

## CURRICULUM VITAE: PROF CHRIS GREENING

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

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

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**Website:** greeninglab.com

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### QUALIFICATIONS

2014	Ph.D., Department of Microbiology and Immunology, University of Otago <i>Physiological roles of the three [NiFe]-hydrogenases in Mycobacterium smegmatis</i>
2010	M.Sc./B.Sc. (1 <sup>st</sup> Class), Molecular and Cellular Biochemistry, University of Oxford <i>Variants of heme d<sub>1</sub> biosynthesis enzymes in Paracoccus pantotrophus</i>
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)
- 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.

2023 – 2026	ARC Discovery Project Grant (DP230103080, CI-A), \$694K Extracting energy from air: mechanism of a bacterial hydrogenase
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 Research Hub for Carbon Utilisation and Recycling
2022 – 2025	NSF Partnerships for International Research and Education (OISE-2230766; CI-C), \$1.5M Four networks for geologic hydrogen storage
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, agritech, 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 seven PhD students, five postdoctoral fellows, two research assistants, and one Honours student. The five 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. Five postdoctoral fellows that I have mentored have secured independent fellowships and five are now independent group leaders (Rhys Grinter, Carlo Carere, Rachael Lappan, Sean Bay, Ya-Jou Chen).

### **PhD lead supervision:**

James Archer	Regulation and assembly of a high-affinity hydrogenase	2023 –
Nadeesha Athukorala	Metabolic flexibility of aerobic gas-consuming bacteria	2023 –
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 – 2022
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 biogeochemistry and microbial communities in permeable sediments	2016 – 2020
Dr Sean Bay	Structure and basis of soil microbial biodiversity	2016 – 2020

### **PhD co-supervision:**

Patrick Morrison (2023 – ), Ashleigh Kropp (2022 – ), Afif Jati (2022 – ), Fabian Mnder (2021 – ), Ning Hall (2021 – ), Tess Hutchinson (2021 – ), Maha Alharbi (2021 – ), Sarah Reeve (2017 – 2021), Dr Rosemarie Herbert (2016 – 2017), Dr Dan Sndergaard (Aarhus, 2015 – 2018), Dr Brendon Lee (ANU, 2015 – 2018), Dr Liam Harold (Otago, 2015 – 2019)

### **Postdoctoral staff:**

Dr Francesco Ricci (2023 – ), Dr Pok Man Leung (2023 – ), 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 – 2022; secured DECRA Fellowship; now group leader), Dr Rachael Lappan (2019 – 2022; secured DECRA Fellowship; now group leader at Monash University), 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:**

James Lingford (2023 – ), James Archer (2023), 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:**

Montgomery Hall (2023), 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:**

Lily Collins (2022 – 2023), Giulia Ragucci (2022 – 2023), Gemma Schlegel (2022 – 2023), Ella Petrovski (2022 – 2023), 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 – 2023
BMS5003: Infectious diseases and population health	Lecturer	2020 – 2022
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
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### **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 – )
- Affiliate: Monash Sustainable Development Institute (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 – 2022)
- 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: Biomedical Research Early Career Postdoctoral Fellowships (2022)
- 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:**

- Climate Program Lead: Biomolecular Horizons Conference (Melbourne, 2024)
- Chair: AusME: Australian Microbial Ecology Conference (Melbourne, 2022)
- Organising Committee: ASM Hour (Virtual, 2022 – )
- Organising Committee: 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: Microbiology Australia special issue (2023)
- Editor: mSystems (2022 – )

