taiwan University, Taipei, Taiwan.
- 2010 "Grosmannia clavigera Population Structure and Migration Pattern as Affected by Its Vector Mountain Pine Beetle Movement" Seminar Series. CBS Fungal Biodiversity Centre, Utrecht, Netherlands.
- 2010 "Grosmannia clavigera Population Structure and Migration Pattern as Affected by Its Vector Mountain Pine Beetle Movement" Departmental Seminar. Départment Ecologie, Systématique & Evolution. Université Paris-Sud XI. Paris, France.
- 2009 "*Population Genetics of Mountain Pine Beetle Pathogens*" Departmental Seminar. Department of Plant Biology and Pathology, Rutgers University, USA.
- 2009 "Rapid Detection and Genotyping of Microbial Pathogens by a Novel Technology: the Use of Circular Probes and Rolling Circle Amplification"

Department seminar. Department of Biology and Chemistry, City University of Hong Kong, HK.

- 2008 *"Population Structure of Grosmannia clavigera"* Invited Seminar. Unité de Microbiologie et Unité de Phytopathologie, Université Catholique de Louvain, Belgium.
- 2003 "Production of Fatty acids by Thraustochytrids in Hong Kong" Department of Biology, Konan University, Kobe, Japan.
- 2002 Research Center for Pathogenic Fungi and Microbial Toxicoses, Chiba University, Japan.
- 1999 Key Laboratory of Microbial Fermentation, Yunnan University, Kunming, China.

2022 (Aug)	Biomedical Data Immersion Program	Microbial Genomics 101	1 lecture
2021 (Sep)	Sidra Microbiology lecture series	(q)PCR and Sequencing: from theory to practice	1 lecture
2020 (Dec)	Sidra Microbiology lecture series	Alphabets of new technologies to enhance Microbiology Diagnostics: WGS, ITS, 16S	2 lectures
2020 (Oct)	Qatar University – Graduate Seminar in Environmental Science	Fungi in Tree Pathology	1 lecture
2019 (Oct)	FOOD 523 (Seminar) "Advances in Food Microbiology" (UBC)	Whole genome sequencing for bacterial pathogen investigation	1 lecture
2019 (Oct)	Qatar University – Graduate Seminar in Environmental Science	Fungal population genetics	1 lecture
2019 (Oct)	Sidra Microbiology lecture series	The rise of Candida auris	2 lectures
2019 (April)	Sidra Microbiology lecture series	Introduction to Mycology	2 lectures

E. Other/ Guest Lectures

2013	BCPHMRL ASDT Bioinformatics	Phylogenetic Analysis	1 lecture
	Training		
2011/2012	FRST449/505 (UBC)	Advances in Forest Disease Management	1 lecture
2009/2010	FRST449/505 (UBC)	Advances in Forest Disease Management	2 lectures
2007	INIM5013 (Univ Sydney)	Clinical Mycology and Parasitology	2 lectures
2003	BCH4018 (CityU HK)	Microbial Physiology	1 lecture
1999	28205 (HKU)	Fungal Diversity	1 lecture

## SERVICE TO THE UNIVERSITY

A. Memberships on committees

2020	Abstract Reviewer, ASM Microbe 2020, USA
2019	Abstract Reviewer, ASM Microbe 2019, USA
2010	Abstract and Poster Judge 3rd Annual Rising Stars of Research - National Undergraduate
	Research Poster Competition. Faculty of Graduate Studies, UBC, Canada.

### B. Other service

2011-2013 **Postdoctoral/Research Associate Representative** Departmental Meeting, Forest and Conservation Sciences, UBC

# COMMUNITY SERVICE AND SOCIETY IMPACT

A. Memberships on scholarly societies, including offices held and dates

2011-2017	Mycological Society of America
2012-2016	Committee Member in Environmental Health and Medical Mycology

### B. Memberships on other societies, including offices held and dates

2018-present	European Society of Clinical Microbiology and Infectious Diseases	
	Society of Molecular Biology and Evolution	
2009-present	International Society of Animal and Human Mycology	
2008-present	American Society for Microbiology	
2015-2018	Canadian Association for Clinical Microbiology and Infectious Diseases	
2007-2019	Australian Society for Microbiology	

