

# DAVID WILKINS

Peer-reviewed  
publications

**D. Wilkins**, A. S. Lane, and S. R. Orde. *Audit of low tidal volume ventilation in patients with hypoxic respiratory failure in a tertiary Australian intensive care unit*. Anaesthesia and Intensive Care, 2021.  
doi:10.1177/0310057X21993132

**D. Wilkins**, X. Tong, M. H. Y. Leung, C. E. Mason, and P. K. H. Lee. *Diurnal variation in the human skin microbiome affects accuracy of forensic microbiome matching*. Microbiome, 2021, 9(1).  
doi:10.1186/s40168-021-01082-1

**D. Wilkins**, M. H. Y. Leung, and P. K. H. Lee. *Microbiota fingerprints lose individually identifying features over time*. Microbiome, 2017, 5(1).  
doi:10.1186/s40168-016-0209-7

**D. Wilkins**, M. H. Y. Leung, and P. K. H. Lee. *Indoor air bacterial communities in Hong Kong households assemble independently of occupant skin microbiomes*. Environmental Microbiology, 2015, 18(6):1754-01763.  
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**D. Wilkins**, S. Rao, X.-Y. Lu, and P. K. H. Lee. *Effects of sludge inoculum and organic feedstock on active microbial communities and methane yield during anaerobic digestion*. Frontiers in Microbiology, 2015, 6(1114).  
doi:10.3389/fmicb.2015.01114

**D. Wilkins**, X.-Y. Lu, Z. Shen, J. Chen, and P. K. H. Lee. *Pyrosequencing of mcrA and archaeal 16S rRNA genes reveals diversity and substrate preference of anaerobic digester methanogen communities*. Applied and Environmental Microbiology, 2015, 81:604-613.  
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**D. Wilkins**, E. van Seville, S. R. Rintoul, F. M. Lauro, and R. Cavicchioli. *Advection shapes Southern Ocean microbial assemblages independent of distance and environment effects*. Nature Communications, 2013.  
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**D. Wilkins**, F. M. Lauro, T. J. Williams, M. Z. DeMere, M. V. Brown, J. M. Hoffman, C. Andrews-Pfannkoch, J. B. McQuaid, M. J. Riddle, S. R. Rintoul, and R. Cavicchioli. *Biogeographic partitioning of Southern Ocean microorganisms revealed by metagenomics*. Environmental Microbiology, 2013, 15:1318-1333.

**D. Wilkins**, S. Yau, T. J. Williams, M. A. Allen, M. V. Brown, M. Z. DeMaere, F. M. Lauro, and R. Cavicchioli. *Key microbial drivers in Antarctic aquatic environments*. FEMS Microbiology Reviews, 2013, 37:303-335.

Tong X, M. H. Y. Leung, **D. Wilkins**, H. H. L. Cheung, and P. K. H. Lee. *Neutral processes drive seasonal assembly of the skin mycobiome*. mSystems, 2019, 4(2), e00004-e00019.  
doi:10.1128/mSystems.00004-19.

Y. Jia, M. H. Y. Leung, X. Tong, **D. Wilkins**, and P. K. H. Lee. *Rare taxa exhibit disproportionate cell-level metabolic activity in enriched anaerobic digestion microbial communities*. mSystems, 2019, 4(1), e00208-e00218.  
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M. H. Y. Leung, X. Tong, **D. Wilkins**, H. H. L. Cheung, and P. K. H. Lee. *Individual and household attributes influence the dynamics of the personal skin microbiota and its association network*. Microbiome, 2018, 6(1), 26.  
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X. Tong, M. H. Y. Leung, **D. Wilkins**, and P. K. H. Lee. *City-scale distribution and dispersal routes of mycobiome in residences*. Microbiome, 2017, 5(1).  
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Y. Jia, **D. Wilkins**, H. Lu, M. Cai, and P. K. H. Lee. *Long-term enrichment on cellulose or xylan causes functional and taxonomic convergence of microbial communities from anaerobic digesters*. Applied and Environmental Microbiology, 2016, 82:1519-1529.  
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M. Cai, **D. Wilkins**, J. Chen, S. K. Ng, H. Lu, Y. Jia, P. K. H. Lee. *Metagenomic reconstruction of key anaerobic digestion pathways in municipal sludge and industrial wastewater biogas-Producing systems*. Frontiers in Microbiology, 2016, 7(e9221):70.  
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M. H. Y. Leung, **D. Wilkins**, and P. K. H. Lee. *Insights into the pan-microbiome: skin microbial communities of Chinese individuals differ from other racial groups*. Scientific Reports, 2015.  
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M. H. Y. Leung, **D. Wilkins**, E. K. T. Li, F. K. F. Kong, and P. K. H. Lee. *Indoor-air microbiome in an urban subway network: diversity and dynamics*. Applied and Environmental Microbiology, 2014.  
doi:10.1128/AEM.02244-14

T. J. Williams, **D. Wilkins**, E. Long, F. Evans, M. Z. DeMaere, M. J. Raftery, and R. Cavicchioli. *The role of planktonic Flavobacteria in processing algal organic matter in coastal East Antarctica revealed using metagenomics and metaproteomics*. Environmental Microbiology, 2013, 15:1302–1317.

