

# *Curriculum Vitae*

## **Stephen Brian Pointing**

### **Personal Details**

Nationality: British/New Zealand  
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### **Qualifications**

MBA (with commendation) Education Management, University of Leicester (2010)  
PhD Marine Microbiology, University of Portsmouth (1995)  
MSc & BSc (hons) Biological Sciences, Portsmouth Polytechnic (1991)

### **Employment History**

2023 – present Professor, Department of Biological Sciences, National University of Singapore (NUS)  
2017 – 2023 Professor, Division of Science, Yale-NUS College (NUS)  
2013 – 2017 Professor, School of Sciences, Auckland University of Technology (AUT)  
2008 – 2012 Associate Professor, School of Biological Sciences, The University of Hong Kong (HKU)  
2001 – 2008 Assistant Professor, Department of Ecology and Biodiversity, HKU  
1998 – 2001 Research Assistant Professor, Department of Ecology and Biodiversity, HKU  
1996 – 1998 Postdoctoral Research Fellow, Department of Biology and Chemistry, City University of Hong Kong

### **Research Interests**

The focus of my research is the biogeography and ecophysiology of microorganisms in extreme environments. I have specifically focused on hot springs, deserts, and polar regions. This work helps to resolve how microbial communities respond to extreme stress and this is relevant to understanding their ecology across diverse habitats in a changing world. I have also maintained an interest in applied microbiology with projects addressing the role of microorganisms in biodeterioration of cultural heritage and transformation of pollutants in extreme environments. I have supervised 24 PhD and MPhil/MSc students and consistently attracted external research funding for over twenty-five years.

## Publications

Summary: I have published over 125 scientific articles with several in leading journals including *Nature*, *Nature Communications*, *Nature Microbiology*, *Nature Reviews Microbiology*, and *Proceedings of the National Academy of Sciences*. I am the senior and corresponding author for the majority of my publications. My work has attracted 13,516 citations and my h-index is 60 (Google Scholar, accessed 01/08/23). Ten representative articles with an impact factor of 10+ are listed below:

### Ten representative publications

(corresponding author underlined)

1. Archer SDJ, Lee KC, Caruso T *et al.* & Pointing SB (2023) Contribution of soil bacteria to the atmosphere across biomes. *Science of the Total Environment*, 871, 162137.
2. Santl-Temkiv T, Amato P, Casamayor EI, Lee PKH, Pointing SB (2022) Microbial ecology of the atmosphere. *FEMS Microbiology Reviews* doi:10.1093/femsre/fuac009.
3. Archer SDJ, Lee KC, King-Miaow K, Harvey M, Wainwright B, Huang D, Pointing SB (2020) Air mass source determines airborne microbial diversity at the ocean-atmosphere interface of the Great Barrier Reef marine ecosystem. *The ISME Journal* 14, 871-876.
4. Archer SDJ, Lee KC, Maki T, Lee CK, Cary SC, Cowan DA, Maestre FT, Pointing SB (2019) Airborne microbial transport limitation to isolated Antarctic soil habitats. *Nature Microbiology* 4, 925-932.
5. Pointing SB, Fierer N, Smith GJD, Steinberg PD, Wiedmann M (2016) Quantifying human impact on Earth's microbiome. *Nature Microbiology* 1, 16145.
6. Chan Y, van Nostrand J, Zhou J, Pointing SB, Farrell RL (2013) Functional ecology of an Antarctic dry valley. *Proceedings of the National Academy of Sciences USA* 110, 8990-8995.
7. Pointing SB and Belnap J (2012) Microbial colonization and controls in dryland systems. *Nature Reviews Microbiology* 10, 551-562.
8. Bahl J, Lau MCY, Smith GJD, Dhanasekaran V, Cary SC, Lacap DC, Lee CK, Papke RT, Warren-Rhodes KA, Wong FKY, McKay CP, Pointing SB (2011) Ancient origins determine global biogeography of hot and cold desert cyanobacteria. *Nature Communications* 2, 163.
9. Caruso T, Chan Y, Lacap DC, McKay CP, Pointing SB (2011) Stochastic and deterministic processes interact to determine global biogeography of arid soil bacteria. *The ISME Journal* 5, 1406-1413.
10. Pointing SB, Chan Y, Lacap DC, Lau MCY, Jurgens J, Farrell RL (2009) Highly specialized microbial diversity in hyper-arid polar desert. *Proceedings of the National Academy of Sciences USA* 106, 19964-19969.

## Research Funding

Recent research grants:

1. Biogeography, functional ecology, and resilience of photosynthetic microbial communities under extreme environmental stress (2023-2026), Singapore MoE Tier 2 Fund, SGD SGD 929,591 (USD 686,500).
2. Understanding the role of Singapore's microbiome at the air-sea interface (2022-2025), Singapore MoE Tier 2 Fund, SGD 1.2 million (USD 892,000).