

Ph.D. student sought to study soil biodiversity using bioinformatics tools & state-of-the-art environmental DNA technology

POSITION DESCRIPTION: We are seeking a strong and independent graduate student to study soil biodiversity and its response to varied restoration practices using state-of-the-art environmental DNA technology and bioinformatic tools for data analyses. The candidate will be involved in developing novel molecular approaches to study soil biodiversity across multiple taxonomic levels including both prokaryotes and eukaryotes. The research will include opportunities to study species interactions (e.g. plant root microbiome) and the efficacy of varied soil amendments that could help accelerate ecological succession across soil disturbance gradients. The research will take place in the boreal forest of Northern Ontario and relates to mining operations taking place there. The selected candidate will gain experience in bioinformatics, molecular biology, spatial ecology, environmental chemistry, and environmental restoration. The candidate will be part of a collaborative research team that seeks to study biodiversity moderation at the landscape scale. The applicants should hold a M.Sc. degree in one of the following fields: Bioinformatics, Biology, Biotechnology, Molecular Biology, Soil Science, or in any other program that is relevant to the proposed research activities. The principal laboratory is located at the University of Guelph's Biodiversity Institute in Guelph (ON, Canada). The candidate will also interact with colleagues from Kirkland Lake Gold Corp, the University of Saskatchewan, and multiple faculty members from Guelph. The project will begin in September 2021.

PROGRAM CHOICE: This project includes both analytical and biological research components. Depending upon the applicants' background and primary research interests, the selected student could enroll through either the PhD program in Integrative Biology or the PhD program in Bioinformatics, University of Guelph.

HOW TO APPLY: All interested candidates need to send a letter of interest, a CV, a copy of University transcripts, a writing example (such as a publication, MSc thesis chapter, or other project), and the names and email addresses of three referees to: rhanner@uoguelph.ca & sadamowi@uoguelph.ca. If available, and particularly for applicants interested in the PhD in Bioinformatics program, we also encourage applicants to send a code example from your work or your GitHub link. Preference will be given to citizens and permanent residents of Canada. Review of applications will commence on May 10, 2021, and selected applicants will be invited for an interview via videoconferencing. After a discussion and mutual agreement about moving forward, the applicant will also need to apply formally to the appropriate PhD graduate program at the University of Guelph.

The University of Guelph is committed to equity in its policies, practices, and programs, supports diversity in its teaching, learning and work environments, and ensures that applications from members of underrepresented groups are seriously considered under its employment equity policy. All qualified individuals who would contribute to the further diversification of our University community are encouraged to apply.

FOR FURTHER INFORMATION: Please see the following links for further information about the University of Guelph, the relevant PhD programs, and stipend information.

<https://www.uoguelph.ca/>

https://www.uoguelph.ca/ib/graduate_home

<https://www.uoguelph.ca/bioinformatics/programs>

<https://www.uoguelph.ca/cbs/cbs-research/student-stipend-information>