

CURRICULUM VITAE: PROF CHRIS GREENING

Position: Professor & Group Leader, Department of Microbiology, Monash University

Date of Birth: February 25, 1987 (Warrington, UK)

Contact: chris.greening@monash.edu (email) / +61 3 990 51692 (phone)

Website: greeninglab.com

Last updated: September 9, 2022

QUALIFICATIONS

- 2014 Ph.D., Department of Microbiology and Immunology, University of Otago
Physiological roles of the three [NiFe]-hydrogenases in Mycobacterium smegmatis
- 2010 M.Sc./B.Sc. (1st Class), Molecular and Cellular Biochemistry, University of Oxford
Variants of heme d₁ biosynthesis enzymes in Paracoccus pantotrophus
- 2005 Five A-levels (Grade A), Nailsea Comprehensive School

APPOINTMENTS

- Jun 22 – Present Professor, Department of Microbiology, Monash University
- Jan 20 – May 22 Associate Professor, Department of Microbiology, Monash University
- Jan 20 – Present NHMRC EL2 Fellow, Department of Microbiology, Monash University
- Jan 19 – Dec 20 Associate Professor, School of Biological Sciences, Monash University
- Jan 17 – Dec 19 ARC DECRA Fellow, School of Biological Sciences, Monash University
- Jun 16 – Dec 18 Lecturer & Group Leader, School of Biological Sciences, Monash University
- Feb 16 – Jun 16 Adjunct Lecturer, Research School of Chemistry, Australian National University
- Feb 15 – Jun 16 Postdoctoral Fellow, CSIRO Land & Water
- Feb 14 – Feb 15 Cover Lecturer & Assistant Research Fellow, Department of Microbiology, University of Otago

AWARDS

My research, teaching, and service has been recognised with diverse institutional and nationally competitive awards:

- Australian Academy of Science: Fenner Medal (2022)
- Australian Museum Eureka Prizes: Finalist for Outstanding Early-Career Researcher (2022)
- Australian Society for Microbiology: Fellow (FASM) (2022)
- Australian Society of Microbiology: Jim Pittard Award for Outstanding Early-Career Researcher (2019)
- National Health & Medical Research Council (NHMRC): Emerging Leader 2 (EL2) Fellowship (2019)
- Monash University Faculty of Science: Dean's Commendation for Teaching Excellence (2019)
- Monash University Faculty of Science: Exceptional Service Award (2018)
- Monash University Faculty of Science: Early Career Researcher Award (2017)
- Monash University School of Biological Sciences: Teaching Excellence Award (2017)
- Australian Research Council (ARC): Discovery Early Career Researcher Award (DECRA) Fellowship (2016)
- CSIRO: Office of the Chief Executive Postdoctoral Fellowship (2014)
- University of Otago: Margaret di Menna Best Publication Award (2014)
- University of Otago School of Biomedical Sciences: Best Publication Award (2014)
- Dunedin Basic Medical Sciences Course Trust: Professor Sandy Smith Memorial Scholarship (2013)

EXTERNAL GRANTS & FUNDING

Since initiating an independent career with my ARC DECRA Fellowship, I have secured funding across a range of sources to execute my One Health Microbiology vision. These span individual grants with a basic science focus from

the Australian Research Council (ARC) and National Health & Medical Research Council (NHMRC), as well two large program grants with a translational focus. I have been awarded over \$5.2M in competitive funding as a lead or sole investigator, and helped secure over \$55M funding as a chief investigator.

2022 – 2025	Human Frontiers Science Foundation (Co-Lead CI), \$1.71M The atmosphere: a living, breathing ecosystem?
2022 – 2027	ARC Industrial Transformation Research Hubs (IH220100012, CI-O), \$10M ARC Training Hub for Carbon Utilisation and Recycling
2022 – 2025	NSF Partnerships for International Research and Education (OISE-2230766; CI-C), \$1.5M Coastal permeable sediments as a novel source of greenhouse gases
2022 – 2024	Hermon Slade Foundation Project Grant (CI-C), \$87K Hiding in plain sight: Do bark-dwelling microbes secretly feed trees nitrogen?
2021 – 2023	ARC Discovery Project Grant (DP210101595; Co-Lead CI), \$671K Coastal permeable sediments as a novel source of greenhouse gases
2020 – 2024	NHMRC Emerging Leadership Fellowship (EL2 APP1178715; Sole CI), \$1.45M Carbon monoxide as a host-derived energy source for mycobacterial persistence
2020 – 2022	ARC Discovery Project Grant (DP200103074; Lead CI), \$497K Living on air: how do bacteria scavenge atmospheric trace gases?
2020 – 2027	ARC Special Research Initiative in Excellence in Antarctic Science (SR200100005; CI), \$36M SAEF: Securing Antarctica's Environmental Future
2020 – 2023	Australian Antarctic Science Grant Program (AAS-4592; Lead CI), \$138K Terrestrial microbial biodiversity in the Vestfold Hills: structure, drivers, and protection
2020	ARC Linkage, Equipment, and Infrastructure Grant (LE200100156; CI), \$471K A facility for quantification and isotopic analysis of trace gases
2020 – 2024	NHMRC Ideas Grant (APP1163728; AI – Pathogen Monitoring; relinquished CI status due to successful EL2 Fellowship), \$2.9M Assessing exposure pathways for pathogens causing gastrointestinal infection among children living in urban informal settlements
2018 – 2021	NHMRC Project Grant (APP1142699; Sole CI), \$396K Targeting redox homeostasis to prevent <i>Mycobacterium tuberculosis</i> persistence
2018 – 2020	ARC Discovery Project Grant (DP180101762; CI), \$411K Hydrogen: an overlooked intermediate during anoxia in permeable sediments
2018 – 2020	NHMRC Project Grant (APP1139832; CI), \$670K Preventing the evolution of transmissible nitroimidazole resistance in <i>Mycobacterium tuberculosis</i>
2017 – 2022	Wellcome Trust Our Planet, Our Health Program Grant (CI following grant variation), \$14M RISE: Revitalising Urban Settlements and their Environments
2017 – 2020	Marsden Grant (GNS1601; AI), \$286K Methanotroph's dirty little secret: they're not metabolically monogamous
2017 – 2019	Australian Antarctic Division Project Grant (AAS-4406; CI), \$128K A novel strategy driving niche development and climate adaptation in polar desert soils

2017 – 2019 ARC DECRA Fellowship (DE170100310; Sole CI), \$360K
Atmospheric trace gases: fuelling the dormant majority

Also received over \$800K in industrial funding from partners in energy, food, and environmental management sectors. International collaborator on Global Partnerships in Livestock Emissions grant (2017 – 2020) and cohort study on human gastrointestinal hydrogen metabolism (2019 – 2021).

SUPERVISION & MENTORING

Over the last five years, I have developed a diverse, innovative, and productive team. My group currently hosts six PhD students, five postdoctoral fellows, two research assistants, and one Honours student. The four completed PhD students under my primary supervision developed excellent scientific and professional skills, published papers in leading journals, and presented at major national or international conferences. Three postdoctoral fellows that I have mentored have secured independent fellowships and two are now independent group leaders.

