UNIVERSITY OF CALGARY

The O'Brien Institute for Public Health &
the Department of Community Health Sciences present:

High-selenium Lentils: A Nutritional (Whole Food) Trial to Combat Arsenic Poisoning in a Rural Bangladeshi Community

Speakers: Regina Krohn and Judit Smits
Friday, October 27th, 2017 - 12:00 to 12:50 p.m.

G500 - Health Sciences Centre, 3330 Hospital Dr NW

Arsenic-laden drinking water is the major source of chronic poisoning in Bangladesh. While ongoing efforts to provide safe drinking water to millions of people are showing limited success, the presented research aims to mitigate the effects of chronic arsenic exposure by reducing the body burden of arsenic via incorporation of high-selenium lentils in the daily diet.

Regina Krohn, PhD. Dr. Krohn is a Research Associate with Dr. Judit Smits in the Department of Ecosystem & Public Health, Faculty of Veterinary Medicine at the University of Calgary. Her work is focused on environmental toxins, such as petroleum-related toxins and arsenic. A major part of her work to date, has been the organization and sample analyses of the clinical trial that aims to combat arsenic poisoning in a rural population of Bangladesh. Another current project Dr. Krohn is taking the lead on, is the establishment of an amphibian metamorphosis assay to assess oil-spill related toxicity in freshwater ecosystems. This multi-disciplinary project is taking place at the IISD-Experimental Lakes Area, Ontario in 2018, and involves a controlled oil spill into a lake followed by various remediation approaches.

Professor Judit Smits, Doctor of Veterinary Medicine, Master of Veterinary Science, PhD. Dr Smits' research group focuses on developing novel, non-invasive techniques in wildlife to monitor impacts of anthropogenic contamination and disruption of the environment. They investigate naturally exposed, native wildlife (bioindicators), in combination with controlled experimental studies to determine the most sensitive biomarkers, to study health effects of air and water borne contaminants using a variety of physiological and toxicological responses. Professor Smits is currently working to reverse chronic arsenic poisoning through dietary intervention. This started with laboratory animals, and has advanced to conducting a human clinical trial in a heavily affected region of the world. Her research is greatly enriched through interdisciplinary collaborations.

Objectives:

1. Can micronutrient-(selenium) rich food aid to reduce the body burden of environmentally derived chronic metal (arsenic) toxicity?
2. Are high-selenium lentils a practical solution to decrease arsenic poisoning in Bangladesh?
3. What are the challenges of conducting a clinical trial abroad…and how to deal with them

This event is a self approved group learning activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada. **This seminar is also available via an online AdobeConnect session:** To attend the seminar from another location via your computer, click on this link:

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