



## Rhizosphere Dynamics Graduate Student Position

**Potential start dates: January or April 2019.**

**An MSc or PhD graduate student position available. Highly qualified candidates are encouraged to inquire about this MSc or PhD position.**

**Working directly with Dr. Monika Gorzelak, Soil Fertility Research Scientist, based in Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, and with co-supervision by Dr. Guillermo Hernandez, Associate Professor, and registered at University of Alberta, Department of Renewable Resources.**

Join a new lab at AAFC in Lethbridge investigating crop rhizosphere dynamics. Trace nutrient flows from plants to bacteria and mycorrhizal fungi. Use stable isotope probing and next-generation sequencing to identify microbes involved in nutrient cycling. Answer questions about carbon sequestration in soils, decomposition rates, and the potential to manipulate microbes to improve soil health. Determine the impacts of root exudates on microbial populations. Explore the potential of mycorrhizal networks to transfer information chemicals and nutrients in annual and perennial cropping systems. Support in developing an impactful research project will be provided. No experience necessary, however, familiarity and interest in soils and/or microbes, and/or sustainability and resilience research in agroecosystems would be an asset.

The successful candidate will spend most of the research program tenure working at the Lethbridge Research and Development Centre, AAFC, and will complete his/her coursework requirements at UAlberta in Edmonton as part of the degree program. The successful candidate will have the great opportunity to work with a diverse group of researchers across scientific disciplines at both prestigious institutions.

Apply with CV, scanned copies of transcripts and a brief letter introducing yourself and your research interests to:

Monika.Gorzelak@Canada.ca

or

Guillermo Hernandez, ghernand@ualberta.ca