C. Editorships

2021-present	Associate Editor. Molecular Ecology, Molecular Ecology Resources
2020-present	Recommender/Managing Director. Peer Community In Registered Reports
2020-present	Associate Editor. Fungal Genetics and Biology, Journal of Fungi, Frontiers in
	Fungal Biology
2018-presnt	Associate Editor. Ecology and Evolution, PLoS One

	<b>Review Editor.</b> Frontiers in Microbiology	
2014-present	Associate Editor. Fungal Biology and Biotechnology	
2004-present	Associate Editor. Fungal Diversity	

### D. Reviewer

Year	Funding Agency	Proposal
2015	Czech Science Foundation	Sequence-based phylogeny of Glomeromycota: from virtual taxa to a new species concept and global ecological patterns of arbuscular mycorrhizal fungi
2013	National Research Foundation, South Africa	Comparative genomics of Ceratocystis

Year	Journals		
1999-	Acta Protozoologica, Antonie van Leeuwenhoek, Biological Journal of the Linnean Society,		
current	Botanica Marina, Canadian Journal of Microbiology, Cryptogamie Mycologie, Diseases of		
	Aquatic Organisms, Environmental Microbiology Report, Experimental Parasitology, Frontiers		
	in Oncology, Frontiers Cellular and Infection Microbiology, Frontiers in Microbiology, Fungal		
	Biology, Fungal Diversity, Fungal Genetics and Biology, Journal of Medical Microbiology,		
	Journal of Water and Health, Microbial Pathogenesis, Microbial Genomics, Microbiology		
	Spectrum, Molecular Ecology, Molecular Ecology Resources, Molecular Plant Pathology,		
	Mycologia, Mycological Progress, Mycosphere, Mycotaxon, New Phytologist, PeerJ,		
	Phytopathology, Plant Pathology, PLoS ONE, Protists, Studies in Mycology, Sydowia, Scientific		
	Data, Trees, Virulence, Mycoses, Journal of Fungi		

### E. External examiner

Name	Degree	Program	University	Year
MATLHO,	Master of Science	Sexually Transmitted Infections	University of	2009
K.	in Medicine	Research Centre, Westmead	Sydney	
		Hospital, Australia.		

# F. Consultant

2005 *"Effects of indoor mould exposure on the health of aboriginal people in British Columbia*", School of Occupational and Environmental Hygiene, UBC, Canada.

# G. Other service to the community

2019	Poster Judge Annual Meeting of the Minds, Carnegie Mellon University - Qatar, Doha,		
	Qatar		
2016-	Awards and Nominations Committee Member, CACMID (Canadian Association for		
2017	Clinical Microbiology and Infectious Diseases)		
2012	Judge Canadian Society of Ecology and Evolution Student Presentation Award.		
	Evolution Meeting, Ottawa, Canada.		

2012	Poster Judge Evolution meeting. Ottawa, Canada.	
2012	Poster Judge AAAS Annual Meeting. Vancouver, Canada.	
2011	Poster Judge Greater Vancouver Regional Science Fair. Vancouver, Canada.	
2009	Judge Best Student Presentation Award, Asian Mycological Congress 2009, Taichung,	
	Taiwan.	
2006	Scientific Contributor Tree of Life (NSF) <a href="http://tolweb.org/Tubeufiaceae/">http://tolweb.org/Tubeufiaceae/</a>	

# AWARDS AND HONORS

Awards for Scholarship

Name	Organization	Amount	Year
President's International Fellowship	Chinese Academy of	USD \$6000	2019-2020
Initiative Visiting Scientist Fellowship	Science (CAS)		
(Genomics of Colletotrichum spp.)			
Postdoctoral Fellowship	Croucher Foundation	CAD \$86,000	2003-2005
	Hong Kong		

# Other Awards

Name	Organization	Amount	Year
FEMS Congress	World Microbe Forum 20-24 Jun 21 (ASM	US\$400	2021
Attendance Grant	Microbe 2021 and FEMS2021)		
Travel bursaries	Food Safety Bioinformatics Hackathon,	UK£ 500	2019
	Quadram Institute, Norwich, UK		
Travel bursaries	Center for Emerging & Neglected Diseases	US\$ 300	2017
	(CEND), UC Berkeley for PacTB Retreat		
Travel Award	British Society of Plant Pathology	UK£ 750	2012
Travel Award	Montreal Population Genomics Workshop	CAN\$ 500	2011
Travel Award	Deep-Hypha Project (Annual Meeting of	US\$ 500	2005
	Mycological Society of America)		
Travel Award	Deep-Hypha Workshop Meeting	US\$ 500	2005
Mentor Student	Mycological Society of America	US\$ 500	1999
Travel Award			

