

Position:	Research Assistant
Department:	Department of Microbiological Sciences
Advisors:	Dr. Samiran Banerjee and Dr. Kevin Sedivec
Start Date:	Summer 2020 or sooner
Salary:	\$25,000/year, plus tuition waiver
Open to:	Graduate students in Microbiology or Molecular Pathogenesis
Apply:	NDSU Graduate School Application link

The Department of Microbiological Sciences at North Dakota State University is seeking a motivated PhD student to start Summer 2020 or sooner.

The student will conduct research to investigate the role of microbiota in plant invasion. Using high-throughput sequencing techniques and a state-of-the-art greenhouse facility at NDSU, the student will develop a mechanistic understanding of how alien plants alter the native microflora during various stages of invasion. The student will also conduct field and laboratory studies to develop expertise in plant-soil interactions and microbial ecology. Additionally, there will be opportunities to acquire skills in bioinformatics and advanced statistical analyses.

We are seeking an industrious and highly motivated student with experience (M.S. preferred, but not required) in microbiology and natural resource sciences. Prior experience in molecular techniques and statistical analyses will be an advantage. The ideal candidate would be reliable and well-organized and have excellent oral and written communication abilities. The student must be willing to work in a multidisciplinary and diverse environment.

This fully-funded position includes an annual stipend of \$25k and a tuition waiver. Additionally, there will be opportunities to attend national and international scientific meetings. The student will be co-supervised by Drs. Samiran Banerjee and Kevin Sedivec.

Our PhD program is one of the few in the US that does not require intensive coursework. Instead, we focus on developing competencies in core areas such as scientific method, research techniques, communication, and professional soft skills. For more information visit https://www.chronicle.com/article/Outcome-Based-Graduate-School-/246325.

Interested candidates are encouraged to first email Dr. Samiran Banerjee (<u>samiran.banerjee@ndsu.edu</u>) with a letter of motivation and a copy of recent CV. Formal applications can be submitted through NDSU Graduate School. Review of applications begins immediately and will continue until the position is filled.



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We are seeking a motivated Ph.D. student to fill an open research assistant position in the Department of Microbiological Sciences at North Dakota State University. The student will conduct research to investigate microbe-microbe interactions and the role of keystone taxa in the soil microbiome.

Previous work (Banerjee et al., 2016 *Soil Biology and Biochemistry*; Banerjee et al., 2018 *Nature Reviews Microbiology*; Banerjee et al., 2019 *ISME Journal*) found that highly connected keystone taxa are associated with microbiome structure and functioning. This project will build on these findings and explore the ecological rules that govern microbial associations and if keystone taxa pull more weight in the community. The student will use culturomics, high-throughput sequencing and advanced statistical analyses to investigate the influence of keystone taxa.

Applicants should have experience in microbiology and/or molecular biology. Experience of using network analysis or programming in R/Python would be an advantage. The ideal candidate would be reliable and well-organized and have excellent oral and written communication abilities. The student must be willing to work in a multidisciplinary and diverse environment.

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