

Laurentian **SETAC**



LAURENTIAN SETAC 28th **CONFERENCE & AGM**

David Braley Health Sciences Centre
Hamilton, ON | June 13-14th, 2024



THANK YOU TO OUR 2024 AGM COMMITTEE

Victoria Restivo

Tyler Black

Sarah Gewurtz

Elise Millar

Carolyn Brown

Wilson Lau

Quinn Allamby

Jack Salole

Celina Ruan

Laiba Jamshed

Abithiny Selvarajah

Andrea Amendola

Tana McDaniel

THANK YOU TO OUR 2024 SPONSORS

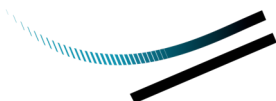
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Aquatic Omics Lab

PROGRAM AT A GLANCE

THURSDAY, JUNE 13

INTRO TO ENVIRONMENTAL CHEMISTRY | 09:00 - 12:00 | DBHSC 1005A

All environmental research includes some chemistry; however, many self-identified non-chemists perceive the subject to be an insurmountable obstacle. In this course I will present an environmental chemistry primer aimed at non-experts from biology and engineering that will provide participants with an appreciation for the role of chemistry in their environmental research.

Instructor:

Dr. Jessica D'eon | Department of Chemistry | University of Toronto

INTRO TO CSMs AND PROBLEM FORMULATION | 13:00 - 17:00 | DBHSC 1005A

This short course will introduce the Problem Formulation, the first step of a Human Health and Ecological Risk Assessment. The Problem Formulation provides the objectives, framework and approach for the risk assessment. This short course is ideal for students, new graduates, and early career professionals.

Instructors:

Andrea Amendola | Ecometrix Inc.












Lara Alves-Beese | Dillon Consulting Ltd.

LAURENTIAN SETAC PUB NIGHT | ANCHOR BAR | 18:00 TO LATE

Join us for a talk by Dr. Emily Choy (McMaster University) on the effects of climate change and pollutants on Arctic seabirds, followed by Q&A, and a meet and greet with fellow Laurentian SETAC members to start off the 2024 conference!

PROGRAM AT A GLANCE

FRIDAY, JUNE 14

7:30-8:30 AM	Registration & Poster Set-Up	 Atrium (DBHSC 2nd Floor)
8:30-8:45 AM	Opening Remarks	 DBHSC 2032
8:45 - 9:00 AM	NASAC & SETAC North America Update	 DBHSC 2032
9:00-9:55 AM	Plenary: Dr. Darren Thomas, Wilfrid Laurier University	 DBHSC 2032
10:00 AM - 12:00 PM	AM Concurrent Sessions	 DBHSC 2032 / DBHSC 1005A
12:00-1:00 PM	Lunch	 DBHSC 2032
1:00 - 3:15 PM	PM Concurrent Sessions	 DBHSC 2032 / DBHSC 1005A
3:15 - 4:30 PM	Poster Session (Judging)	 Atrium (DBHSC 2nd Floor)
4:30 - 4:45 PM	AGM Closing Remarks & Updates	 DBHSC 2032
5:00 - 6:00 PM	Student Event	 Anchor Bar
6:00- 8:00 PM	Awards Social	 Anchor Bar

OMICS RESEARCH

DBHSC 1005A | 10:00 - 11:45

10:00 - 10:15 

G. GAO: Assessment of the metabolic perturbations with exposure to N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine (6PPD) in *Eisenia fetida* earthworms

10:15 - 10:30 

S. HAJIR: Metabolomics identified early molecular responses after exposure to phenanthrene and its oxygen and nitrogen-containing analogs on *Daphnia magna*

10:30 - 10:45 

C. HENRIQUES: Proteomic analysis of short-chain perfluorinated alkyl substance (PFAS) exposure in Fathead Minnows (*Pimephales Promelas*)

10:45 - 11:00 

R. HUBLEY: The Effects of Hypoxia on Fathead Minnow Behaviour and 'Omics

OMICS RESEARCH

DBHSC 1005A | 10:00 - 11:45

11:00 - 11:15 

E. HUNG: Investigating the impacts of pyrene and tire wear particle leachate on the *Daphnia magna* transcriptome

11:15 - 11:30 

A. POINT: Using omics approaches to identify sublethal, chronic effects of artificial sweeteners on rainbow trout

11:30 - 11:45 

S. ST-HILLAIRE: Multigenerational toxicity of lead from fishing gear to the freshwater snail, *Planorbella pilsbryi*

AM SESSIONS

FIELD TOXICOLOGY & ENVIRONMENTAL MONITORING

DBHSC 2032 | 10:00 - 12:00

10:00 - 10:15 

C. BROWN: Can young-of-the-year Smallmouth Bass be useful for post-development monitoring?

10:15 - 10:30 

E. DIESBOURG: Microbiomes of freshwater insects and riparian spiders downstream of municipal wastewater discharges in the Bow River, AB

10:30 - 10:45 

M. IJZERMAN: New insights into pesticide occurrence and multicompartmental monitoring strategies in stream ecosystems using periphyton and suspended sediment

