

Quincy Faber, PhD
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SUMMARY

Dr. Faber's research program explores how microorganisms adapt to extreme environments found in polar regions. Her interdisciplinary approach bridges microbial ecology, genomics, geochemistry, and ecosystem science to understand how microbial communities survive and respond to environmental change.

EDUCATION

University of Florida , Gainesville, FL Ph.D., Microbiology and Cell Science Dissertation: <i>Composition, Nutrient Cycling, and Cross-Domain Interactions of Glacial Microbial Communities</i> Advisor: Brent C. Christner	August 2024
Georgia Institute of Technology , Atlanta, GA B.S., Biochemistry Minor: Biology	May 2019

RESEARCH APPOINTMENTS

The Ohio State University , Columbus, OH Byrd Polar and Climate Research Center School of Earth Sciences <i>Postdoctoral Scholar, School of Earth Sciences</i>	October 2025- Present
Cold Regions Research and Engineering Lab , Hanover, NH <i>Postdoctoral Researcher, Biogeochemical Sciences Branch</i>	September 2024- September 2025
University of Florida , Gainesville, FL <i>Graduate Research Assistant, Microbiology and Cell Science</i>	August 2019- August 2024

TEACHING EXPERIENCE

Columbus State Community College <i>Adjunct Professor, BIO2215 Microbiology</i>	Columbus, OH Spring 2026
University of Florida <i>Graduate Teaching Assistant, MCB4150/MCB6151 Prokaryotic Diversity</i>	Gainesville, FL Summer 2025
University of Florida <i>Graduate Teaching Assistant, MCB 3020 Lab for Basic Biology of Microorganisms</i>	Gainesville, FL 2019-2021
Georgia Institute of Technology <i>Undergraduate Teaching Assistant, CHEM 2211 Quantitative Analysis</i>	Atlanta, GA Fall 2018

PUBLICATIONS

⁺ indicates a mentee I supervised

9. **Q. Faber**, G. K. Davis⁺, A. B. Michaud. 2026. A structured approach to onboarding undergraduate researchers in environmental microbiology laboratories. *Journal of Microbiology & Biology Education*. In press.
8. J. R. West, **Q. Faber**, A. Shepherd⁺, R. A. Barbato. 2026. Genome-based predictions of metabolic preferences and substrate phenotypes in psychrotrophic bacteria from permafrost environments. *Microbiology Spectrum*. <https://doi.org/10.1128/spectrum.00617-26>
7. H. C. Lemus-Cisneros, R. A. Barbato, A. McCarthy, S. Blisard, J. Compton, **Q. Faber**, D. Leary, V. A. Roman, Blake Stamps. 2026. High-quality draft genome sequence of *Cryobacterium* sp. AP23 isolated from ancient Alaskan permafrost. *Microbial Resource Announcements*. <https://doi.org/10.1128/mra.00307-26>
6. **Q. Faber**, C. C. M. Baker, J. R. West, S. J. Doherty, J. G. Ernakovich, R. A. Barbato. 2026. Antimicrobial resistance varies with warming in active layer soil and permafrost. *Scientific Reports*. 16. <https://doi.org/10.1038/s41598-026-46295-2>
5. **Q. Faber**, J. R. West, E. Corriveau, R. Barbato. 2025. Complete Genomic Sequences of Nine Bacillota isolated from Alaskan permafrost. *Microbial Resource Announcements*. 14:9. <https://doi.org/10.1128/mra.00268-25>
4. **Q. Faber**, C. Davis, B. C. Christner. 2024. Metagenomic inference of microbial community composition and function in the weathering crust aquifer of a temperate glacier. *Frontiers in Microbiomes*. 3. <https://doi.org/10.3389/frmbi.2024.1488744>
3. A. Dubnick, **Q. Faber**, J. R. Hawkings, N. Bramall, B. C. Christner, P. T. Doran, J. Nadeau, C. Snyder, A. M. Kellerman, A. M. McKenna, R. G. M. Spencer, M. L. Skidmore. 2022. Biogeochemical responses to mixing of glacial meltwater and hot spring discharge in the Mount St. Helens crater. *JGR Biogeosciences*. 127. e2022JG006852. <https://doi.org/10.1029/2022JG006852>
2. L. M. Jay-Garcia, J. L. Cornell, R. L. Howie, **Q. Faber**, A. Salas, T. A. Chernova, Y. O. Chernoff. 2023. Yeast Chaperone Hsp70-Ssb Modulates a Variety of Protein-Based Heritable Elements. *Int. J. Mol. Sci.* 24:10. <https://doi.org/10.3390/ijms24108660>
1. R. L. Howie, L. M. Jay-Garcia, D. A. Kiktev, **Q. Faber**, M. Murphy, K. A. Rees, N. Sachwani, Y. O. Chernoff. 2019. Role of the Cell Asymmetry Apparatus and Ribosome-Associated Chaperones in the Destabilization of a *Saccharomyces cerevisiae* Prion by Heat Shock. *Genetics*. 213:3. <https://doi.org/10.1534/genetics.119.302237>