- Editor: Microbial Genomics (2021 – )
- 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 – 2022)
- 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
- Panellist for NHMRC Investigator Grants
- 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), ABC (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. 12<sup>th</sup> 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. 10<sup>th</sup> 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. School of Earth, Atmosphere & Environment, Monash University, Australia (2022)
3. Biochemistry and Microbiology Building, University of Sydney, Sydney, Australia (2022)
4. Australian institute for Microbiology & Infection, University of Technology Sydney, Sydney, Australia (2022)
5. Marine Biological Association, Plymouth, UK (2022)
6. Department of Biochemistry, University of Oxford, Oxford, UK (2022)
7. UK Centre for Astrobiology, University of Edinburgh, Edinburgh, UK (2022)
8. School of Biological Sciences, University of Aberdeen, Aberdeen, UK (2022)
9. Biomedicine Discovery Institute, Monash University, Melbourne, Australia (2021)
10. Doherty Institute for Infection and Immunity, Melbourne University, Melbourne, Australia (2021)
11. Department of Earth and Planetary Science, UC Berkeley, California, USA (2021)
12. Department of Chemistry & Biochemistry, Montana State University, Montana, USA (2021)
13. Securing Antarctica's Environmental Future Seminar Series, Australia (2021)
14. Atmospheric Physics and Chemistry Group, Utrecht University, Utrecht, Netherlands (2019)
15. Department of Microbiology, Radboud University, Nijmegen, Netherlands (2019)
16. Royal Netherlands Institute for Sea Research, Tessel, Netherlands (2019)
17. Biomolecular Sciences and Biotechnology Institute, University of Groningen, Groningen, Netherlands (2019)
18. Department of Agrotechnology and Food Sciences, Wageningen University, Wageningen, Netherlands (2019)
19. Centre for Microbial Ecology and Genomics, University of Pretoria, Pretoria, South Africa (2019)
20. School of Biological Sciences, University of Auckland, New Zealand (2019)
21. School of Biological Sciences, University of Canterbury, New Zealand (2019)
22. Department of Molecular Science, Macquarie University, Sydney, Australia (2019)
23. Carl R. Woese Institute for Genomic Biology, University of Illinois-Champaign, Champaign, IL USA (2018)
24. Center for Metalloenzyme Studies, University of Georgia, Athens, GA USA (2018)
25. Rollins School of Public Health, Emory University, Atlanta, GA USA (2018)
26. Department of Biological Sciences, Louisiana State University, Baton Rouge, LA USA (2018)
27. Division of Microbial Ecology, University of Vienna, Vienna, Austria (2018)
28. School of Chemistry and Molecular Biosciences, University of Queensland, Brisbane, Australia (2018)
29. Department of Physiology, Anatomy and Microbiology, La Trobe University, Melbourne, Australia (2018)
30. Department of Microbiology and Immunology, University of Otago, Dunedin, New Zealand (2018)
31. 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 100 journal articles and book chapters (average 12 per year). Demonstrating my leadership, I am corresponding/senior author on 66 (66%) and first author on 21 (21%) publications. Over half of my journal articles (50 of 89) 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 38, 4362 cites total, 33 papers cited > 50 times) and my citations show a rapid upward trajectory (162 in 2017, 283 in 2018, 477 in 2019, 762 in 2020, 1273 in 2023). Six of these articles received commentaries, five received editor spotlights, three are F1000-recommended, and three are cover articles.

## Preprints

100) Leung PM\*, Grinter R, Tudor-Matthew E, Jimenez L, Lee H, Milton M, Hanchapola I, Tanuwidjaya E, Peach H, Carere CR, Stott MB, Schittenhelm RB, Greening C\* (2023). Atmospheric hydrogen oxidation extends to the domain archaea. Under submission [CITES = 0]

99) Valentin Alvarado LE, Fakra SC, Probst AJ, Giska JR, Jaffe AL, Oltrogge LM, West-Roberts J, Rowland J, Manga M, Savage DF, Greening C, Baker BJ, Banfield JF\* (2023). Autotrophic biofilms sustained by deeply-sourced groundwater host diverse CPR bacteria implicated in sulfur and hydrogen metabolism. In revision [CITES = 0]

## 2023

98) Dong X\*, Peng Y, Wang M, Woods L, Wu W, Wang Y, Xiao X, Li J, Jia K, Greening C, Shao Z, Hubert CRJ (2023). Evolutionary ecology of microbial populations inhabiting deep sea sediments associated with cold seeps. Conditionally accepted, Nature Communications [IF = 17.7, CITES = 0]

97) Grinter R\* & Kropp A, Venugopal H, Senger M, Badley J, Cabotaje P, Jia Ruyu, Duan Z, Huang P, Stripp ST, Barlow CK, Belousoff M, Shafaat HS, Cook GM, Vincent KA, Schittenhelm RB, Khalid S, Berggren G, Greening C\* (2023). Energy extraction from air: structural basis of atmospheric hydrogen oxidation. In press, Nature [IF = 69.5, CITES = 0]

96) Jain S\*, Heffernan J, Joshi J, Watts T, Marcellin E\*, Greening C\* (2023). Microbial conversion of waste gases into single-cell protein. In press, Microbiology Australia [IF = N/A, CITES = 0] (invited article)

95) Lappan R & Shelley G & Islam ZF, Leung PM, Lockwood S, Nauer PA, Jirapanjawan T, Ni G, Chen Y-C, Kessler AJ, Williams TJ, Cavicchioli R, Baltar F, Cook PLM, Morales SE, Greening C\* (2023) Molecular hydrogen in seawater supports growth of diverse marine bacteria. In press, Nature Microbiology [IF = 31.0, CITES = 0]

94) Ni G & Lappan R, Hernandez M, Santini T, Tomkins A, Greening C\* (2023). Functional basis of primary succession: traits of the pioneer microbes. Environmental Microbiology 25, 171-176 [IF = 5.5, CITES = 0] (invited article)

## 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)

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