PhD lead supervision:

Thanh Nguyen	Pathways of greenhouse gas emissions in permeable sediments	2022 –
Thilini Koralegedara	Carbon monoxide: fuel or poison for tuberculosis	2022 –
Caitlin Welsh	Determinants of microbial hydrogen cycling in the human gastrointestinal tract	2020 –
David Gillett	Energetics of nitrogen cycling in mycobacteria	2019 –
Katie Bayly	Molecular basis of carbon monoxide tolerance of mycobacteria	2019 –
Pok Man Leung	Energy and carbon acquisition in global desert ecosystems	2018 –
Dr Paul Cordero	Biochemical basis of mycobacterial hydrogen and carbon monoxide oxidation	2017 – 2021
Dr Zahra Islam	New mediators of bacterial atmospheric trace gas oxidation	2017 – 2020
Dr Ya-Jou Chen	Linking biogeochemical processes to microbial community in permeable sediments	2016 – 2020
Dr Sean Bay	Structure and basis of soil microbial biodiversity	2016 – 2020

PhD co-supervision:

Ashleigh Kropp (2022 –), Fabian Munder (2021 –), Ning Hall (2021 –), Tess Hutchinson (2021 –), Maha Alharbi (2021 –), Sarah Reeve (2017 – 2021), Dr Rosemarie Herbert (2016 – 2017), Dr Dan Søndergaard (Aarhus, 2015 – 2018), Dr Brendon Lee (ANU, 2015 – 2018), Dr Liam Harold (Otago, 2015 – 2019)

Postdoctoral staff:

Dr Surbhi Jain (2022 –), Dr Gaofeng Ni (2022 –), Dr Thomas Watts (2022 –), Dr Laura Woods (2021 – 2022), Dr Laura Perlaza Jimenez (2020 – 2022), Dr Sean Bay (2020 – ; co-supervised with Prof Steven Chown), Dr Rachael Lappan (2019 –), Dr Rhys Grinter (2018 – 2020; secured NHMRC EL1 Fellowship; now group leader at Monash University), Dr Karen Jordaan (2018 – 2019), Dr Eleonora Chiri (2017 – 2020; secured SNF Fellowship), Dr Carlo Carere (mentored, 2016 – 2017; secured Marsden Fast Start; now group leader at University of Canterbury)

Technical staff:

Luis Jimenez (2021 –), Michael Milton (2021 – 2022), Dr Paul Cordero (2021), Jie Mao (2020 – 2021), Caitlin Welsh (2019 – 2020), Ashleigh Kropp (2019 –), Dr Maria Chuvochina (2017), Blair Ney (2017 – 2018), Tent Jirapanjawat (2016 –)

Honours supervision:

James Archer (2022), Isabelle Magnin-Bougma (2022), Anjali Lobo (2021), Abraham Freijah (2019 – 2020), Caitlin Welsh (2019), Guy Shelley (2018), Katie Bayly (2018), Joanna Feng (2017), Blair Ney (2016. ANU), Thanavit Jirapanjawat (2015 – 2016), James Antoney (Co-supervised, 2015), Kiel Hards (Co-supervised, 2012)

Undergraduates:

Thuy Dinh (2022), Montgomery Hall (2021 – 2022), Natasha Bong (2021 – 2022), Jake Locop (2021 – 2022), Eve Tudor-Matthew (2021 – 2022), Quynh Nguyen (2021 – 2022), Anjali Lobo (2020), Jasmyn Voss (2017), Jethro Sallmann (2017), Lauren Sanders-Berg (2016 – 2017), Blair Ney (2015 - 2016), Ro Rushton-Green (2014 - 2015), Kiel Hards (2011 - 2012)

Sabbatical visitors:

Prof Osnat Gillor (2019)

TEACHING

I have convened and lectured for a wide range of units for students from first to fifth year. For example, as convenor of BIO3082: Global Change Biology, I entirely redesigned the course to take a more integrative, solution-based approach; it now considers causes, effects, and mitigation of global warming and other pressures within the framework of sustainable human development. It adopted a student-centred teaching approach that emphasised in-class interactions and fosters creativity. My teaching consistently receives excellent individual evaluations and all units that I have convened have been formally recognised as being outstanding (>4.7 out of 5.0) in all instances.

Monash University – Department of Microbiology:

S3701: Microbiology Honours	Deputy convenor, lecturer	2021 –
BMS5003: Infectious diseases and population health	Lecturer	2020 –
MIC3032: Pathogenesis of infectious disease	Lecturer	2020
MIC2011: Introduction to microbiology	Lecturer	2020 –

Monash University – School of Biological Sciences:

BIO1022: Life on earth	Module designer	2019
BIO4100: Honours research project	Course convenor, primary lecturer	2018 – 2019
BIO3082: Global change biology	Course convenor, primary lecturer	2017 – 2019

Australian National University – Research School of Chemistry:

CHEM4005: Enzymatic basis of energy generation	Module convenor, primary lecturer	2016
--	-----------------------------------	------

University of Otago – Department of Microbiology and Immunology:

MICR461: Molecular microbiology	Lecturer	2014
MICR336: Microbial ecology	Lecturer	2014
MICR335: Molecular microbiology	Lecturer	2014

INSTITUTIONAL SERVICE

Program leadership:

- Member: Monash Health & Climate Steering Committee (2022 –)
- Member: Centre to Impact AMR Asia-Pacific Working Group (2022 –)
- Head: Biomedicine Discovery Institute Biomedicine in a Changing World Program (2021 –)
- Member: Biomedicine Discovery Institute Infection Theme Executive Committee (2021 –)
- Member: Centre to Impact AMR Leadership Team (2020 –)
- Chair: Centre to Impact AMR One Health Working Group (2020 –)
- Member: Monash Energy Institute (2020 –)
- Chief Investigator: SAEF: Securing Antarctica's Environmental Future (2020 –)
- Member: Micromon Genomics Steering Committee (2019 –)
- Chief Investigator: RISE: Revitalising Informal Settlements and their Environments (2018 –)
- Member: Centre for Geometric Biology (2016 – 2018)

Departmental / school leadership:

- Member: Biomedical Sciences Bioinformatics Teaching Redevelopment Group (2022)
- Faculty Representative: Monash Climate Change Workshop (2021)
- Member: Department of Microbiology Leadership Team (2021 –)
- Member: Centre to Impact AMR Leadership Team (2021 –)
- Head: Antimicrobial Resistance Testing & Surveillance Facility (2020 –)
- Member: School of Biological Sciences Leadership Team (2019)
- Convenor: School of Biological Sciences Honours Program (2018 – 2019)
- Lead: School of Biological Sciences Media Engagement Strategy (2018 – 2019)
- Member: School of Biological Sciences Research Committee (2018 – 2019)

- Convenor: School of Biological Sciences Seminar Program (2017)

Teaching & Training:

- Judge: Robert Power Prize for Laboratory-Based Sciences (2021)
- Member: Biological Sciences Teaching Committee (2018 – 2019)
- Chief Judge: Biological Sciences Postgraduate Symposia (2016 – 2018)
- Panel Chair: 5+ PhD students (2020 –)
- Panel Member: 15+ PhD students (2017 –)

Community:

- Member: Monash University Ally Network (2018 –)
- Co-organiser: Inaugural Women in Science Lecture (2018)
- Participant: Monash University Open Days (2016 – 2018)

EXTERNAL SERVICE

Conference roles:

