



## PhD student position in Environmental Sciences

### Who are we?

The mission of our lab is to develop projects in partnership with communities living in a changing environment to assess the impacts of anthropogenic pressures on health and well-being. To investigate these associations, we are using an ecosystem approach combining information from multiple levels of biological organization. Our innovative approach combines toxicology, molecular biology, community-based research, exposure assessment, epidemiology and environmental health.



### What is this study about?

Our goal is to investigate how air quality contributes to inflammation and asthma in an *in vitro* co-culture cell model of the human respiratory tract. We will sample 4 regions along a gradient varying in population size, vegetation and land use, from Resolute Bay (Nunavut) to Scarborough (Ontario). In these 4 regions, we will characterize air quality parameters (pollutants, pollen and microbial communities). In the lab, we will expose the co-culture to these field microbes and pollutants, representative of our field data. We will then measure indicators of oxidative stress and inflammation, to quantify the role of both microbes and pollutants in asthma and identify organisms that protect from inflammation. The PhD applicant will have access to training opportunities in toxicology, science communication, community-based research and in Northern research.

### Who are we looking for?

The applicant will be employing technical skills in molecular biology and tissue culture. The successful candidate will be joining a young, dynamic environment within the Department of Physical and Environmental Sciences at the University of Toronto Scarborough, in the lab of Élyse Caron-Beaudoin with access to state-of-the-art lab equipment. The applicant will work closely with the research team, conjointly led by Dr. Catherine Girard (Microbial Heritage lab, Université du Québec à Chicoutimi). The applicant must have recently completed a MSc or equivalent in biology, environmental sciences or a related discipline, and have developed technical skills and knowledge that are suitable for the project. Applicants should forward a CV, academic transcripts and a cover letter.



Applicants will also need to apply for admission to the PhD in environmental sciences program by May 15 2022 (program start date Fall 2022). This is a fully funded position (\$25,000 yearly salary).

Our lab and the University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of color, women, Indigenous People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.

If you would like to learn more or to submit your application (**by April 1, 2022**), please contact:

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