

ANNE M. KATULA

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Education

Ph.D. Biology 2024 –
University of Miami, Coral Gables, FL
Committee: **Michelle Afkhami**, Chris Searcy, Neil Rosser, Robyn Barbato

B.A. Biology with High Honors 2020 - 2024
Dartmouth College, Hanover, NH
Concentration in Ecology, Minor in Studio Art
Committee: **V. Bala Chaudhary**, Matthew P. Ayres, Caitlin Hicks-Pries

Fellowships and Awards

2026 – University of Miami, William H. Evoy Graduate Research Support Fund ----- **\$500**
2025 – University of Miami, Christiane Tyson Endowed Research Fund ----- **\$1,200**
2024 – United States Department of Defense (DoD) SMART Scholarship ----- **\$540,390**
2024 – Lisa D. Anness Fairchild Tropical Botanic Garden Graduate Fellowship ----- **\$31,950**
2020 – Sam G. Hannah Honorary Scholarship ----- **\$10,000**

Research Appointments

DoD SMART Scholar Research Intern 2025 –
U.S. Cold Regions Research and Engineering Laboratory, Hanover, NH.

Soil Microbiology Intern 2023 - 2024
U.S. Cold Regions Research and Engineering Laboratory, Hanover, NH.

Undergraduate Honors Thesis 2023 - 2024
Dartmouth College, Department of Biology, Hanover, NH.

Research Assistant 2021 - 2024
Dartmouth College, Department Env. Studies, Chaudhary Lab, Hanover, NH.

Field Research Assistant 2022
Dartmouth College, Department of Biology, Ayres Lab, Hanover, NH.

Publications

Published

2. **Katula, A.M.**, N.C. Johnson, V.B. Chaudhary & M.E. Afkhami. Multilevel selection theory informs context-dependent mycorrhizal functioning. **Invited Special Issue Article** for *Front. Microbiomes*. 4:1676639. doi: 10.3389/frmbi.2025.1676639.
1. Chaudhary, V.B., L.F. Nokes, J.B. González, P.O. Cooper, **A.M. Katula**, E.C. Mares, S. Pehim Limbu, J.N. Robinson & C.A. Aguilar-Trigueros. TraitAM, a global spore trait database for arbuscular mycorrhizal fungi. *Sci. Data*. 12:588 (2025). <https://doi.org/10.1038/s41597-025-04940-x>.

Manuscripts - completed and in prep

Martinez, T.S.^Φ, **A.M. Katula**^Φ, D.J. Hernandez[^], M.E. Afkhami[^]. (Completed Draft)
PN-SLAYR: A novel rRNA suppression method for microbiome transcriptomics at a fraction of the cost. Target Journal: Nature Methods. (Submission Fall 2026).
^Φdenotes co-first authorship; [^]denotes co-senior authorship.

Katula, A.M. and M.E. Afkhami. (Completed Manuscript) Frozen in a warming world: Microbiomes in permafrost. Target Journal: Frontiers for Young Minds. (Waiting for submission portal to open again in Winter 2026)

Invited and Contributed Talks

2026 – U.S. Tri-Service Microbiome Consortium. September 9-10, 2026. Dayton, OH.

2026 – International Conference on Mycorrhiza (ICOM) 13. Symposium on “mycorrhizal microbiomes.” July 14, 2026. Cairns, QLD, Australia. **Invited talk.**

Poster Presentations

Katula, A.M., Johnson, N.C., Chaudhary, V.B., Doherty, S.J., Barbato, R.A., Afkhami, M.E. (2025, Aug. 08). Multilevel selection theory informs rhizosphere microbial assembly under cold stress. CRREL Student Poster Symposium, Hanover, NH, United States.

Katula, A.M., Ayres, M.P., Metzler, P.A. & Chaudhary, V.B. (2024, Aug. 4-9). SpoViS: A machine vision system for in situ assessment of arbuscular mycorrhizal fungal spores. International Conference on Mycorrhiza (ICOM) 12, Manchester, UK.

Katula, A.M., Ayres, M.P., & Chaudhary, V.B. (2023, Nov. 13-14). Using automated image acquisition to assess arbuscular mycorrhizal fungal spore traits. University of Texas at Austin Gateway to Graduate Studies in Science (G2S2) Symposium, Austin, TX, United States.

Katula, A.M., Doherty, S.J., & Barbato, R.A. (2023, Aug. 08). Comparing the Microbial Community Substrate Utilization of Alaskan Permafrost and Active Layer Soils Using Biolog Ecoplates [Poster presentation]. USACE ERDC CRREL Student Poster Symposium, Hanover, NH, United States.

Nokes, L.F.^Φ, **Katula, A.M.**^Φ, Aguilar-Trigueros, C.A., Mares E.C., Rillig, M., & Chaudhary, V.B. (2022, Aug. 14-19). Why are there so many kinds of arbuscular mycorrhizal fungal spores? Ecology Society of America (ESA), Montréal, Québec, Canada.

1. **Katula, A.M.**, Dissanayake, H. Sweeny, M.A., Battle, J., & Morquecho, A. (2019, Dec. 09-13). STEMFilters: Learning Lenses. American Geophysical Union (AGU), San Francisco, CA, United States.

Departmental Service

Biology Graduate Symposium Committee, University of Miami, Miami, FL

2024 - 2026

