# **M. Sc. student** sought to study and to model contaminant body burden in polar bears using feces as a proxy of contamination

Over the last decades, evidence has accrued showing that Arctic ecosystems are exposed to contaminants, such as persistent organic pollutants and mercury. These contaminants are of concern because of their persistence, toxicity, and bioaccumulation rate. Polar bears, as apex predators, can biomagnify such contaminants and are a good indicator of Northern environmental pollution. Several studies have quantified contaminant body burden in polar bears, but most of these studies have relied on invasive methods, including collection of fat, liver, teeth, or kidneys. The novelty of this project centres on using a non-invasive and robust monitoring method using polar bear faeces to quantify contaminant loads. The long-term objective of this work is to establish a database of contaminant concentrations in bear tissues to predict human exposure and risks for local indigenous people.

We are seeking a strong and independent graduate student to study and to model contaminant body burden in polar bears using feces as a proxy of contamination. The successful candidate will gain experience in ecotoxicology, animal physiology, analytical chemistry, and data analysis. The applicants should hold a B. Sc. degree in one of the following fields: Chemistry, Biology, Physiology, Health Sciences, Biochemistry, or in any other program that is relevant to the proposed research activities by May 2019. The principal laboratory is situated at the *Institut national de la recherche scientifique* (INRS) located in beautiful Quebec City, QC, Canada. The successful candidate will interact with a dynamic research team which encompasses several research assistants/manager, graduate students, and post-doctoral fellows (http://www.inrs.ca/valerie-langlois) and will also work with the director and staff of the Queen's University Analytical Services Unit (https://www.queensu.ca/asu/home). This is also a unique opportunity to learn French if the candidate is interested, although French is not mandatory.

HOW TO APPLY: All interested candidates need to send a letter of research interest, a CV, a copy of University transcripts, and the names and email addresses of three referees to: valerie.langlois@inrs.ca. The successful candidate will need to meet the registration guideline of INRS (http://www.inrs.ca/).

*For further information please contact:*

**Dr. Valerie Langlois,** Associate Professor
Centre Eau Terre Environnement
Institut national de la recherche scientifique (INRS)
490 de la Couronne, Québec, QC, Canada
T: +1.418.654.2547 E: valerie.langlois@inrs.ca

**Dr. Allison Rutter,** Director of the Analytical Services Unit
School of Environmental Studies
Biosciences Complex, Queen's University
Kingston, Ontario, Canada, K7L 3N6
T : (613) 533-2642 E : ruttera@queensu.ca