GRANTS AND FELLOWSHIPS

Trainee Travel Award, Ohio State University Center for Microbiome Science
Funding travel to Polar and Alpine Microbiology Conference in 2027

2026

ORISE Postdoctoral Fellowship , US Army Corps of Engineers	2025
Water Institute Graduate Fellowship , <i>High Latitude Hydrology: Water in a Changing World</i> , University of Florida	2019-2023
Member of an interdisciplinary cohort of PhD students researching the impacts of ice retreat in Greenland.	
Dr. James Davidson Graduate Travel Scholarship , University of Florida	2022
\$650	
Funded travel to The International Symposium for Microbial Ecology in Lausanne, Switzerland.	
Student Government Graduate Student Travel Grant , University of Florida	2022
\$300	
Funded travel to the Polar and Alpine Microbiology Conference in Potsdam, Germany.	
NASA FSGC Dissertation and Thesis Improvement Fellowship , <i>Brine Analogs for the Europa Subsurface</i> \$5,000, Mentor: Brent C. Christner	2022
Funded metagenomic study to assess microbial adaptations to icy environments.	
DOE Office of Science Graduate Student Research Program ,	2022
<i>Biogeochemical cycling by phototrophic consortia in near-surface aquifers of the Greenland Ice Sheet</i> ~\$11,000, Mentors: Brent C. Christner, Xavier Mayali	
Funded study using nanoSIMS to assess carbon and nitrogen cycling of microbial communities within the Greenland Ice Sheet.	
American Geophysical Union Horton Research Grant , <i>Glacier Algae in Supraglacial Weathering Crust Ecosystems</i> \$10,000, Mentor: Brent C. Christner	2022
Funded study of microbial community composition within the Greenland Ice Sheet.	
President's Undergraduate Research Award at the Georgia Institute of Technology , <i>Role of SSB in Novel Prion</i> \$2,500, Mentor: Yury O. Chernoff	2020
President's Undergraduate Research Award at the Georgia Institute of Technology , <i>Isolation of Glaucoma-related Protein Domain</i> \$2,500, Mentor: Raquel L Lieberman	2018

FIELD EXPERIENCE

Field Microbiologist: Puerto Rico	November 2024
Conducted mobile field sampling across multiple coastal sites, collecting samples for microbial ecology research supporting biocementation applications.	
Field Microbiologist: Kangerlussuaq, Greenland	May- August 2022, 2023
Conducted microbial and geochemical sampling during two summer field seasons in a semi-remote Arctic environment.	
Collaborated within a highly interdisciplinary research team investigating the ecological and landscape-level consequences of Arctic ice loss.	
Microbiology Lead: Mt St Helens, Washington, USA	September 2020, 2021

Led microbiological field activities and coordinated glacier sampling in a remote volcanic landscape.
Collaborated with an interdisciplinary NASA-supported research team.

PRESENTATIONS

**Talk, ⁺Mentee*

*Q. Faber, T. J. Vick-Majors, E. S. Kane, D. Emerson, A. B. Michaud. Permafrost Thaw-Driven Disturbances Reshape Microbial Composition in Arctic Soils and Lakes. Polar and Alpine Microbiology Meeting, 2026.

*Q. Faber, C. C. M. Baker, J. R. West, S. J. Doherty, R. A. Barbato. Dynamics of Antimicrobial Resistance Genes in Thawing Arctic Soils. Tri-Services Microbiome Consortium, 2025.

⁺J. Anderson, Q. Faber, ⁺A. Shepherd, J. R. West, R. A. Barbato, Isolation and Characterization of *Methylococcus* Isolated from Permafrost. CRREL Student Research Symposium, 2025.

*Q. Faber, J. R. West, ⁺A. Shepherd, E. J. Corriveau, S. Sher, B. C. Christner, K. M. Shafi, S. Techtman, T.J. Vick-Majors, R. A. Barbato. Evaluation of Psychrotrophic Bacteria for Biotechnological Potential. American Society for Microbiology Microbe conference, 2025.

*Q. Faber, J. R. West, A. Shepherd, E. J. Corriveau, R. A. Barbato. Exploring the Biotechnological Potential of Psychrotrophic Bacteria: Insights from the ICE-COLD Library. Ron Liston Seminar, 2025.

Q. Faber, M. Flint, ⁺K. Palmer, J. Martin, B. C. Christner. Carbon Cycling and Nutrient Storage in Supraglacial Environments on the western margin of the Greenland Ice sheet. EGU General Assembly, 2024.

Q. Faber, M. Flint, ⁺K. Palmer, J. Martin, B. C. Christner. Microbial and Nutrient Composition of Seasonal Porous Aquifers that Form in Ablating Glacial Ice. American Geophysical Union Fall Meeting. 2023.