- Program Committee: Biomolecular Horizons Conference (Melbourne, 2024)
- Chair: AusME: Australian Microbial Ecology Conference (Melbourne, 2022)
- Co-organiser: ASM Hour (Virtual, 2022 –)
- Co-organiser: Microbial Genomics Seminar Series (Virtual, 2021 –)
- Session Chair: Goldschmidt Conference (Virtual, 2020)
- Session Chair: MicroSeq (Virtual, 2020)
- Advisory Committee: AusME: Microbial Ecology Conference (Perth, 2019)
- Co-founder: MEEM: Microbial Ecology – Environmental Microbiology in Victoria Symposia (Melbourne, 2018 –)
- Organising Committee: New Zealand Microbiological Society Conference (Dunedin, 2012)

Society roles:

- Theme Lead: Australian Society for Microbiology (2021 –)
- Committee Member: New Zealand Microbiological Society (2012 – 2013)
- Member: International Society for Microbial Ecology (2017 –), Australian Society for Microbiology (2017 –), New Zealand Microbiological Society (2011 –), AusBiotech (2020 –), Australian Society for Microbiology and Molecular Biology (2021 –), Microbiology Society (2022 –)

Outreach and translation roles:

- Consultation for the Victorian Antimicrobial Resistance Strategy, including Human Health Sector, Environmental Sectors, and Cross-Sector workshops (2021 –).
- Consultation for One Health Master Action Plan of National Antimicrobial Resistance Strategy (2021).
- Panel member: DFAT Fiji and Tuvalu Research and Evaluation Service (2020 –)
- Member: Defence Science and Technology – Academia Working Group (2018 – 2020)
- Scientific advisor: China-Australia Scientific Association (2014)

Editorial and reviewer roles:

- Editor: Microbial Genomics (2021 –), mSystems (2022 –)
- Editor: Frontiers in Microbiology special topics 'Microbial hydrogen metabolism' (2017 – 2019) and 'Hydrogenase: structure, function, maturation, and application' (2021 – 2022)
- Editorial Board: The ISME Journal (2021 –), Environmental Microbiology (2020 –), Environmental Microbiology Reports (2020 –), and Frontiers in Microbiology (2017 –)
- Recommender: PCI Microbiology (2022 –)
- Reviewer of 104 articles for 41 journals (<https://publons.com/researcher/1513245/chris-greening/>), e.g. JACS, ISME Journal, Nature Microbiology, Environmental Microbiology, Chemical Science, Journal of Infectious Diseases
- Examiner for nine PhD theses, one habilitation thesis, and one MSc thesis
- Grant reviewer for national schemes of Australia, New Zealand, Netherlands, France, Iceland, UK, and NASA

OUTREACH ACTIVITIES

I am also passionate about communicating the importance of science to children and the public, as well as inspiring future scientists and leaders. Reflecting this, I have participated in a wide and growing range of outreach activities.

- Curriculum designer for Microbiology Literacy Knowledge Framework (2021 –), designed to improve understanding of microbiology in society and visualise the invisible.
- Given several school talks (e.g. for STEM Week, Haileybury College Berwick, 2020), where I discuss how I overcame considerable adversity to make scientific discoveries and emerge as a leader.
- Written popular science articles for COSMOS (2018), Monash LENS (2018), Nature Blogs (2017), ECOS (2015).
- Quoted expert in news articles for Science (2022), National Geographic (2022), and other sources.
- Interviewed on the television documentary Life Beyond Earth (AstroMedia, 2017).
- Gained strong social media presence through Twitter account (>5500 followers).
- Responsible for reviewing and revising media dissemination strategy at the School of Biological Sciences, Monash University, leading to a series of changes that resulted in a three-fold increase in the school's press attention.
- Research articles highlighted in diverse local, national, and international press and social media, e.g.: Nature paper (Altmetric score 558; <https://www.nature.com/articles/nature25014/metrics>) and Nature Reviews Microbiology article (Altmetric score 397, <https://www.nature.com/articles/s41579-020-0413-0/metrics>).

CONFERENCE PRESENTATIONS AND EXTERNAL SEMINAR / SYMPOSIUM PRESENTATIONS

Since forming my own group, I have developed a strong national and international profile through 35 conference and symposium talks, including nine plenary, 15 invited, and one award talk. I have also delivered 41 invited seminars across major institutions in the USA, UK, Europe, Israel, South Africa, Australia, and New Zealand.

Conference and symposium presentations

1. ISME Conference, Cape Town, South Africa (invited speaker, 2024)
2. Bioenergetics GRC, Connecticut, USA (invited speaker, 2023)
3. Applied and Environmental Microbiology GRC, Connecticut, USA (invited speaker, 2023)
4. Upcoming: NZMEC: New Zealand Microbial Ecology Conference, Auckland, New Zealand (plenary speaker, 2023)
5. ISME Conference, Lausanne, Switzerland (replacement speaker, 2022)
6. Scientific Committee for Antarctic Research Conference, Virtual (plenary speaker, 2022)
7. Microbial Cycling of Volatile Organic Compounds Symposium, Norwich, UK (plenary speaker, 2022)
8. International Symposium on Hypoxic Biology, Umeå, Sweden (plenary speaker, 2022)
9. Molecular Basis of Microbial One-Carbon Metabolism GRC, New Hampshire, USA (invited speaker, 2022)
10. Hydrogenase Lecture Series, Virtual (invited speaker, 2022)
11. MicroSeminar Series, Virtual (invited speaker, 2022)
12. NASA's Network for Life Detection Series (invited speaker, 2022)
13. Malaysian Society for Microbiology 2021, Kuala Lumpur, Malaysia (plenary speaker, 2021)
14. JAMS Kuala Lumpur, Virtual, Malaysia (invited speaker, 2021)
15. Australian Society for Microbiology Conference 2021, Melbourne, Australia (invited speaker, 2021)
16. ASM Hour: Theme Leader Spotlight, Australia (invited speaker, 2021)
17. Early-Career Research Symposium 2021, Monash University, Melbourne, Australia (plenary speaker, 2021)
18. Australian Society for Microbiology Conference, Adelaide, Australia (Jim Pittard award lecture, 2019)
19. Science for Life Laboratory Biodiversity Symposium, Uppsala, Sweden (plenary speaker, 2019)
20. Metagenomics Workshop, Uppsala, Sweden (invited speaker, 2019)
21. 12th Annual Hydrogenase Conference, Lisbon, Portugal (oral presenter, 2019)
22. Symposium on Desert Ecology, Gobabeb, Namibia (invited speaker, 2019)
23. AusME: Australian Microbial Ecology Conference, Perth, Australia (invited speaker, 2019)
24. QMB Infectious Disease Meeting, Queenstown, New Zealand (invited speaker, 2019)
25. ISME Conference, Leipzig, Germany (oral presenter, 2018)
26. Joint Academic Microbiology Seminars Annual Symposium, Sydney, Australia (plenary speaker, 2018)
27. New Zealand Microbial Ecology Conference, Auckland, New Zealand (oral presenter, 2018)
28. Australian Society for Microbiology Conference, Hobart, Tasmania (invited speaker, 2017)

