



PhD Position in Plant-Microbe Interactions (Start date: January, 2024)

The [Plant Systems Biology](#) and [Agricultural Microbial Ecology](#) Groups at the University of Manitoba are seeking a PhD student **researcher to study interactions between plant roots and microbial inoculants using phenotypic screening, biochemical and physiological characterization, and functional genomic tools**. The selected candidate will join a large multi-year, multi-institutional project, including academic and industry partners, which aims to reduce greenhouse gas emissions from agricultural systems by leveraging microbial inoculants to promote crop nutrient uptake.

This project requires us to meet performance and reporting deadlines, but the selected candidate will have some latitude to explore and develop their own ideas within the context of the project. There will be opportunities for collaboration within our groups and across our network, and to pursue professional development activities.

Applicant qualifications

- BSc or MSc in plant biology, microbiology, molecular biology, or a related discipline.
- Ability to work independently and as a member of a diverse team.
- Desire to learn and develop skills as scientist, writer, and communicator.
- Ability to perform experiments precisely and correctly according to laboratory protocols.
- Ability to manage time and efforts to ensure that the goals of their project and graduate program are being met.
- Ability to communicate freely and clearly with their supervisors and lab mentors with results, errors, delays, etc.

Research and training

The successful candidate will develop skills in a wide variety of areas including building and maintaining microbial inoculant collections, performing and analyzing high throughput plant phenotyping screens, and undertaking detailed physiological and molecular analyses of plant-inoculant interactions. The student will learn skills in hypothesis development, experimental design, and data analysis in R, and will be expected to cultivate skills in project management and within-team communication, scientific writing, and oral presentations. We will provide support for development in these areas. All research personnel will be required to participate in team meetings, to share data and progress, and to take ownership of their research projects. Our labs are diverse and collaborative workplaces that are committed to building an environment of integrity and respect where science and scientists can flourish.

Application Process and Funding

Review of applications will begin on June 12th, and position will remain open until a suitable candidate has been identified. Interested applicants should send a letter stating their interest in this position, a complete CV, academic transcripts, and contact information for three references to matthew.bakker@umanitoba.ca AND olivia.wilkins@umanitoba.ca. Only shortlisted candidates will receive follow up communication.



**University
of Manitoba**

Faculty of Science

Bakker and Wilkins Labs
Faculty of Science
University of Manitoba
Winnipeg, Manitoba, Canada

This position will start in January 2024. Ahead of that time, the successful candidate will need to apply for admission to the University of Manitoba, according to the following deadlines:

Canadian and US students: October 1st, 2023

International students: July 1st, 2023

The successful candidate will register in either the Biological Sciences or Microbiology graduate program, pending discussion with Drs. Wilkins and Bakker.

Student stipends will be consistent with the NSERC standard. Trainees are strongly encouraged to apply for external scholarships for which they are eligible. In addition to federal scholarships (e.g. NSERC), Research Manitoba, and UM offer internal awards to qualified applicants.

University of Manitoba

The [University of Manitoba](#) is part of the U15 Group of Canadian Research Universities and is in the diverse and accessible [City of Winnipeg](#) on the original lands of Anishinaabeg, Cree, Oji-Cree, Dakota and Dene peoples, and on the homeland of the Métis Nation. There are vibrant plant biology, microbiology, genetics, and biochemistry communities at UM and there will abundant opportunities for trainees to interact with collaborators on this project across multiple Canadian universities.