### **Publications List**

### I. <u>REFEREED PUBLICATIONS</u>

*Journals* (\*: corresponding author)

- 1. Zhou X, Wang J, Liu F, Bai Y, Liang J, Zhao P, **Tsui CKM**, Cai L (2022) Cross-kingdom synthetic microbiota supports tomato suppression of *Fusarium* wilt disease. Nature Communications
- Tsui CKM, Abid FB, McElheny CL, Almuslamani M, Omrani AS, Doi Y. (2022) Genomic epidemiology revealed the emergence and worldwide dissemination of ST383 carbapenem-resistant hypervirulent *Klebsiella pneumoniae* and hospital acquired infections of ST196 *Klebsiella quasipneumoniae* in Qatar. biorxiv doi: https://doi.org/10.1101/2022.06.02.494628
- Liang J, Li Y, Dodds PN, Figueroa M, Sperschneider J, Han S, Tsui CKM, Zhang K, Li L, Ma Z, Cai L. (2022) The largest haplotype-phased and chromosome-scale genome assembly of fungal pathogen, *Puccinia polysora*, by HiFi reads and Hi-C data. Molecular Ecology Resources
- 4. **Tsui CK**, Sorrentino F, Narula G, Losana AM, del Rio RG, Herran EP, Lopez A, Bojang A, Zheng X, Romuinan-Blanco MJ, Av-Gay Y. (2022) Hit compounds and associated targets in intracellular *Mycobacterium tuberculosis*. Molecules 27, 4446. https://doi.org/10.3390/molecules27144446
- Huang JJ, Chen X, Tsui CKM, Pang C, Hu Z, Shi Y, Wang W, Cui L, Xiao Y, Gong J, Fan X, Li Y, Zhang G, Xiao M, Xu Y (2022) Persistence of an epidemic cluster of *Rhodotorula mucilaginosa* in multiple geographic regions in China and the emergence of an echinocandins-azoles-5-flucytosine resistant clone. Emerging Microbes and Infection 11(1):1079-1089. doi: 10.1080/22221751.2022.2059402.
- 6. Hong N, Lei Y, Chen H, Chen X, **Tsui KM**, Hu D, Liao W, Yan L, Zhang H, Zhao R, Wu G, Yu N, Deng S. (2022) Genotyping and drug resistance profile of clinical isolates of *Candida albicans* from vulvovaginal candidiasis in the eastern China. Mycopathologia 10.1007/s11046-022-00616-x
- 7. Wang R, **Tsui CKM**, You C (2022) Cryptic species diversity and phylogenetic relationship in the rust genus *Chrysomyxa* from China. Journal of Fungi 8(1):83. doi: 10.3390/jof8010083
- Sahel AB, Shurab N, Sundararaju S, Hasan MR, Tsui KM, Suleiman M, Tang P, Perez-Lopez A. (2021) First report of NDM-1-producing *Pseudomonas aeruginosa* in the Arabian Peninsula. Journal of Global Antimicrobial Resistance S2213-7165(21)00278-2 doi: 10.1016/j.jgar.2021.12.007.
- 9. Liang J, Pecoraro L, Cai L, Yuan Z, Zhao P, **Tsui CKM**, Zhang Z (2021) Phylogenetic relationships, speciation, and origin of *Armillaria* in Northern Hemisphere: a lesson based on rRNA and elongation factor 1-alpha. Journal of Fungi 7, https://doi.org/10.3390/jof7121088
- Perez-Lopez A, Sundararaju S, Tsui KM, Al-Mana H, Hasan MR, Suleiman M, Iman O, Roscoe D, Tang P. (2021) Fecal carriage and molecular characterization of carbapenemase-producing Enterobacterales among the pediatric population in Qatar. Microbiology Spectrum https://doi.org/10.1128/Spectrum.01122-21
- 11. Sundararaju S, Salah H, Ibrahim EB, Ben Abid F, Perez-Lopez A, **Tsui CKM**. (2021) Draft genome sequence of *Rhodotorula mucilaginosa* from an adult patient in Qatar. Microbiology Resources Announcement 10: e00725-21.
- 12. Hasan HR, Kalikiri MKR, Mirza F, Sundararaju S, Sharma S, Lorenz S, Chemaitelly H, El-Kalout RA, Tsui KM, Yassine HM, Coyle P, Al Khal A, Bertollini R, Al Thani MH, Abu-Raddad LJ, Tang P, and National study group for COVID-19 epidemiology in Qatar. (2021) Real-Time SARS-CoV-2 Genotyping by High-Throughput Multiplex PCR Reveals the Epidemiology of the Variants of Concern in Qatar. International Journal of Infectious Disease S1201-9712(21)00709-8. doi: 10.1016/j.ijid.2021.09.006

