

Toxicology Centre Distinguished Lecturer Series

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“Trends of New and Legacy Contaminants in a Changing Arctic”

Monday, February 23, 2015
12:30 p.m.
Rm. 2104, WCVM
University of Saskatchewan



As climate change and industrial development increasingly impact the Arctic, sources of persistent organic pollutants (POPs) and mercury to this region are also changing. While long range atmospheric and oceanic transport is still regarded as most important, for some chemicals such as flame retardants and personal care products, local Arctic sources can also play a role in contaminating marine, terrestrial and freshwater food webs. The changing Arctic climate may affect temporal trends of legacy and new POPs as well as mercury, both in terms of changing sources (e.g. increased frequency of pollutants from forest fires) and changing food webs (shifts in migratory species). The influence of climate has been most convincingly demonstrated for mercury; trends in fish have been related to climate oscillation indices and temperature. While exposure of arctic wildlife to most POPs is low relative to urban influenced temperate regions, mercury exposure is elevated in some fish species and in most mammalian top predators. Climate change and contaminant interactions could potentially increase the risk of biological effects in arctic biota. This presentation will review these issues and will draw on information from recent assessments of POPs and mercury in the Canadian Arctic which are available at <http://www.science.gc.ca/default.asp?lang=En&n=6192170C-1>



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