29. ASM Environmental Microbiology Evening (plenary speaker, 2017)
30. AusME: Australian Microbial Ecology Conference, Melbourne, Australia (oral presenter, 2017)
31. New Zealand Microbial Ecology Conference, Auckland, New Zealand (oral presenter, 2016)
32. National Symposium on Infectious Diseases, Queenstown, New Zealand (invited speaker, 2015)
33. 10th International Hydrogenase Conference, Szeged, Hungary (oral presenter, 2013)
34. New Zealand Microbiological Society Conference 2012, Dunedin, New Zealand (oral presenter, 2012)
35. New Zealand Microbiological Society Conference 2011, Palmerston North, New Zealand (oral presenter, 2011)

Institutional seminars

1. Hudson Institute of Medical Research, Melbourne, Australia (upcoming)
2. Biochemistry and Microbiology Building, University of Sydney, Sydney, Australia (2022)
3. Australian institute for Microbiology & Infection, University of Technology Sydney, Sydney, Australia (2022)
4. Marine Biological Association, Plymouth, UK (2022)
5. Department of Biochemistry, University of Oxford, Oxford, UK (2022)
6. UK Centre for Astrobiology, University of Edinburgh, Edinburgh, UK (2022)
7. School of Biological Sciences, University of Aberdeen, Aberdeen, UK (2022)
8. Biomedicine Discovery Institute, Monash University, Melbourne, Australia (2021)
9. Doherty Institute for Infection and Immunity, Melbourne University, Melbourne, Australia (2021)
10. Department of Earth and Planetary Science, UC Berkeley, California, USA (2021)
11. Department of Chemistry & Biochemistry, Montana State University, Montana, USA (2021)
12. Securing Antarctica's Environmental Future Seminar Series, Australia (2021)
13. Atmospheric Physics and Chemistry Group, Utrecht University, Utrecht, Netherlands (2019)
14. Department of Microbiology, Radboud University, Nijmegen, Netherlands (2019)
15. Royal Netherlands Institute for Sea Research, Tessel, Netherlands (2019)
16. Biomolecular Sciences and Biotechnology Institute, University of Groningen, Groningen, Netherlands (2019)
17. Department of Agrotechnology and Food Sciences, Wageningen University, Wageningen, Netherlands (2019)
18. Centre for Microbial Ecology and Genomics, University of Pretoria, Pretoria, South Africa (2019)
19. School of Biological Sciences, University of Auckland, New Zealand (2019)
20. School of Biological Sciences, University of Canterbury, New Zealand (2019)
21. Department of Molecular Science, Macquarie University, Sydney, Australia (2019)
22. Carl R. Woese Institute for Genomic Biology, University of Illinois-Champaign, Champaign, IL USA (2018)
23. Center for Metalloenzyme Studies, University of Georgia, Athens, GA USA (2018)
24. Rollins School of Public Health, Emory University, Atlanta, GA USA (2018)
25. Department of Biological Sciences, Louisiana State University, Baton Rouge, LA USA (2018)
26. Division of Microbial Ecology, University of Vienna, Vienna, Austria (2018)
27. School of Chemistry and Molecular Biosciences, University of Queensland, Brisbane, Australia (2018)
28. Department of Physiology, Anatomy and Microbiology, La Trobe University, Melbourne, Australia (2018)
29. Department of Microbiology and Immunology, University of Otago, Dunedin, New Zealand (2018)
30. Department of Gastroenterology, Alfred Hospital, Melbourne, Australia (2018)
36. School of Biotechnology and Biomolecular Sciences, University of New South Wales, Sydney, Australia (2017)
37. School of BioSciences, Melbourne University, Melbourne, Australia (2017)
38. Department of Microbiology, Monash University, Melbourne, Australia (2017)
39. The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University, Sde Boker, Israel (2016)
40. Research School of Chemistry, Australian National University, Canberra, Australia (2016)
41. GNS Science, Taupo, New Zealand (2014)
42. Max-Planck Institute for Terrestrial Microbiology, Marburg, Germany (2013)

PUBLICATIONS

* = corresponding author, & = authors contributed equally, IF = 2022 impact factor

Eight years post-PhD, I have published 93 journal articles and book chapters (average 12 per year). Demonstrating my leadership, I am corresponding/senior author on 52 (56%) and first author on 21 (23%) publications. Over half of my journal articles (46 of 84) are published in high-impact journals (IF > 10), such as Nature, PNAS, the ISME Journal, Nature Microbiology, Nature Communications, Lancet Planetary Health, and Nature Reviews Microbiology, and most involve international and discipline diverse collaborations. My work is well-cited (h-index 36, 3887 cites total, 27 papers cited > 50 times) and my citations show a rapid upward trajectory (162 in 2017, 283 in 2018, 477 in 2019, 762 in 2020,

1060 for 2021). Six of these articles received commentaries, five received editor spotlights, three are F1000-recommended, and three are cover articles.

Preprints

94) Lappan R & Shelley G & Islam ZF, Leung PM, Lockwood S, Nauer PA, Jirapanjawat T, Chen Y-C, Kessler AJ, Williams TJ, Cavicchioli R, Baltar F, Cook PLM, Morales SE, Greening C* (2022) Molecular hydrogen is an overlooked energy source for marine bacteria. In review [CITES = 0]

2022

93) Dong X* & Zhang C, Peng Y, Zhang H-X, Shi L-D, Wei G, Hubert CRJ, Wang Y*, Greening C (2022). Phylogenetically and catabolically diverse diazotrophs reside in deep-sea cold seep sediments. *Nature Communications* 13, 4866 [IF = 17.7, CITES = 0]

92) Ray AE, Zaugg J, Benaud N, Chelliah DS, Bay SK, Wong HL, Leung PM, Ji M, Terauds A, Montgomery K, Greening C, Cowan DA, Kong W, Williams TJ, Hugenholtz P, Ferrari BC* (2021). Atmospheric chemosynthesis is phylogenetically and geographically widespread and contributes significantly to carbon fixation throughout cold deserts. *The ISME Journal*, doi: 10.1038/s41396-022-01298-5 [IF = 11.2, CITES = 0]

91) Li QS & Wang R, Ma ZY, Zhang XM, Jiao JZ, Zhang ZG, Ungerfeld EM, Yi KL, Zhang BZ, Long L, Long Y, Tao Y, Huang T, Greening C, Tan ZL*, Wang M* (2022). Dietary selection of metabolically distinct microorganisms drives hydrogen metabolism in ruminants. *The ISME Journal*, doi: 10.1038/s41396-022-01294-9 [IF = 11.2, CITES = 0]

90) Li H* & Greening C* (2022). Termite-engineered microbial communities of termite nest structures: a new dimension to the extended phenotype. *FEMS Microbiology Reviews* 46, fuac034 [IF = 15.2, CITES = 0] (invited review)

89) Leung PM, Daebeler A*, Chiri E, Hanchapola I, Gillett DL, Schittenhelm RF, Daims H*, Greening C* (2022). A nitrite-oxidizing bacterium constitutively consumes atmospheric hydrogen. *The ISME Journal*, doi: 10.1038/s41396-022-01265-0 [IF = 11.2, CITES = 6]

88) Lockwood S, Greening C, Baltar F, Morales SE* (2022). Global and seasonal variation of marine phosphonate metabolism. *The ISME Journal*, doi: 10.1038/s41396-022-01266-z [IF = 11.2, CITES = 0]

87) Greening C*, Grinter R* (2022). Microbial oxidation of atmospheric trace gases. *Nature Reviews Microbiology* 20, 513-528 [IF = 78.3, CITES = 3] (cover image article)