- Gao M, Xiong C, Gao C, Tsui CKM, Wang MM, Zhou X, Zhang AM, Cai L.\* (2021) Disease-induced changes in plant microbiome assembly and functional adaptation. Microbiome 9, 187 (2021). https://doi.org/10.1186/s40168-021-01138-2
- 14. Zhao P, Zhang ZF, Qi XH, **Tsui KM**, Hu DM, Gafforov Y, Huang JE, Cai L. (2021) Contributions to rust flora in China. I, tremendous diversity from natural reserves and parks. Fungal Diversity https://doi.org/10.1007/s13225-021-00482-w
- 15. Barrett T, **Tsui CKM**. (2021) Emerging fungal infection: *Candida auris*. Evolution, Medicine, & Public Health doi:10.1093/emph/eoab021
- Al-Mana H, Sundararaju S, Tsui CKM, Perez-Lopez A, Yassine H, Al Thani A, Al-Ansari K, Eltai NO (2021) Whole-Genome Sequencing for molecular characterization of carbapenem-resistant Enterobacteriaceae causing lower Urinary Tract Infection among pediatrics. Antibiotics DOI: 10.3390/antibiotics10080972
- Perez-Lopez A, Hasan M, Sundararaju S, Tsui KM, Al-Mana H, Suleiman M, Imam O, Tang P. (2021) Trends in faecal carriage of carbapenemase-producing Enterobacterales in children before and after the implementation of international travel restrictions in response to COVID-19. Travel Medicine and Infectious Disease 43: https://doi.org/10.1016/j.tmaid.2021.102120
- El-Nemr I, Mushtaha M, Hasan MR, Tsui KM, Goktepe I. (2021) Monitoring the effect of environmental conditions on safety of fresh produce sold in Qatar's wholesale market. International Journal of Environmental Health Research https://doi.org/10.1080/09603123.2021.1931050.
- Salah H, Sundararaju S, Dalil L, Salameh S, Al-Wali W, Tang P, Ben Abid F, Tsui CKM\* (2021) Genomic epidemiology of *Candida auris* in Qatar reveals hospital transmission dynamics and a South Asian origin. Journal of Fungi 7(3), 240. https://doi.org/10.3390/jof7030240
- 20. Su, H, Zhu M, Tsui, CKM, van der Lee H, Kooreman MT, Zoll J, Engel T, Hagen F, Li L, Zhu J, Lu Z, Zhang Q, Verweij PE, Deng S\* (2021) Potency of olorofim compared to contemporary antifungal agents against clinical *Aspergillus fumigatus* isolates, and a review on the azole-resistance in China. Antimicrobial Agents and Chemotherapy doi:10.1128/AAC.02546-20
- Malaki A, Brumfield K, Tsui CK, Anand A, Rasheed S, Ibrahim E, Shammari H, Haq A, Colwell R, Fotadar R\* (2021) Draft genome sequences of seven *Vibrio cholerae* isolates from adult patients in Qatar. Microbiology Resources Announcement DOI:10.1128/MRA.01489-20
- 22. Ben Abid F\*, Tsui CKM, Doi Y, Deshmukh A, McElheny CL, Butt AA, Bachman WC, Fowler EL, Albishawi A, Mushtaq K, Almuslamani MA, Al Khai A, Ibrahim EB, Doiphode SH, Hamed MM, Omrani A. (2021) Molecular Characterization of clinical carbapenemase-producing Enterobacterales from Qatar. European Journal of Clinical Microbiology & Infectious Diseases doi.org/10.1007/s10096-021-04185-7
- 23. Imam O\*, Al-Zubaidi K, Janahi M, Imam A, Dobson S, Leghrouz B, Sundararaju S, **Tsui KM**, Hasan MR, Perez-Lopez A (2021) Peritoneal dialysis-associated peritonis caused by *Mycobacterium abscessus* in children: a case report. Open Forum Infectious Diseases https://doi.org/10.1093/ofid/ofaa579
- 24. Yang H, You CJ, **Tsui CKM**, Tembrock L, Wu ZQ, Yang DP.\* (2020) Phylogeny and biogeography of the Japanese rhinoceros beetle, *Trypoxylus dichotomus* (Coleoptera: Scarabaeidae) based on SNP markers. Ecology and Evolution 10.1002/ece3.6982

