

## **Student MES Research Position in Phytotechnologies**

My phytotechnology lab at the Royal Military College of Canada is involved in research funded by national granting agencies, and industrial partnerships. I am seeking a Masters level student to explore salt remediation using both accumulator and excretor halophytes. Phytoremediation is still limited by its efficiency and required timescales, thus strategies to enhance the phytoextraction of salts are being explored. In this project, endophytes (i.e. microorganisms that live inside plant tissues without causing pathogenicity) are being investigated to promote halophytic growth in challenging environments. This multi-year study will involve field and greenhouse experiments to evaluate the phytoremediation of saline soils by halophytes and investigate the capacity of their respective endophytes to enhance growth. The student undertaking this project will carry out field studies using established phytoremediation field plots on: i) a contaminated roadside in the Greater Toronto Area and ii) at an industrial battery site in Alberta. They will examine the long-term ability of selected halophyte species to extract salt and survive under variable weather conditions and competition from other plant species. The results of this project have the potential to be broadly applied to remediate salt-affected soils while providing valuable insights into the application and implementation of biotechnology to remediate salt contaminated soils over a longer time than typical phytoremediation studies.

While I am seeking a strong MES student to begin the Fall of 2024, there is also the opportunity for the student to begin working in May 2024 (as NSERC USRA or via other funding).

Interested applicants should contact Dr. Barb Zeeb ([zeeb-b@rmc.ca](mailto:zeeb-b@rmc.ca)) immediately.