86) Lappan R*, Jirapanjawat T, Williamson DA, Lange S, Chown SL, Greening C (2022). Simultaneous detection of multiple pathogens with the TaqMan Array Card. *MethodsX* 9, 101707 [IF = 1.9, CITES = 1]

85) Martínez-Pérez C, Greening C, Bay SK, Lappan R, Zhao Z, De Corte D, Hulbe C, Ohneiser C, Stevens C, Thomson B, Stepanauskas R, González JM, Logares R, Herndl GJ, Morales SE*, Baltar F* (2022). Phylogenetically and functionally diverse microorganisms reside under the Ross Ice Shelf. *Nature Communications* 13, 117 [IF = 17.7, CITES = 6]

84) Chen YC & Leung PM, Cook PLM, Wong WW, Hutchinson T, Eate V, Kessler AJ, Greening C* (2022). Hydrodynamic disturbance controls microbial community assembly and biogeochemical processes in coastal sediments. *The ISME Journal* 16, 750-763 [IF = 11.2, CITES = 6]

83) Greening C*, Islam ZF, Bay SK (2022). Hydrogen is a major lifeline for aerobic bacteria. *Trends in Microbiology* 30, 330-337 [IF = 20.0, CITES = 9] (invited article)

82) Langwig MV* & De Anda V, Dombrowski N, Seitz KW, Rambo IM, Greening C, Teske A, Baker BJ* (2022). Large-scale protein level comparison of Deltaproteobacteria reveals cohesive metabolic groups. *The ISME Journal* 16, 307-320 [IF = 11.2, CITES = 13]

2021

81) Ortiz M & Leung PM*, Shelley G, Jirapanjawat T, Nauer PA, Van Goethem MW, Bay SK, Islam ZF, Jordaan K, Vikram S, Chown SL, Hogg ID, Makhalanya TP, Grinter R, Cowan DA*, Greening C* (2021). Multiple energy sources

and metabolic strategies sustain microbial diversity in Antarctic desert soils. *PNAS* 118, e2025322118 [IF = 12.8, CITES = 14]

80) Xu Y, Ting Y*, Dong X, Wang X, Zhang C, Ren W, Zhao L, Luo Y, Greening C (2021). Genome-resolved metagenomics reveals how soil bacterial communities respond to elevated H₂ availability. *Soil Biology and Biochemistry* 163, 108644 [CITES = 0] [IF = 8.5, CITES = 5]

79) Muleta AJ, Lappan R, Stinear TP, Greening C* (2021). Understanding the transmission of *Mycobacterium ulcerans*: a step towards controlling Buruli ulcer. *PLOS Neglected Tropical Diseases* 15, e0009678 [IF = 4.8, CITES = 8]

78) Chiri E & Nauer PA*, Lappan R, Jirapanjawan T, Waite DW, Handley KM, Hugenholtz P, Cook PLM, Arndt SK, Greening C* (2021). Termite gas emissions select for hydrogenotrophic microbial communities in termite mounds. *PNAS* 118, e2102625118 [IF = 12.8, CITES = 6]

77) Grinter R*, Morris FC, Dunstan RA, Leung PM, Kropp A, Belousoff M, Gunasinghe SD, Scott NE, Beckham S, Peleg AY, Greening C, Li J, Heinz E, Lithgow T* (2021). BonA from *Acinetobacter baumannii* forms a divisome-localized decamer that supports outer envelope function. *mBio* 4, e01480-21 [IF = 7.8, CITES = 3]

76) Xie F, Jin W, Si H, Yuan Y, Tao Y, Liu J, Wang X, Yang C, Li Q, Yan X, Lin L, Jiang Q, Zhang L, Guo C, Greening C, Heller R, Guan L, Pope PB, Tan Z, Zhu W, Wang M, Qiu Q, Li Z, Mao S (2021). An integrated gene catalog and over 10,000 metagenome-assembled genomes from the gastrointestinal microbiome of ruminants. *Microbiome* 9, 137 [IF = 16.8, CITES = 29]

75) French MA & Barker SF & Taruc RR, [25 authors], Greening C, [8 authors], Clasen T, Luby S, Leder K*, RISE Consortium (2021). A planetary health model for reducing exposure to faecal contamination in urban informal settlements: baseline findings from Makassar, Indonesia. *Environment International* 155, 106679 [IF = 13.4, CITES = 9]

74) Bay SK*, Waite DW, Dong X, Gillor O, Chown SL, Hugenholtz P, Greening C* (2021). Chemosynthetic and photosynthetic bacteria contribute differentially to primary production across a steep desert aridity gradient. *The ISME Journal* 15, 3339-3356 [IF = 11.2, CITES = 18]

73) Wong WW*, Greening C, Shelley G, Lappan R, Leung PM, Kessler AJ, Winfrey BK, Poh SC, Cook PLM (2021). Effects of drift algae accumulation and nitrate loading on nitrogen cycling in a eutrophic coastal sediment. *Science of the Total Environment* 790, 147749 [IF = 10.8, CITES = 5]

72) Garcia SL* & Mershad M & Buck M, Tsuji JM, Neufeld JD, McMahon KD, Bertilsson S, Greening C, Peura S (2021). Freshwater *Chlorobia* exhibit metabolic specialization among cosmopolitan and endemic populations. *mSystems* 6, e01196-20 [IF 7.3, CITES = 3]

71) Bayly K & Cordero PRF, Kropp A, Huang C, Schittenhelm RF, Grinter R*, Greening C* (2021). *Mycobacteria* tolerate carbon monoxide by remodelling their respiratory chain. *mSystems* 6, e310292-20 [IF = 7.3, CITES = 2]

70) Lappan R & Henry R, Chown SL, Luby SP, Higginson EE, Bata L, Jirapanjawan T, Schang C, Openshaw JJ, O'Toole, Lin A, Tela A, Turagabeci A, Wong THF, French MA, Brown RR, Leder K, Greening C*, McCarthy D* (2021). Monitoring diverse enteric pathogens across environmental and host reservoirs with TaqMan Array Cards and standard qPCR: a methodological comparison study. *The Lancet Planetary Health* 5, E297-E308 [IF = 28.8, CITES = 9]

69) Chen Y-J & Leung PM, Wood JL, Bay SK, Hugenholtz P, Kessler AJ, Shelley G, Waite DW, Franks A, Cook PLM*, Greening C* (2021). Metabolic flexibility allows bacterial habitat generalists to become dominant in a frequently disturbed ecosystem. *The ISME Journal* 15, 2986-3004 [IF = 11.2, CITES = 45]

68) Grinter R*, Greening C* (2021). Cofactor F420: an expanded view of its distribution, biosynthesis, and roles in bacteria and archaea. *FEMS Microbiology Reviews* 45, fuab021 [IF = 15.2, CITES = 3]

67) Jeffrey LC*, Maher DT, Tait DR, Reading MJ, Chiri E, Greening C, Johnston SG (2021). Isotopic evidence for axial tree stem methane oxidation within subtropical lowland forests. *New Phytologist* 230, 2200-2212 [IF = 10.3, CITES = 13]

66) Jeffrey LC*, Maher DT, Chiri E, Leung PM, Nauer PA, Arndt SK, Tait DR, Greening C, Johnston SG (2021). Bark-dwelling methanotrophic bacteria decrease methane emissions from trees. *Nature Communications* 12, 2127 [IF = 17.7, CITES = 26] (received *Nature Reviews Microbiology* summary)