- 25. Liang J, Liu X, **Tsui CKM**, Ma Z, Luo Y.\* (2020) Genetic structure and asymmetric migration of wheat stripe rust pathogen in western epidemic areas of China. Phytopathology doi.org/10.1094/PHYTO-06-20-0236-R
- Perez-Lopez A\*, Sundararaju S, Al-Mana H, Tsui KM, Hasan M, Suleiman M, Janahi M, Al Maslamani E, Tang P. (2020) Molecular characterization of extended-spectrum beta-lactamases producing *Escherichia coli* and *Klebsiella pneumoniae* among the pediatric population in Qatar. Frontiers in Microbiology 10.3389/fmicb.2020.581711.
- Huang C<sup>\$</sup>, Tsui CKM<sup>\$</sup>, Chan M, Pan K, Li X, Wang L, Zheng Y, Zheng D, Chen X, Huang M, Jiang L, Wei L, Liao W, Cao C.\* (2020) Emerging *Cryptococcus gattii* species complex infections in Guangxi, southern China. PLoS Neglected Tropical Diseases 14(8): e0008493. doi.org/10.1371/journal.pntd.0008493.
- Jiang Y, Tsui CKM, Amed S, Hagen F, Shang Z, van den Ende BG, Verweij PE, Lu H, de Hoog S. (2020) Intraspecific variation and taxonomy of *Emmonsia crescens*. Mycopathologia 185(4):613-627. doi: 10.1007/s11046-020-00475-4
- 29. Hasan M, Sundararaju S, Tang P, **Tsui KM**, Perez-Lopez A, Janahi M, Tan R, Tilley P. (2020) A metagenomics- based diagnostic approach for central nervous system infections in hospital acute care setting. Scientific Reports 10(1):1119 4. doi: 10.1038/s41598-020-68159-z
- Tsui CKM\*, Sundararaju S, Al Mana H, Hasan MR, Tang P, Perez-Lopez A. (2020) Plasmid-mediated colistin resistance encoded by *mcr-1* gene in *Escherichia coli* co-carrying *bla*<sub>CTX-M-15</sub> and *bla*<sub>NDM-1</sub> genes in pediatric patients in Qatar. Journal of Global Antimicrobial Resistance 22:662-663. doi.org/10.1016/j.jgar.2020.06.029
- 31. Zhou X, Wang J, Wang W, **Tsui CKM**, Cai L. (2020) Changes in bacterial and fungal microbiomes associated with tomatoes of healthy and infected by *Fusarium oxysporum* f. sp. *lycopersici*. Microbial Ecology. https://doi.org/10.1007/s00248-020-01535-4
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## II. NON-REFEREED PUBLICATIONS

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- (b) Conference Proceedings

- 1. Shin PKS, Chan AKY, **Tsui KM**, Pang KL, Kwan BKY, Kong RYC, Cheung SG. (2019) Population Genetic Structure of juvenile Chinese Horseshoe Crabs in Hong Kong. The 4th International Workshop on the Science and Conservation of Horseshoe Crabs. p.87, 15-20 Jun 2019, Beibu Gulf University, Guangxi, China
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### (c) Others

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# III. <u>BOOKS</u>

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# Dr. Patrick Tang

Division of Pathology Sciences, Department of Pathology

Sidra Medical and Research Center Doha, Qatar <u>ptang@sidra.org</u>

# Dr. Yohei Doi

Department of Medicine, University of Pittsburgh Pittsburgh, PA 15261 yod4@pitt.edu

### Prof. Yossi Av-Gay

Faculty of Medicine, Division of Infectious Diseases University of British Columbia Vancouver, Canada yossi@mail.ubc.ca

# Dr. Will Hsiao

Faculty of Health Science Simon Fraser University Burnaby, Canada wwhsiao@sfu.ca