Trent University
Chemistry/Physics Seminar Series

Dr. Alexandre Poulain, University of Ottawa

Wednesday, November 25, 2015

11:00 a.m. to 11:50 a.m.

Science Complex Room 115

Microbial Controls of Hg Cycling

Mercury (Hg) is a priority contaminant that, in its methylated form, is a toxic substance that persists in the environment and is biomagnified through aquatic food webs. Human activities associated with industrialization have exacerbated Hg contamination, leading to Hg levels in fish and other aquatic animals that exceed guidelines for human consumption. Mercury toxicity and bioaccumulation depend on in-situ synthesis of methylmercury, occurring mostly in anoxic environments. Therefore, processes that directly or indirectly affect methylmercury production modulate the impact of Hg contamination. In this context, my lab is interested in how microbes affect the mobility and toxicity of Hg in the environment mostly through its redox cycle. We use a combination of fieldwork and lab experiments to gain insights into the mechanisms underlying its uptake by microbial cells as well as determine rates of Hg transformations in environmental matrices.

http://mysite.science.uottawa.ca/apoulain/index.html

All are welcome to attend!