

## **Dr. Magali Houde**

Research Scientist, Environment and Climate Change Canada and Adjunct Professor, Université du Québec à Montréal

### ***Investigating environmental contaminants of concern to support decision-making: from the St. Lawrence to the Arctic***

#### **Abstract**

Modern life generates the production and use of thousands of chemicals to meet the daily needs of human populations. Assessing the environmental risks associated with these compounds is an important mandate of the federal government. To do so, it is necessary to evaluate the distribution and accumulation as well as characterize the effects of the chemicals of interest, especially emerging substances, for which very little information is available. Chemicals can be investigated in major impacted rivers such as the St. Lawrence and new high-throughput technologies (i.e., omics) can assist in the comprehensive and objective identification of biological systems that can be affected in aquatic organisms exposed to environmental stressors. The toxicity of substances of interest can also be experimentally investigated in the lab generating effects information important for risk assessment. Contaminants can also be transported through great distances by air and ocean currents and accumulate in wildlife from remote regions reaching elevated concentrations in the Canadian Arctic predators. The federal Northern Contaminants Program evaluates long-range transport, accumulation and trends in chemical contamination in abiotic compartments in addition to fish and Arctic wildlife consumed by northern populations. These studies, done in collaboration with northern communities, allow identification and tracking of new substances at remote sites and support international regulatory work on environmental contaminants.

#### **Biography**

Dr. Magali Houde has been studying the accumulation and effects of legacy and emerging contaminants in aquatic ecosystems for many years. She holds a Ph.D. in Environmental Biology from the University of Guelph during which she studied the accumulation of polyfluoroalkyl substances in wild bottlenose dolphins from the southeastern US. She is currently a research scientist in the Aquatic Contaminants Research Division at Environment and Climate Change Canada in Montreal. Her research team works on evaluating the effects of environmental stressors on the health of aquatic organisms (i.e., invertebrates, fish, and marine mammals) using tools such as toxicogenomics. Her research projects lead her to work in the St. Lawrence River as well as in the Arctic. In addition to managing a research team, Magali co-supervises the work of several graduate students and is an adjunct professor at the University of Quebec in Montreal.

## **Dr. Angelika Zidek**

Senior Manager, Healthy Environments and Consumer Safety Branch, Health Canada

*How research and regulatory risk assessment have advanced policy making in Canada over the last decade*

### **Abstract**

Since the launch of the Chemicals Management Plan (CMP) in 2006, Canada has published hundreds of risk assessments on nearly 4,000 existing substances. This effort has brought together researchers, risk assessors, exposure modellers, toxicologists and policy makers across multiple governments and academic institutions. It has also resulted in the generation of research on a number of chemicals of concern and risk management actions to reduce exposures in Canadians from select substances. This presentation will provide an overview of the chemical landscape assessed over the last decade under the CMP, challenges and triumphs, as well as the importance of strong partnerships between regulators and researchers in environmental science. It will also highlight new advancements and tools needed for effective policy making in the 21<sup>st</sup> century related to chemicals management.

### **Biography**

Dr. Angelika Zidek is a Senior Manager at Health Canada responsible for leading human health risk assessments and development of exposure methodologies for existing chemicals. She has over 15 years of experience in the regulatory domain of exposure assessment, leading regulatory risk assessments of both pesticides and industrial chemicals including estimation of exposure and risk for susceptible populations, workers and the general population under both the Canadian Environmental Protection Act and the Pest Control Products Act. Prior to her position with Health Canada she worked in the private sector as well as for the provincial and municipal governments across Canada and abroad. Her areas of expertise include: children's health, application and interpretation of human biomonitoring studies, hazard communication, occupational exposure, consumer exposures, dermal absorption including evaluation of in vivo, in vitro and in silico methods, exposure modeling and validation, chemical priority setting and chemical risk assessment. Angelika Zidek is a member of the International Society for Exposure Science (ISES) and was a co-Chair of the 2018 Joint ISES-International Society for Environmental Epidemiology (ISEE) Annual Meeting. She continues to work closely with researchers and risk assessors in exploring new exposure tools, approaches, and models as well as emerging chemical contaminants. She has also been the Canadian delegate on the OECD Working Party on Exposure Assessment for the last 10 years working with international partners on exposure related projects and issues.