

DOCTORAL POSITION OFFERED: MAY or SEPT 2024

Microbial ecology, plant-microbe interactions, bioinformatics, genomics

PURPOSE OF THE STUDY: Characterize the diversity, functions and resilience of microbial communities associated with plant species used in ecological restoration.

CONTEXT AND OBJECTIVES: The electrification of transportation requires the mining of critical metals. Our team has launched an interdisciplinary project aimed at mitigating the impact of these activities by investigating principles of plant acclimation to assist in the development of ecological restoration practices. The doctoral project will profit from a major experimental device deployed by our team in 2021, on the Whabouchi site operated by Nemaska Lithium. As part of this initiative, five plant species native to the region (shrubs and trees) were pre-acclimated to site conditions using 10 treatments. The project will include laboratory work (microbiology, genomics) as well as bioinformatics analyzes (U. de Sherbrooke) and entail fieldwork in the northern, remote region of Eeyou-Istchee (James Bay).

Goals :

- (1) Characterize the bacterial and fungal communities of the rhizosphere of plant species (phylogenetic study), and the functions present in these microbial communities.
- (2) Investigate correlations between microbial community structure and plant host success (survival and growth).
- (3) Evaluate the contribution of plants to biogeochemical cycles through leaf loss (litter quality).



Prospective candidates should contact us with the following information:

1. Letter of interest (1 page)
2. CV
3. Unofficial transcripts
4. Contact information for two references

Informal inquiries are welcome. The position is based at Université de Sherbrooke, a francophone university, therefore knowledge of the French language is an asset. Our team offers a work environment that is inclusive, respectful, healthy, and open to differences.

Join a dynamic, and welcoming research group!

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