⁺Palmer, K., Faber, Q., Christner, B. C. “Microbial Cell Distribution in Near-Surface Glacial Ice in Western Greenland”. Florida American Society for Microbiology Annual Meeting, 2023.

Q. Faber, B.C. Christner. Vertical gradients of light, biomass, and microbial taxa in near-surface glacial ice. American Geophysical Union Fall Meeting, 2022.

Q. Faber and the SILA Science Team. Connecting Florida Students to Arctic Science through After-school Education Programs. American Geophysical Union Fall Meeting, 2022.

*Q. Faber, A. Dubnick, J. R. Hawkings, M. Skidmore, N. Bramall, B.C. Christner, P. T. Doran, J. Nadeau, C. Snyder, K. Bywaters, A. M. Kellerman, A. M. McKenna, R. G. M. Spencer. Effects of glacial and geothermal stream mixing on microbial communities in the Mount St. Helens crater. International Symposium on Microbial Ecology, 2022.

*Q. Faber, B. C. Christner. Environmental conditions and biogeochemical cycling in supraglacial weathering crust habitats. International Conference on Polar and Alpine Microbiology, 2022.

Q. Faber, C. Davis, Brent C. Christner. Metagenomic analysis of algal communities inhabiting the near-surface aquifer of an Alaskan glacier. University of Florida Water Institute Symposium, 2022.

*Q. Faber, Christina Davis, Brent C. Christner. Composition of the sympagic algal community in the near-surface ice of an Alaskan glacier revealed by metagenomic analysis. American Geophysical Union Fall Meeting, 2021.

*Q. Faber, A. Dubnick, J. R. Hawkings, M. Skidmore, N. Bramall, B.C. Christner, P. T. Doran, J. Nadeau, C. Snyder, K. Bywaters, A. M. Kellerman, A. M. McKenna, R. G. M. Spencer. Fire and Ice: Effects of glacial and geothermal stream mixing on microbial communities at Mount St. Helens. Microbiology and Cell Science Student Research in Progress Seminar October 2021.

Q. Faber, C. Davis, B. C. Christner. Metagenomic analysis of algae colonizing the near surface aquifer of a temperate glacier. JGI Annual Meeting August 2021.

*Q. Faber and the SILA Science Team. Significance of Ice-loss to Landscapes in the Arctic (SILA): Biological, geochemical, and hydrologic feedbacks influenced by ice-loss in Western Greenland. Association of Polar Early Career Scientists International Online Conference, 2021.

Q. Faber, C. Davis, R. Moore, B. C. Christner. Phylogenetic support for glacier algae metagenomes linked through atmospheric transport. American Geophysical Union Fall Meeting, 2020.

Q. Faber, L. M. Jay-Garcia, R. L. Howie, T. Chernova, Y. O. Chernoff. Role of ribosome-associated chaperone Hsp70-SSB in prion-based stress memory. Southeastern Regional Yeast Meeting, 2019.

MENTORSHIP EXPERIENCE

Grace Davis, The Ohio State University, Undergraduate researcher	2026-Present
Rylin Lofton, The Ohio State University, Undergraduate researcher	2025-Present
Jacklyn Anderson, CRREL, High school intern	2025
Abigail Shepherd, CRREL, Post-baccalaureate researcher	2024-2025
Katelyn Palmer, University of Florida, Undergraduate researcher	2022-2024
Natasha Klayman, University of Florida, Undergraduate researcher	2021-2022
Mason Atkinson, University of Florida, Undergraduate researcher	2020-2022

ACADEMIC SERVICE

Manuscript Reviewer: Scientific Reports, Journal of Geophysical Research Biogeosciences, Federation of European Microbiological Societies Microbiology Ecology	2025- current
Abstract Reviewer: American Society for Microbiology Microbe Meeting	2026
Proposal Reviewer: Ohio State University's President's Research Excellence Accelerator competition	2025
Session Convener: American Geophysical Union Fall Meeting	2023

LEADERSHIP & OUTREACH

Byrd Polar and Climate Research Center tours (n=150 k-12 or university students)	2025-present
Skype a Scientist meetings with K-12 classrooms (n=450 k-12 students)	2020-present
McAuliffe-Shepard Discovery Center, Education volunteer	2024
American Geophysical Union, Local Science Partner	2022-2023
Gainesville After School Science Clubs (3 times per year)	2021-2023

Microbiology and Cell Science Graduate Student Organization, class representative	2021-2022
Florida Junior Science, Engineering, and Humanities Symposium judge	2021-2022
Alaska Native Science and Engineering Program, virtual presenter	2020-2021
Alachua County Science Fair Judge	2020

PROFESSIONAL AFFILIATIONS

American Society for Microbiology	2020 - Present
American Geophysical Union	2020 - Present