

# Functional microbial ecology of onsite sanitation

## Master, PhD and Postdoc opportunity

### Public Health and Environmental Engineering Lab

#### The project

About 40 % of the World's population does not have access to sanitation and it is estimated that 60 % of all human waste enters the environment untreated. Onsite sanitation systems (pit latrines, septic tanks, etc.) play a critical role in addressing this crisis and have a primary purpose of containing excreta. Many of such systems are designed with the assumption that degradation mechanisms can also fulfil an *in situ* treatment role. However, this project seeks to test these (dated) assumptions and provide a basis for a rational design of such systems. This is an exciting opportunity to unravel the mysteries of the toilet and embark on a journey on the wonderful world of faecal sludge!



Different projects are available within this research programme that combines lab and fieldwork in varied settings. Positions available at different levels requiring varied backgrounds.

Intended start date: September 2020 or January 2021 (hiring on a rolling basis as talents are identified). For these entry points the deadline for applications is 28/February/2020.

#### The ideal candidate (any nationality):

- Should not be squeamish at the thought of working with poop;
- GPA of 3.5 (out of 4.0 scale) or higher;
- Degree in a relevant field: environmental (chemical or civil) engineering, microbiology, biology, environmental science, chemistry or biochemistry;
- Previous laboratory/research experience;
- Relevant field experience in low resource contexts;
- Motivation, independence, resourcefulness, scientific curiosity and passion to make a difference;
- A clean driving license.

#### Funding

As per our Departmental policy, a minimum funding of \$17,500 CAD per year is guaranteed for the two year MSc or three year PhD programme (TBD based on candidate's experience and performance). Graduate funding support from the Department of Civil Engineering is granted through a variety of mechanisms including but not limited to: research grant support, teaching assistantships, awards and fellowships, and research contracts. Top-ups are available to students that receive independent research scholarships.

Note for Canadian applicants: Eligible candidates are reminded of upcoming NSERC funding deadlines for MSc (Dec), PhD (Oct) and PDF (Oct). Québec residents are reminded that they are eligible to apply for a FRQNT scholarship (deadline: Oct) and use the training award outside Québec.

**Highly qualified and motivated students will be invited to submit an application (CV, academic records and cover letter stating your motivations and interests) to [caetanodorea@uvic.ca](mailto:caetanodorea@uvic.ca). Please cite "SAN2020" on the subject line of your email.**