65) Bay SK, Dong X, Bradley JA, Leung PM, Grinter R, Jirapanjawat T, Arndt SK, Cook PLM, LaRowe D, Nauer PA, Chiri E*, Greening C* (2021). Trace gas oxidizers are widespread and active members of soil microbial communities. *Nature Microbiology* 6, 246-256 [IF = 31.0, CITES = 44] (received commentary / Nature Reviews Microbiology summary / F1000 recommended)

64) Nauer PA*, Chiri E, Jirapanjawat T, Greening C, Cook PLM* (2021). Inexpensive modification of Exetainers for the reliable storage of trace-level hydrogen and carbon monoxide gas samples. *Biogeosciences* 18, 729–737 [IF 5.1, CITES = 4]

63) Leder KS*, [12 authors], Greening C, Henry R, Higginson E, Johnston D, Lappan R, [14 authors], Brown RR, RISE Consortium (2021). Study design, rationale and methods of the Revitalising Informal Settlements and their Environments (RISE) study: a cluster randomised controlled trial to evaluate environmental and human health impacts of a water sensitive intervention in informal settlements in Indonesia and Fiji. *BMJ Open* 11, e042850 [IF = 2.7, CITES = 12]

62) Giguere AT & Eichorst SA*, Meier DV, Herbold CW, Richter A, Greening C, Woebken D (2021). Acidobacteria are active and abundant members of diverse atmospheric H₂-oxidizing communities detected in temperate soils. *The ISME Journal* 15, 363-376 [IF = 11.2, CITES = 12]

2020

61) Jordaan K & Lappan R, Dong X, Aitkenhead IJ, Bay SK, Chiri E, Wieler N, Meredith LK, Cowan DA, Chown SL, Greening C* (2020). Hydrogen-oxidizing bacteria are abundant in desert soils and strongly stimulated by hydration. *mSystems* 5, e01131-20 [IF = 7.3, CITES = 20] (received video summary)

60) Dong X*, Rattray JE, Campbell C, Webb J, Chakraborty A, Adebayo O, Matthews S, Li C, Fowler M, Macdonald A, Morrison N, Groves RA, Lewis IA, Wang SH, Mayumi D, Greening C, Hubert CRJ* (2020). Thermogenic hydrocarbon biodegradation by diverse depth-stratified microbial populations at a Scotian Basin cold seep. *Nature Communications* 11, 5825 [IF = 17.7, CITES = 23]

59) Greening C*, Lithgow T* (2020). Formation and function of bacterial organelles. *Nature Reviews Microbiology* 18, 677–689 [IF = 78.3, CITES = 60] (featured article)

58) Chiri E, Greening C*, Lappan R, Waite DW, Jirapanjawat T, Dong X, Arndt SK*, Nauer PA (2020). Termite mounds contain soil-derived methanotroph communities kinetically adapted to elevated methane concentrations. *The ISME Journal* 14, 2715–2731 [IF = 11.2, CITES = 17] (co-corresponding author)

57) Islam ZF, Welsh C, Bayly K, Grinter R, Southam G, Gagen EJ, Greening C* (2020). A widely distributed hydrogenase oxidises atmospheric H₂ during bacterial growth. *The ISME Journal* 14, 2649–2658 [IF = 11.2, CITES = 27]

56) Bay S*, McGeoch MA, Gillor O, Wieler N, Palmer DJ, Baker DJ, Chown SL, Greening C* (2020). Soil bacterial communities exhibit strong biogeographic patterns at fine taxonomic resolution. *mSystems* 5, e00540-20 [IF = 7.3, CITES = 19] (editor's choice)

55) Grinter R*, Ney B, Brammananth R, Barlow CK, Cordero PRF, Gillett DL, Izore T, Cryle MJ, Harold LK, Cook GM, Taiaroa G, Williamson DA, Warden AC, Oakeshott JG, Taylor MC, Crellin PK, Jackson CJ, Schittenhelm RB, Coppel RL, Greening C* (2020). Cellular and structural basis of synthesis of the unique intermediate dehydro-F420-0 in mycobacteria. *mSystems* 5, e00389-20 [IF = 7.3, CITES = 5] (received cover image)

54) Greening C (ed.), Boyd ES (ed.) (2020). *Microbial Hydrogen Metabolism*. E-Book, Frontiers Press.

53) Kessler AJ*, Rogers A, Cyronak T, Bourke MF, Hasler-Sheetal H, Glud RN, Greening C, Meysman FJ, Eyre BD, Cook PLM (2020). Pore water conditions driving calcium carbonate dissolution in reef sands. *Geochimica et Cosmochimica Acta* 279, 16-28 [IF = 5.9, CITES = 6]

52) Leung PM*, Bay SK, Meier DV, Chiri E, Cowan DA, Gillor O, Woebken D, Greening C* (2020). Energetic basis of microbial growth and persistence in desert ecosystems. *mSystems* 5, e00495-19 [IF = 7.3, CITES = 36] (invited article)

51) Lee BM, Harold LK, Almeida DV, Afriat-Jurnou L, Aung HL, Forde BM, Hards K, Pidot SJ, Ahmed FH, Mohamed AE, Taylor MC, West NP, Stinear TP, Greening C, Beatson SA, Nuernberger EL, Cook GM, Jackson CJ* (2020). Predicting nitroimidazole antibiotic resistance mutations in *Mycobacterium tuberculosis* with protein engineering. *PLoS Pathogens* 16, e1008287 [IF = 6.8, CITES = 38]

50) Benoit SL, Maier RL*, Sawers RG, Greening C* (2020). Molecular hydrogen metabolism: a widespread trait of pathogenic bacteria and protists. *Microbiology and Molecular Biology Reviews* 84, e00092-19 [IF = 13.0, CITES = 40] (F1000 recommended / co-first author)

49) Greening C*, Boyd ES* (2020). Editorial: Microbial Hydrogen Metabolism. *Frontiers in Microbiology* 11, 56 [IF = 6.1, CITES = 4]

2019

48) Cordero PRF, Grinter R, Hards K, Cryle MJ, Warr CG, Cook GM, Greening C* (2019). Two uptake hydrogenases differentially interact with the aerobic respiratory chain during mycobacterial growth and persistence. *Journal of Biological Chemistry* 294, 18980-18991 [IF = 5.5, CITES = 20]

47) Kelly WJ, Leahy SC, Kamke J, Soni P, Koike S, Mackie R, Seshadri R, Cook GM, Morales SE, Greening C, Attwood GT* (2019). Occurrence and expression of genes encoding methyl-compound production in rumen bacteria. *Animal Microbiome* 1, 15 [IF = TBA, CITES = 27]

46) Islam ZF & Cordero PRF, Greening C* (2019). Putative iron-sulfur proteins are required for hydrogen consumption and enhance survival of mycobacteria. *Frontiers in Microbiology* 11, 2749 [IF = 5.6, CITES = 6]

45) Grinter R*, Leung PM, Wijeyewickrema LC, Littler D, Beckham S, Pike RN, Walker D, Greening C, Lithgow T* (2019). Protease-associated import systems are widespread in Gram-negative bacteria. *PLoS Genetics* 15, e1008435 [IF = 6.0, CITES = 12]

