

PhD RESEARCH PROJECT – BIORETENTION AND PHYTOTECHNOLOGY

Context

Water quality in urban areas is constantly threatened by multiple sources of pollution. In order to ensure water quality and to limit storm water runoff, bioretention basins coupled with vegetation are a novel technology to consider. Plants, due to their natural capability to filter water, can be an important element for the management of water quality in urban areas. However, the efficiency of this phytotechnology is still poorly documented.

Project description

This project will be led by Professor Sarah Dorner (École polytechnique de Montréal) for the hydrological aspects, and by Professors Jacques Brisson (Institut de recherche en biologie végétale) and Danielle Dagenais (Université de Montréal) for the vegetation and bioretention aspects.

Under the supervision of the principal investigators together with the City of Trois-Rivières and the Ouranos consortium, the PhD student will monitor six bioretention basins and set up laboratory experiments to assess the effect of vegetation on water quality and runoff. The PhD student will be part of an international multidisciplinary team, which includes engineers, hydrologists, chemists and landscape specialists from Canada, the United States and Australia.

Eligibility criteria

Applicants must have completed a Masters degree (or exceptionally a Bachelor degree) in biological sciences, environmental sciences or a related field. They must also show a strong interest in phytotechnology and scientific research. The successful candidate must be ready to begin the PhD research program by September 2018.

Funding and work conditions

The successful candidate will be granted a three-year scholarship of \$63,000 CAN (\$21,000 CAN per year). The successful candidate will be provided a workspace at the Institut de recherche en biologie végétale (IRBV), and will work under the supervision of Professors Jacques Brisson, Danielle Dagenais and Sarah Dorner.

Selection process

To apply, please send the following documents by email to Pr. Jacques Brisson (jacques.brisson@umontreal.ca):

- A cover letter describing your interest for the project
- Your CV (up to date), including publications if appropriate
- A copy of your most recent academic transcript
- The names and contact information, such as academic supervisors, for two references

Also, please consult the Chair's website (<http://chairephytotechnologie.com/en/>) for more information concerning the ongoing research projects.