



Alexander B. Chase

MICROBIAL ECOLOGY • NATURAL PRODUCTS



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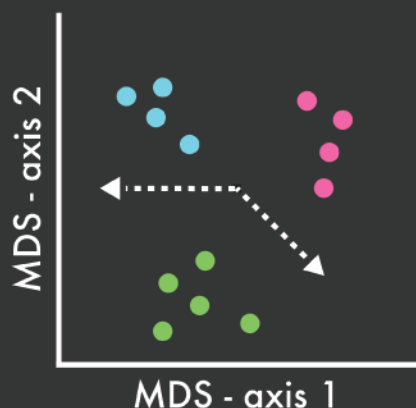
RESEARCH INTERESTS

Microbial biogeographical patterns and the role microbes play in regulating and/or promoting ecosystem processes

Evolutionary processes that influence microbial population dynamics using (meta)genomics

Establishing links between fine-scale genetic diversity and functional traits

Ecological roles of bacterial specialized metabolites and the evolutionary processes contributing to their distribution



PROFESSIONAL APPOINTMENTS

- 2022 - Assistant Professor
Roy M. Huffington Department of Earth Sciences
Southern Methodist University (SMU)
- 2019 - 2022 Postdoctoral Research Fellow
Center for Marine Biotechnology and Biomedicine
Scripps Institution of Oceanography
- 2018 Research Affiliate
Earth and Environmental Sciences
Lawrence Berkeley National Laboratory
- 2014 - 2018 Graduate Student Researcher
Ecology and Evolutionary Biology
University of California, Irvine
- 2012 - 2013 Research Associate III
Ecology and Evolutionary Biology
University of California, Los Angeles
- 2009 - 2010 Research Assistant
National Center for Research on Evaluation,
Standards, and Student Testing (CRESST)
University of California, Los Angeles

EDUCATION

- 2014 - 2018 Doctor of Philosophy (Ph.D.) - Biological Sciences
University of California, Irvine
"Ecological and evolutionary processes contributing to the formation of bacterial populations"
Advisor: Dr. Jennifer Martiny
- 2014 - 2017 Master of Science - Ecology and Evolutionary Biology
University of California, Irvine
Advisor: Dr. Jennifer Martiny
- 2008 - 2012 Bachelor of Science - Biological Sciences
University of California, Los Angeles

PUBLICATIONS

- 2022 NC Scales, AB Chase, SS Finks, AA Malik, C Weihe, SD Allison, AC Martiny, JBH Martiny
Differential response of bacterial microdiversity to simulated global change
[Applied and Environmental Microbiology](#)
G Castro-Falcón, KE Creamer, AB Chase, MC Kim, D Sweeney, E Glukhov, W Fenical, PR Jensen
Structure and candidate biosynthetic gene cluster of a manumycin-type metabolite from *Salinispora pacifica*
[Journal of Natural Products](#)
- 2021 AB Chase, D Sweeney, MN Muskat, D Guillen-Matus, PR Jensen
Vertical inheritance facilitates interspecies diversification in biosynthetic gene clusters and specialized metabolites
[mBio](#)
AB Chase, C Weihe, JBH Martiny
Adaptive differentiation and rapid evolution of a soil bacterium along a climate gradient
[Proceedings of the National Academy of Sciences](#)
Z Shang, ZE Ferris, D Sweeney, AB Chase, C Yuan, L Hou, E Older, D Xue, X Tang, W Zhang, et al.
Grincamycins P–T: rearranged angucyclines ... inhibit cell lines of the rare cancer pseudomyxoma peritonei
[Journal of Natural Products](#)
A Oliver, AB Chase, C Weihe, S Orchanian, SF Riedel, C Hendrickson, ML Lay, JM Sewall, JBH Martiny, KL Whiteson
High fiber, whole foods dietary intervention alters the human gut microbiome but not fecal short-chain fatty acids
[mSystems](#)
MA Schorn...AB Chase...PR Jensen, K Duncan, M Crusemann, S Rogers, PC Dorrestein, MH Medema, JJJ van der Hoof
A community resource for paired genomic and metabolomic data mining
[Nature Chemical Biology](#)
- 2020 B Román-Ponce, N Millán-Aguíñaga, D Guillen-Matus, AB Chase, JGM Gingini, K Soapi, KD Fessner, PR Jensen, ME Trujillo
Six novel species of the obligate marine actinobacterium ... and emended description of the genus *Salinispora*
[International Journal of Systematic and Evolutionary Microbiology](#)
JM Sewall, A Oliver, K Denaro, AB Chase, C Weihe, M Lay, JBH Martiny, KL Whiteson
Fiber Force: a fiber diet intervention in an advanced Course-based Research Experience (CURE) course
[Journal of Microbiology and Biology Education](#)
- 2019 AB Chase, P Arevalo, EL Brodie, MF Polz, U Karaoz, JBH Martiny
Maintenance of sympatric and allopatric populations in free-living terrestrial bacteria
[mBio](#)
MBN Albright, AB Chase, JBH Martiny
Experimental evidence that stochasticity contributes to bacterial composition and functioning in a decomposer community
[mBio](#)
T Gallagher, J Phan, A Oliver, AB Chase, WE England, S Wandro, C Hendrickson, SF Riedel, KL Whiteson
Cystic fibrosis-associated *Stenotrophomonas maltophilia* strain-specific adaptations and responses to pH
[Journal of Bacteriology](#)
- 2018 AB Chase, Z Gomez-Lunar, AE Lopez, J Li, SD Allison, AC Martiny, JBH Martiny
Emergence of soil bacterial ecotypes along a climate gradient
[Environmental Microbiology](#)
AB Chase & JBH Martiny
The importance of resolving biogeographic patterns of microbial microdiversity
[Microbiology Australia](#)
- 2017 AB Chase, U Karaoz, EL Brodie, Z Gomez-Lunar, AC Martiny, JBH Martiny
Microdiversity of an abundant terrestrial bacterium encompasses extensive variation in ecologically relevant traits
[mBio](#)
AB Chase, KL Dolan, DJ Mohamed, JBH Martiny
Microbial Biodiversity. Encyclopedia of Biodiversity. Elsevier Press
- 2016 AB Chase, P Arevalo, MF Polz, R Berlemont, JBH Martiny
Evidence for ecological flexibility in the cosmopolitan genus *Curtobacterium*
[Frontiers in Microbiology](#)
MB Nelson, AB Chase, JBH Martiny, R Stocker, J Nguyen, K Lloyd, RT Oshiro, DB Kearns, et al.
The Microbial Olympics 2016
[Nature Microbiology](#)