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

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# PROGRAM AT A GLANCE
THURSDAY, JUNE 13

## INTRO TO ENVIRONMENTAL CHEMISTRY | 09:00 - 12:00

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

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:**<br>Dr. Darren Thomas,<br>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*

# 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

# FIELD TOXICOLOGY & ENVIRONMENTAL MONITORING

## DBHSC 2032 | 10:00 - 12:00

**11:00 - 11:15**

K. McCUTCHEON: Characterization of microbiomes from Tree Swallow (*Tachicyneta 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

# 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

# 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 17α-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©) 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

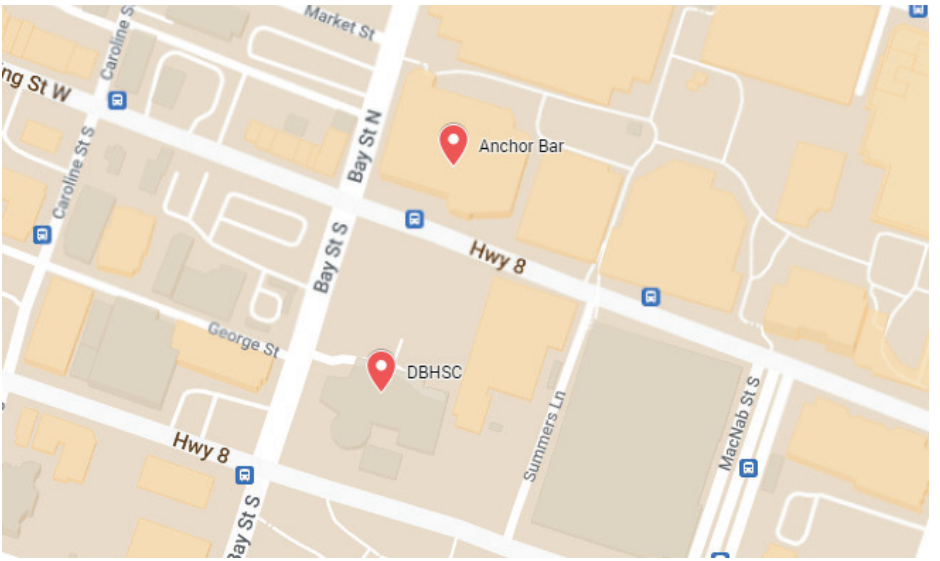
Be sure to visit our exhibitors during the breaks and lunch!





# 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**
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Hamilton, Ontario
L8P 1A1

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L-SETAC AGM 2024

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