Research Associate

The Department of Microbiology and Molecular Genetics is seeking a post-doctoral Research Associate to work in the laboratory of Dr. Ashley Shade conducting research to understand the rules of microbiome resilience.

Position Summary

Michigan State University is one of the top institutions for research in microbial ecology and evolution. One position for a Postdoctoral Research Associate is available in the laboratory of Dr. Ashley Shade (https://ashley17061.wixsite.com/shadelab). The Shade lab is affiliated with the Department of Microbiology and Molecular Genetics (https://mmg.natsci.msu.edu/) and the Department of Plant, Soil and Microbial Sciences (https://www.canr.msu.edu/psm/).

We seek an excellent Research Associate to conduct research to understand the rules of microbiome resilience in support of an ongoing, NSF-funded CAREER award. Applicants should hold a PhD in a field related to ecology/evolution, microbial sciences, plant and soil sciences, bioinformatics/genomics or related field. This exciting project will investigate microbiome responses in soils overlying the Centralia, Pennsylvania coal seam fire. The project will include analysis of metagenome and metatranscriptome data from a 6-year annual field effort and will integrate ecological and/or evolutionary theory for quantifying mechanisms that support microbiome resilience after extreme disturbance.

The successful applicant will enjoy a wide degree of liberty in the creative determination of the next steps in this research, which can be tailored to creative interests aligned with our overarching goals to understand resilience, and can include at least one or combination of experimental, computational, or theoretical work. In addition, the post-doc will receive high-quality individualized mentoring and professional development opportunities according to their career goals. The new post-doc will additionally benefit from the events, resources and intellectual communities of the Ecology, Evolution and Behavior Program (https://eeb.msu.edu/), the Center for Microbial Ecology (https://www.canr.msu.edu/eme/index), the Great Lakes Bioenergy Research Center (https://www.glbrc.org/), and the Plant Resilience Institute (https://plantresilience.msu.edu/).

Demonstrated experience with bioinformatic and statistical analyses of microbiome sequence data is required. The successful applicant will be able to write and execute code in the R language for statistical computing, have experience with GitHub/version control, and experience with or willingness to learn job submission to a high-performance compute cluster. We expect the successful candidate to have a working knowledge of relevant ecological and evolutionary frameworks. Experience in conducting field studies or experiments is welcomed. A skillset in microbiology and molecular biology techniques is required if the candidate desires to pursue wet-lab experiments. A familiarity with dynamic or time series modeling, regime shift analyses, or other advances in innovative multivariate, phylogenomic, or related approaches will be viewed favorably.

The successful applicant will be independent, motivated, and able to take leadership roles as part of a collaborative team. S/he will have as strong writing and communication skills. The Shade Lab is committed to high scientific integrity, to open and reproducible science, and to promoting a welcoming and inclusive team environment.

This is a full-time, 12-month fixed-term position with reappointment contingent on satisfactory performance and available funding.

Equal Employment Opportunity Statement

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, citizenship, disability or protected
Minimum Requirements
PhD in a field related to ecology/evolution, microbial sciences, plant and soil sciences, bioinformatics/genomics or related field.

Desired Qualifications
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Required Application Materials
Interested applicants should submit a cover letter that describes relevant skills, research accomplishments, and creative project ideas, a current CV, and contact information for three references to http://careers.msu.edu posting # 694558.

Summary of Health Risks
This position may include exposure to organic solvents and flammables (e.g., phenol chloroform, ethanol)

Website
https://mmg.natsci.msu.edu/

MSU Statement
Michigan State University has been advancing the common good with uncommon will for more than 160 years. One of the top research universities in the world, MSU pushes the boundaries of discovery and forges enduring partnerships to solve the most pressing global challenges while providing life-changing opportunities to a diverse and inclusive academic community through more than 200 programs of study in 17 degree-granting colleges.