44) Taruc RZ*, [19 authors], Greening C, [10 authors], Brown RR (2019). Implementing baseline ecological and human health field assessments in the Revitalising Informal Settlements and their Environments (RISE) programme in Makassar, Indonesia: an interdisciplinary study. *The Lancet Planetary Health* 3, S8 [IF = 28.8, CITES = 0]

43) Cordero PRF & Bayly K, Leung PM, Huang C, Islam ZF, Schittenhelm R, King GM, Greening C* (2019). Atmospheric carbon monoxide oxidation is a widespread mechanism supporting microbial survival. *The ISME Journal* 13, 2868-2881 [IF = 11.2, CITES = 89]

42) Hill GE* & Hood WR, Ge Z, Grinter R, Greening C, Johnson JD, Park N, Taylor H, Andreassen V, Powers M, Justyn N, Parry H, Kavazis A, Zhang Y (2019). Plumage redness signals mitochondrial function in the House Finch. *Proceedings of the Royal Society B* 286, 20191354 [IF = 5.5, CITES = 53]

41) Carere CR*, McDonald B, Peach H, Greening C, Gapes DJ, Collet C, Stott MB (2019). Hydrogen oxidation influences glycogen accumulation in a verrucomicrobial methanotroph. *Frontiers in Microbiology* 10, 1873 [IF = 6.1, CITES = 12]

40) Greening C* & Geier R, Wang C, Woods LC, Morales SE, McDonald MJ, Rushton-Green R, Morgan XC, Koike S, Leahy SC, Kelly WJ, Cann I, Attwood GT, Cook GM, Mackie RI* (2019). Diverse hydrogen production and consumption pathways influence methane production in ruminants. *The ISME Journal* 13, 2617-2632 [IF = 11.2, CITES = 89]

39) Dong X*, Greening C, Rattray JE, Chakraborty A, Chuvochina M, Mayumi D, Dolting J, Li C, Brooks JM, Bernard BB, Groves RA, Lewis IA, Hubert CRJ* (2019). Metabolic potential of uncultured bacteria and archaea associated with petroleum seepage in deep-sea sediments. *Nature Communications* 10, 1816 [IF = 17.7, CITES = 98]

38) Bashiri G* & Antoney J, Jirgis EN, Shah MV, Ney B, Copp, J, Stuteley, SM, Sreebhavan, S, Palmer, B, Middleditch, M, Tokuriki, N, Greening C, Scott C, Baker EN, Jackson CJ* (2019). A revised biosynthetic pathway for the cofactor F420 in prokaryotes. *Nature Communications* 10, 1558 [IF = 17.7, CITES = 49]

37) Greening C*, Grinter R, Chiri E (2019). Uncovering the metabolic strategies of the dormant microbial majority: towards integrative approaches. *mSystems* 4, e00107-19 [IF = 7.3, CITES = 20] (invited article; see editorial)

36) Islam ZF, Cordero PRF, Feng J, Chen Y-J, Bay SK, Jirapanjwat T, Gleadow RM, Carere CR, Stott MB, Chiri E, Greening C* (2019). Two Chloroflexi classes independently evolved the ability to persist on atmospheric hydrogen and carbon monoxide. *The ISME Journal* 13, 1801-1813 [IF = 11.2, CITES = 78]

35) Spang A*, Stairs CW, Donbrowski N, Eme L, Lombard J, Cáceres EF, Greening C, Baker BJ, Ettema TJ* (2019). Proposal of the reverse flow model for the origin of the eukaryotic cell based on comparative analyses of Asgard archaeal metabolism. *Nature Microbiology* 4, 1138-1148 [IF = 31.0, CITES = 114] (received commentary / F1000 Recommended)

34) Kessler AJ & Chen Y-J & Waite DW, Hutchinson T, Koh S, Popa ME, Beardall J, Hugenholtz P, Cook PL*, Greening C* (2019). Bacterial fermentation and respiration processes are uncoupled in anoxic permeable sediments. *Nature Microbiology* 4, 1014-1023 [IF = 31.0, CITES = 47]

33) Hill GE*, Havird JC, Sloan DB, Burton RS, Greening C, Dowling DK (2019). Assessing the fitness consequences of mitonuclear interactions in natural populations. *Biological Reviews* 94, 1089-1104 [IF = 12.8, CITES = 86]

32) Harold LK, Antoney J, Ahmed FH, Hards K, Carr PD, Rapson T, Greening C*, Jackson CJ*, Cook, GM* (2019). FAD-sequestering proteins protect mycobacteria against hypoxic and oxidative stress. *Journal of Biological Chemistry* 294, 2903-2912 [IF = 5.5, CITES = 9] (co-corresponding author)

2018

31) Stott MB*, Carere CR, Greening C, Morgan XC (2018) *Pyrinomonas*. *Bergey's Manual of Systematics of Archaea and Bacteria* [IF = N/A, CITES = 1] (invited book chapter)

30) Morales HE*, Pavlova A, Amos N, Major R, Kilian A, Greening C, Sunnucks P* (2018). Concordant divergence of mitogenomes and a mitonuclear gene cluster in bird lineages inhabiting different climates. *Nature Ecology & Evolution* 2, 1258-1267 [IF = 19.1, CITES = 70]

29) Dong X, Greening C, Bröls T, Conrad R, Guo K, Blaskowski S, Kaschani F, Kaiser M, Laban NA, Meckenstock R* (2018) Fermentative *Spirochaetes* mediate necromass recycling in anoxic hydrocarbon-contaminated habitats. *The ISME Journal* 12, 2039-2050 [IF = 11.2, CITES = 58]

28) Bay S, Ferrari BC, Greening C* (2018) Life without water: how do bacteria generate biomass in desert ecosystems? *Microbiology Australia* 39, 28-32 [IF = N/A, CITES = 31] (invited article, see cover image)

27) Wang X, Teng Y*, Tu C, Luo Y, Greening C, Zhang N, Dai S, Ren W, Zhao L, Li Z (2018) Coupling between nitrogen fixation and tetrachlorobiphenyl 12chlorination in a rhizobium-legume symbiosis. *Environmental Science & Technology* 52, 2217-2224 [IF = 11.3, CITES = 22]

26) Krzemińska U*, Morales HE, Greening C, Nyári AS, Wilson R, Song BK, Austin CM, Sunnucks P, Pavlova A, Rahman (2018). Population mitogenomics provides insights into evolutionary history, source of invasions and diversifying selection in *Corvus splendens*. *Heredity* 120, 296-309 [IF = 3.8, CITES = 6]

25) Lamb AM, Gan HM, Greening C, Joseph L, Lee YP, Morán-Ordóñez A, Sunnucks P, Pavlova A* (2018). Climate-driven mitochondrial selection: a test in Australian songbirds. *Molecular Ecology* 27, 898-918 [IF = 6.6, CITES = 36]

2017

24) Ji M & Greening C, Vanwonderghem I, Carere CR, Bay S, Steen J, Montgomery K, Lines T, Beardall J, van Dorst J, Snape I, Stott MB, Hugenholtz P, Ferrari B* (2018). Atmospheric trace gases support primary production in Antarctic desert surface soil. *Nature* 552, 400-403 [IF = 69.5, CITES = 207] (co-first author, see commentary / behind the paper)

23) Ney B, Carere CR, Sparling R, Jirapanjawat T, Stott MB, Jackson CJ, Warden A*, Greening C* (2017). Cofactor tail length modulates catalysis of bacterial F420-dependent oxidoreductases. *Frontiers in Microbiology*, 1902 [IF = 6.1, CITES = 16]