10:45 - 11:00 

C. LAJOIE: Variable effects of forestry on mercury biomagnification pre-and post- harvest in Boreal headwater stream food webs

AM SESSIONS

FIELD TOXICOLOGY & ENVIRONMENTAL MONITORING

DBHSC 2032 | 10:00 - 12:00

11:00 - 11:15 

K. McCUTCHEON: Characterization of microbiomes from Tree Swallow (*Tachycineta bicolor*) nestling fecal samples collected from colonies near a wastewater treatment plant

11:15 - 11:30 

E. MONTREUIL STRUB: Microplastics and mesocosms – investigating the effects of MPs on invertebrate communities

11:30 - 11:45 

H. SCHMALZ: Assessing the dynamics of dissolved organic matter in stormwater: implications for greenhouse gas emissions


11:45 - 12:00 

K. SIMPSON: Assessment of environmental microplastic sources across an urban environment

PM SESSIONS

FIELD TOXICOLOGY & ENVIRONMENTAL MONITORING

DBHSC 1005A | 13:00 - 14:00

13:00 - 13:15 

K. STEVENS: Assessing stormwater management pond water quality, function, and potential biotic effects to receiving waters

13:15 - 13:30 

C. WARDLAW: Uptake and transfer of microplastics in riparian food webs

13:30 - 13:45 

E. ZVEREVA: Estimating the mass of PFAS in exterior surfaces of Toronto buildings

13:45 - 14:00 

A. OGUNLAJA: Harmful algal blooms in the Nigerian-Canadian context; measurement and remediation of cyanobacteria and cyanotoxins

PM SESSIONS

CHEMISTRY & METHOD DEVELOPMENT

DBHSC 1005A | 14:00 - 14:45

14:00 - 14:15

T. DOW: Advancing harm reduction strategies in Ontario: Analysis of opioid consumption through wastewater-based epidemiology in the Durham Region

14:15 - 14:30

N. ZABEL: Effects of ethanol preservation on total mercury concentrations, and C:N and stable isotope ratios in dorsal muscle tissues of two salmonid species

14:30 - 14:45

A. FAIRWEATHER: How much is too much? A novel approach for assessing imidacloprid's impact on soil insects, utilizing the common agricultural ant *Lasius neoniger*

RISK ASSESSMENT

DBHSC 1005A | 14:45 - 15:15

14:45 - 15:00 

L. FURTADO: Completing a human health and ecological risk assessment for on-land disposal of dredged tributyltins

15:00 - 15:15 

S. WOLK: Phthalate exposure from graphic designs in children's clothing

LABORATORY TOXICOLOGY

DBHSC 2032 | 13:00 - 15:15

13:00 - 13:15 

Q. ALLAMBY: Assessing microplastics toxicity and accumulation in freshwater macroinvertebrates

13:15 - 13:30 

C. DO: Individual and mixture accumulation of rare earth elements (REEs), Nd, Pr, and Y on *Daphnia magna*

13:30 - 13:45 

Z. HAMOODI: Selenium in focus: Exploring the effect of supra-physiological selenium on trophoblast function

13:45 - 14:00 

M. HENDERSHOT: The effects of neurochemical manipulation on the behaviour of *Capitella teleta*

14:00 - 14:15 

Y. KUDLA: Lethal effects of granular Bayluscide® on the early life stages of a freshwater mussel (*Lampsilis siliquoidea*)

LABORATORY TOXICOLOGY

DBHSC 2032 | 13:00 - 15:15

14:15 - 14:30 

O. KUNTYJ: Use of a mummichog (*Fundulus heteroclitus*) laboratory bioassay to assess the effects of 17 α -Ethinylestradiol (EE2) and increased temperature on growth and the GH-IGF1 pathway

14:30 - 14:45 

N. NYKAMP: Assessing the variation in ventilation rate and activity of fathead minnows exposed to Pb and Ni

14:45 - 15:00 

A. RESIDE: Evaluating the presence and tissue distribution of the neurotoxin β -methylamino-L-alanine (BMAA) and its isomers in Lake Erie fishes

14:45 - 15:00 

C. RUAN: Glyphosate-based herbicide (Roundup $\text{\textcircled{C}}$) alters prostaglandin biosynthesis and angiogenesis pathways in human trophoblasts.

