



Laurentian  
**SETAC**

Laurentian Chapter of the Society of  
Environmental Toxicology and Chemistry

## Ontario Virtual Pub Night

# Poop and the Pandemic

**Dr. Robert Delatolla (U of Ottawa),  
Dr. Mark Servos (U of Waterloo) and  
Dr. Denina Simmons (Ontario Tech University)**

When: Thurs. December 3, 6:30 – 8 PM (EST)

Zoom meeting: Please complete the [RSVP form](#)  
to receive the meeting link

Cost: [Pay what you want](#) to support future student  
awards (\$2 members, \$4 non-members or an  
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Contact: Rebecca Dalton (becca.Dalton@gmail.com)

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# Poop and the Pandemic

## *Virtual Pub Night*

**Dr. Robert Delatolla (U of Ottawa),  
Dr. Mark Servos (U of Waterloo) and  
Dr. Denina Simmons (Ontario Tech University)**

### **Abstract:**

Environmental scientists and engineers from around the world, and here in Canada, are coming together with governments and public health experts to establish waste water epidemiology as a legitimate tool to help measure and monitor population-level COVID-19 infection. By measuring the molecular signatures of the SARS-CoV-2 virus within human waste waters, we can determine if COVID-19 infections are increasing or decreasing in a population – with greater efficiency and cost savings than traditional clinical testing can provide. However, the effort has been difficult due to complexity of the pandemic itself – human behavior, supply chain limits, funding, social distancing, lab closures – everything that makes life a challenge during a global pandemic is also making science a challenge, as well as the typical challenges that come with establishing new scientific methods. Please join Laurentian SETAC for a panel discussion with three researchers who are doing COVID-19 wastewater here in Ontario, and learn more about the science of wastewater epidemiology, as well as the social and political challenges that come with doing research in the midst of a global pandemic.



# Poop and the Pandemic

**Dr. Robert Delatolla,**  
University of Ottawa

## Biography:

Professor Robert Delatolla is an Associate Professor at the University of Ottawa. His research is focused on biological wastewater treatment with a particular interest in the application, modification and optimization of wastewater treatment technologies. Professor Delatolla's research approach is interdisciplinary as it applies microbial, microscopic and molecular methods to improve the current understanding of biological systems at the meso, micro and molecular-scale; with the ultimate goal of enhancing the design and operation of engineered treatment systems. His research to date has resulted in the design of the first moving bed biofilm reactor (MBBR) system for the removal of ammonia from passive treatment systems operating in temperate, northern and cold climates. Professor Delatolla is collaborating with colleagues from the faculties of medicine and science as a primary investigator of the NSERC technologies for microbiome science and engineering (Technomise) CREATE grant. He collaborates with many local, national and international partners. He has recently developed a training program on wastewater treatment and regulations for Environment Climate Change Canada and is currently working with the wastewater group of Environment Climate Change Canada on the assessment of wastewater treatment systems for small and Indigenous communities in Canada.



## Poop and the Pandemic

**Dr. Mark Servos,**  
University of Waterloo



### Biography:

Prof. Mark R. Servos is currently the Canada Research Chair in Water Quality Protection in the Department of Biology, University of Waterloo, where his research and teaching program is related to the science underlying risk assessment and management of emerging threats to water resources. Prof. Servos worked as a research scientist with the Department of Fisheries and Oceans (Great Lakes Laboratory for Fisheries and Aquatic Sciences, 1988-1996) and Project Chief with Environment Canada (National Water Research Institute) (1996-2003) before he joined the University of Waterloo as a Professor of Biology in 2003. He served as Scientific Director of the Canadian Water Network, a national Network of Centres of Excellence, focused on innovation in the water sector until 2011. He plays an active role in international scientific societies, serving as President of both the International Association of Great Lakes Research and the Society of Environmental Toxicology and Chemistry (SETAC). He is a Fellow of the Society of Environmental Toxicology and Chemistry (SETAC) and was recently recognized with Stephen J. Klaine Environmental Education Award for his commitment to innovative interdisciplinary teaching.



## Poop and the Pandemic

**Dr. Denina Simmons,**  
Ontario Tech University

### Biography:

Dr. Denina Simmons is an Assistant Professor in the Faculty of Science at Ontario Tech University in Oshawa, where she is a Tier II Canada Research Chair in Aquatic Toxicology and runs the Aquatic Omics Lab. Denina is also an associate editor of the Elsevier Journal “Comparative Biochemistry and Physiology - Part D: Genomics and Proteomics”. Denina received her undergraduate degree from Ryerson University and then completed her master’s and doctoral degrees at Trent University. Denina completed two consecutive post-doctoral fellowships at Environment Canada working with Jim Sherry in the Aquatic Contaminants Research Division where she developed protein profiling and proteomics methods to investigate the health of fish. After that, Denina had two consecutive contracts working on ‘Omics projects with the Ontario Ministry of Environment, Conservation, and Parks. Denina conducts research in aquatic toxicology using environmental ‘omics for non-lethal biological effects monitoring. She is an expert in liquid chromatography and high-resolution tandem mass spectrometry (LC-MS/MS) and uses these instruments to detect proteins and metabolites in complex samples like blood plasma and environmental water samples.