M. V. Brown, F. M. Lauro, M. Z. DeMaere, L. Muir, **D. Wilkins**, T. Thomas, M. J. Riddle, J. A. Fuhrman, C. Andrews-Pfannkoch, J. M. Hoffman, J. B. McQuaid, A. Allen, S. R. Rintoul and R. Cavicchioli. *Global biogeography of SAR11 marine bacteria*. Molecular Systems Biology, 2012, 8:1–13.

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#### Other publications

**D. Wilkins**. *Automated title and abstract screening for scoping reviews using the GPT-4 Large Language Model*. arXiv preprint, 2023, arXiv:2311.07918.  
doi:10.48550/arXiv.2311.07918

**D. Wilkins**. *R troubleshooting solutions*. Video course. Packt Publishing, Birmingham, United Kingdom, 2018.

**D. Wilkins**. *Learn R programming*. Video course. Packt Publishing, Birmingham, United Kingdom, 2017.

**D. Wilkins**. *Advanced tools and techniques beyond base R*. Video course. Packt Publishing, Birmingham, United Kingdom, 2017.

K. S. Siddiqui, T. J. Williams, **D. Wilkins**, S. Yau, M. A. Allen, M. V. Brown, F. M. Lauro, and R. Cavicchioli. *Psychrophiles*. Annual Review of Earth and Planetary Sciences, 2013, 41:87–115.

T. J. Williams, **D. Wilkins**, M. Z. DeMaere, F. M. Lauro, and R. Cavicchioli. *Microbes under the microscope*. Australian Antarctic Magazine, June 2011

F. M. Lauro, M. A. Allen, **D. Wilkins**, T. J. Williams and R. Cavicchioli. *Genetics, genomics and evolution of psychrophiles*, in Extremophiles Handbook. Springer Verlag GmbH, Heidelberg, Germany, 2010.

#### Conference abstracts

**D. Wilkins**. *General practice registrar evaluation of long COVID in patients presenting with fatigue*. Australasian Association for Academic Primary Care 2024 Conference, Sydney, Australia. August 15–16 2024.

**D. Wilkins**, S. Orde, and A. S. Lane. *Adherence to a low tidal volume ventilation strategy in patients admitted to Nepean Hospital ICU with Acute Respiratory Distress Syndrome*. MD Research Symposium, Sydney School of Medicine, University of Sydney, Australia. September 25–26 2019.

**D. Wilkins**, M. H. Y. Leung, and P. K. H. Lee. *Household surface microbial assemblages are shaped by human-associated groups*. 15<sup>th</sup> International Symposium on Microbial Ecology, Seoul, Korea. August 24–29 2014.

**D. Wilkins**, F. M. Lauro, T. J. Williams, and R. Cavicchioli. *Biogeographic partitioning of Southern Ocean picoplankton*. 14<sup>th</sup> International Symposium on Microbial Ecology, Copenhagen, Denmark. August 19–24 2012.

J. Edwards, **D. Wilkins**, N. Stocks, O. Frank, and E. Hoon. *What value is it providing me? GP attitudes towards the potential utility of an AI-augmented clinical decision support tool for hypertension*. Australasian Association for Academic Primary Care 2024 Conference, Sydney, Australia. August 15–16 2024.

M. H. Y. Leung, **D. Wilkins**, and P. K. H. Lee. *Comparison of bacterial microbiomes in Hong Kong urban household aerosols*. 15<sup>th</sup> International Symposium on Microbial Ecology, Seoul, Korea. August 24–29 2014.

R. Cavicchioli, F. M. Lauro, M. Z. DeMaere, T. J. Williams, M. V. Brown, S. Yau and **D. Wilkins**. *Microbial ecology of Antarctic aquatic ecosystems determined using metagenomics and metaproteomics*. 14<sup>th</sup> International Symposium on Microbial Ecology, Copenhagen, Denmark. August 19–24 2012.

R. Cavicchioli, F. M. Lauro, M. Z. DeMaere, T. J. Williams, M. V. Brown, S. Yau and **D. Wilkins**. *Extremophiles in Antarctica: insight into adaptation, evolution and ecosystem function of cold aquatic systems using metagenomics and metaproteomics*. 9<sup>th</sup> International Congress on Extremophiles, Sevilla, Spain. September 10–13 2012.