POSTER PRESENTATIONS

DBHSC ATRIUM

CHEMISTRY & METHOD DEVELOPMENT

J. FAST: Detection of pharmaceuticals in biofilm exposed to municipal effluents using UPLC-MS/MS

M. KHALILVAND: Multi-species toxicity testing of novel anticorrosion materials: N-heterocyclic NHCs

Y.J. XU: Microplastic extraction methods in complex water samples- effects on aged and pristine microplastics

FIELD TOXICOLOGY & ENVIRONMENTAL MONITORING

B. HOLOWCZAK: In-situ assay development for testing soil and waterborne contaminant effects on wetland vegetation

A. NANCE: Accumulation of microplastics in the littoral-shoreline: Analysis of rock rings, shoreline surface water and macrophytes

POSTER PRESENTATIONS

DBHSC ATRIUM

LABORATORY TOXICOLOGY

F. AMARAL SPAHIU: The ecotoxicity of a n-heterocyclic carbene species on *Dugesia dorotocephala*

P. COCHRANE: Testing effluent samples from Canadian pulp and paper mills and metal mines with *Ceramium tenuicorne* at a Canadian commercial laboratory

O. COFFIELD: Acute sensitivity of adult washboard mussels (*Megalonaias nervosa*) to granular Bayluscide®

C. ENNIS: Sodium selenite exposure in placental trophoblasts alters markers of cellular senescence

S. GAEINI: Investigating the effect of venlafaxine on the behaviour of washboard mussels (*Megalonaias nervosa*)

M. ZAJDLIK: Sensitivity of brown flatworms (*Dugesia dorotocephala*) to the lampricide TFM

POSTER PRESENTATIONS

DBHSC ATRIUM

LABORATORY TOXICOLOGY

J. GAWRONSKI: An improved method to assess growth rates of the freshwater diatom *Navicula Pelliculosa* and applicability for mayfly toxicity testing

S. HANG: The toxicity of firefighting water additives on the embryos of the freshwater pulmonated snail *Planorbella pilsbyri*

N. LETWIN: Usage of x-ray microtomography to assess microplastic movement within earthworm tissues

V. LOOR: Using a passive dosing system to assess the aquatic toxicity of five individual aromatic compounds to different life stages of Manila clam (*Ruditapes philippinarum*)

A. STRBAC: Assessing the impacts of individual aromatic compounds on Pacific purple sea urchin behaviour

POSTER PRESENTATIONS

DBHSC ATRIUM

LABORATORY TOXICOLOGY

J. SALOLE: Replacing fish use in effluent toxicity testing with the RTgill-W1 cell line

K. ROBICHAUD: Venlafaxine exposure alters mitochondrial respiration and mitomiR abundance in zebrafish brains

E. MONNIEZ: Screening for potential stress-disrupting compounds using the SR4G transgenic zebrafish line.

A. KHAN: The effects of heat stress on fathead minnow behaviour

OMICS

M. EASWARAMOORTHY: The chemical defensome in the gut and gill of zebrafish

A. PASHA: The effects of heat stress on fathead minnow metabolomics

POSTER PRESENTATIONS

DBHSC ATRIUM

RISK ASSESSMENT

R. DUTT: Developing a standardized water-based brewing protocol for Labrador tea

N. MINDA: Identifying sources of atmospheric anthropogenic particles and evaluating their transport to urban watersheds

G. IZMA: From rain to drain: Understanding urban pond pollution

EXHIBITORS

DBHSC ATRIUM

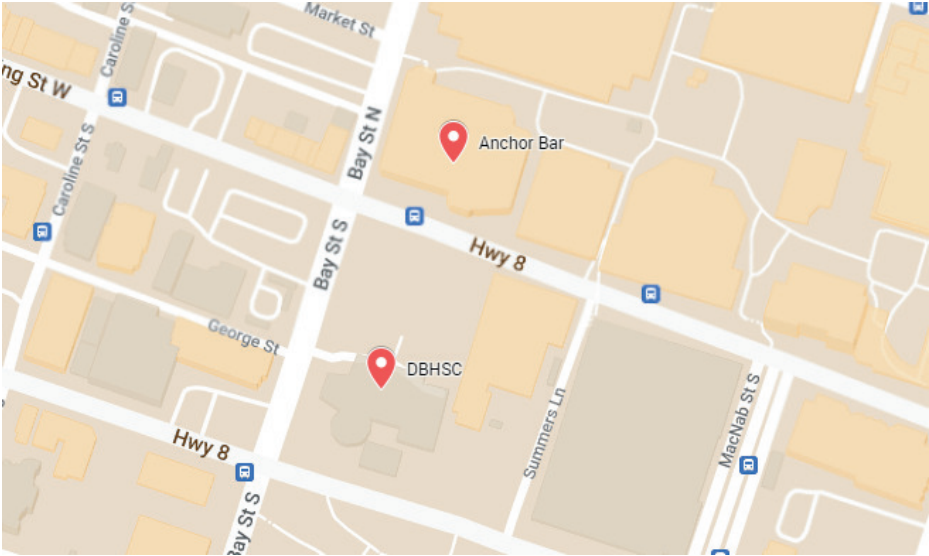
Be sure to visit our exhibitors during the breaks and lunch!



CONFERENCE LOCATIONS



The Conference and AGM will be hosted at the David Braley Health Sciences Centre (DBHSC) located in central Hamilton. The pub night and awards social will be hosted at Anchor Bar Hamilton, just a short walk from the DBHSC.



David Braley Health Sciences Centre

100 Main Street West
Hamilton, Ontario
L8P 1H6



Anchor Bar Hamilton

120 King Street West
Hamilton, Ontario
L8P 1A1



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