22) Carere CR, Hards K, Houghton KM, Power JF, McDonald B, Collet C, Gapes DJ, Sparling R, Boyd ES, Cook GM, Greening C*, Stott MB* (2017). Mixotrophy drives niche expansion of verrucomicrobial methanotrophs. *The ISME Journal* 11, 2599-2610 [IF = 11.2, CITES = 94] (co-corresponding author)

21) Cook GM*, Hards K, Dunn E, Heikal A, Nakatani Y, Greening C, Crick DC, Fontes FL, Pethe K, Hasenoehrl E, Berney M (2017). Oxidative phosphorylation as a target space for tuberculosis: success, caution, and future directions. In *Tuberculosis and the Tubercle Bacilli* (edited by Jacobs Jr WR, McShane H, Mizhari V, Orme IM), ASM Press, Washington DC [IF = N/A, CITES = 73] (invited book chapter)

20) Greening C* & Jirapanjawat T, Afroze S, Ney B, Scott C, Pandey G, Lee BM, Russell RJ, Jackson CJ, Oakeshott JG, Taylor MC, Warden A* (2017). Mycobacterial F420H2-dependent reductases promiscuously reduce diverse compounds through a common mechanism. *Frontiers in Microbiology* 8, 1000 [IF = 6.1, CITES = 28]

19) Bourke M*, Marriott P, Glud R, Hasler-Sheetal H, Kamalanathan M, Beardall J, Greening C, Cook P* (2017) Metabolism in anoxic permeable sediments is dominated by eukaryotic dark fermentation. *Nature Geoscience* 10, 30-35 [IF = 21.2, CITES = 32] (received commentary)

18) Sunnucks P*, Morales HE, Lamb A, Pavlova A, Greening C (2017). Integrative approaches for studying mitochondrial and nuclear genome co-evolution in oxidative phosphorylation. *Frontiers in Genetics* 8, 25 [IF = 4.7, CITES = 55] (invited article, see editorial)

17) Ney B & Ahmed HF, Carere CR, Biswas A, Oakeshott JG, Morales SE, Watt SJ, Warden A, Taylor MC, Stott MB, Jackson CJ*, Greening C* (2017). The methanogenic redox cofactor F420 is widely synthesized by aerobic soil bacteria. *The ISME Journal* 11, 125-137 [IF = 11.2, CITES = 63]

2016

16) Jirapanjawat T & Ney B, Taylor MC, Warden AC, Afroze S, Russell RJ, Lee BM, Jackson CJ, Oakeshott JG, Pandey G, Greening C* (2016) The redox cofactor F420 protects mycobacteria from diverse antimicrobial compounds and mediates a reductive detoxification system. *Applied and Environmental Microbiology* 82, 6810-6818 [IF = 5.0, CITES = 27]

15) Søndergaard D*, Pedersen CNS, Greening C* (2016) HydDB: a web tool for hydrogenase classification and analysis. *Scientific Reports* 6, 34212 [IF = 5.0, CITES = 264]

14) Greening C* & Ahmed HF, Mohamed EA, Lee BM, Pandey G, Warden A, Oakeshott JG, Taylor MC, Jackson CJ* (2016). Physiology, biochemistry, and applications of F420 and Fo dependent redox reactions. *Microbiology and Molecular Biology Reviews* 80, 451-493 [IF = 13.0, CITES = 132] (cover image article)

13) Wolf PC, Biswas A, Morales SE, Greening C*, Gaskins HR* (2016). H₂ metabolism is widespread and diverse among human colonic microbes. *Gut Microbes* 7, 235-245. [IF = 9.4, CITES = 91] (co-corresponding author, see editorial)

12) Greening C*, Maier RJ (2016). Atmospheric H₂ fuels plant-microbe interactions. *Environmental Microbiology* 18, 2289-2291 [IF = 5.5, CITES = 3]

11) Greening C*, Biswas A, Carere CR, Jackson CJ, Taylor MC, Stott MB, Cook GM, Morales SE* (2016). Genomic and metagenomic surveys of hydrogenase distribution indicate H₂ is a widely-utilised energy source for microbial growth and survival. *The ISME Journal* 10, 761-777 [IF = 11.2, CITES = 416] (F1000 recommended)

2015

10) Ahmed FH, Carr PD, Lee BM, Afriat-Jurnou L, Mohamed AE, Hong N-S, Flanagan J, Taylor MC, Greening C, Jackson CJ* (2015). Sequence-structure-function classification of a catalytically diverse oxidoreductase superfamily in mycobacteria. *Journal of Molecular Biology* 427, 3554-3571 [IF = 6.2, CITES = 66]

9) Greening C* & Carere CR, Harold LK, Rushton-Green R, Hards K, Taylor MC, Morales SE, Stott MB*, Cook GM (2015). Persistence of the dominant soil phylum Acidobacteria by trace gas scavenging. *PNAS* 112, 10497-10502 [IF = 12.8, CITES = 103]

8) Greening C*, Constant P, Hards K, Morales SE, Oakeshott JG, Russell RJ, Taylor MC, Berney M, Conrad R, Cook GM (2015). Atmospheric hydrogen scavenging: from enzymes to ecosystems. *Applied and Environmental Microbiology* 81, 1190-1199 [IF = 5.0, CITES = 81] (received editorial)

2014

7) Berney M* & Greening C*, Conrad R, Jacobs JR WR, Cook GM (2014). An obligately aerobic soil bacterium activates fermentative hydrogen production to survive reductive stress during hypoxia. *PNAS* 111, 11479-11484 [IF = 12.8, CITES = 98] (co-first & co-corresponding author)

6) Greening C* (2014) Living on thin air. *Australasian Science* 35, 19-21 [IF = N/A, CITES = 0] (invited book chapter, non-peer-reviewed)

- 5) Cook GM* & Greening C & Hards K & Berney M (2014). Energetics of pathogenic bacteria and opportunities for drug discovery. pp. 1-81 in *Advances in Bacterial Pathogen Biology* (edited by Poole RK), Academic Press, Waltham MA [IF = N/A, CITES = 102] (invited article, co-first author)
- 4) Greening C, Villas-Bôas SG, Robson JR, Berney M, Cook GM* (2014). The growth and survival of *Mycobacterium smegmatis* is enhanced by co-metabolism of atmospheric H₂. *PLoS ONE*, e10304 [IF = 3.7, CITES = 53]
- 3) Greening C*, Cook GM* (2014). Integration of hydrogenase expression and hydrogen sensing in bacterial cell physiology. *Current Opinion in Microbiology* 18, 30-38 [IF = 7.6, CITES = 37] (invited article, see editorial)
- 2) Greening C, Berney M, Hards K, Cook GM*, Conrad R* (2014). A soil actinobacterium scavenges atmospheric H₂ using two high-affinity, O₂-dependent [NiFe]-hydrogenases. *PNAS* 111, 4257-4261 [IF = 12.8, CITES = 120]
- 1) Berney M, Greening C & Hards K, Collins D, Cook GM* (2014). Three different [NiFe]-hydrogenases confer metabolic flexibility in the obligate aerobe *Mycobacterium smegmatis*. *Environmental Microbiology* 16, 318-330 [IF = 5.5, CITES = 56]