



Let's Talk Sustainability

Symposium 2022

What is Let's Talk Science

Let's Talk Science is an award-winning, national, charitable organization focused on education and outreach to support youth development. Let's Talk Science creates and delivers unique learning programs and services that engage children, youth, and educators in science, technology, engineering, and mathematics (STEM). The organization strives to prepare youth for their future careers and role as citizens in a rapidly changing world. For more information about Let's Talk Science, please visit www.letstalkscience.ca.

What are Let's Talk Science Symposia?

Let's Talk Science Symposia connect high school students in grades 11 and 12 with post-secondary mentors to highlight the institution's science, technology, engineering, and mathematics (STEM) specialty. Topic expertise ranges by outreach site from stem cells to environmental impact, cancer to forensics. Students are given the opportunity to engage with post-secondary students and faculty while exploring career options, developing skills and gaining a glimpse into real world problem solving.

Let's Talk Sustainability

Following the immense success of last year's *Let's Talk Biomes* symposium, this year's symposium will follow a similar format. It is a **two-day, virtual event** scheduled for **March 10** and **March 11**. This symposium will boast a prestigious lineup of environmental and biodiversity experts from York University. We will also offer two hands on workshops applicable to DNA studies and environmental pollutants. Finally, we will be hosting a career panel to allow students to ask questions and learn more about career opportunities in STEM beyond secondary studies.

Event Information

Event Dates: March 10, 2022 and March 11, 2022

Event Location: Virtual (via Zoom)

Schedule

Day 1 - March 10

9:00 AM - 9:30 AM

9:30 AM - 10:15 AM

10:15 AM - 10:30 AM

10:30 AM - 11:15 AM

11:15 AM - 12:00 PM

12:00 PM - 1:00 PM

Welcome Address

Speaker 1 - Dr. Alex Mills

15-Minute Break

Speaker 2 - Dr. Sandra Rehan

Lunch Break

Career Panel

Day 2 - March 11

11:30 AM - 11:45 AM

11:45 AM - 12:30 PM

12:30 PM - 1:00 PM

1:00 PM - 2:35 PM

2:30 PM - 2:40 PM

Intro

Speaker 3 - Britney Picinic

Mini Lunch Break

Parallel Workshops Sessions

Closing Remarks

Let's Talk Science York University Team



Dr. Michael Scheid (Associate Dean of Students)

Dr. Scheid supervises the operations of Let's Talk Science at the York University site. His research investigates signal transduction pathways that regulate growth, survival, and metabolism of mammalian cells.

Coordinators:

Eleni Diakanastasis
Matthew Tran
Veedhi Solanki

Executives:

Camille Lavoie
Hajrah Popalzy

Dr. Alex Mills (Full Professor, Teaching Stream)



"I have taught a variety of BIOL and NATS courses since I began at York in 2009. Although I am in the Teaching Stream, I continue to study bird migration. I am currently engaged in a collaborative project using GPS tags to study the migration constraints of a nocturnal bird that breeds in Canada and over-winters in the tropics."

Dr. Sandra Rehan (Associate Professor of Biology)

"The Rehan lab research focus is bee biodiversity and social evolution. We have a special interest in the origin and maintenance of social behaviour in bees. The lab has three main foci: molecular phylogeny, behavioural ecology, and comparative genomics. In studying bee biodiversity, we have a strong passion for documenting these charismatic species."



Britney Picinic (PhD Candidate)



"Hormonal regulation of aquaporins in osmoregulatory organs of mosquitoes. Britney's thesis is co-supervised with Dr. Jean-Paul Paluzzi"

Britney's project, titled *The effect of diet on aquaporin abundance and localization in the mosquito, Aedes aegypti*, was featured in the Beyond Science Initiative Conference 2021.

DNA Discoveries Workshop

This workshop explores the function of DNA, the DNA structure, and the process of genetic inheritance. Students will be introduced to cells, cellular components and how DNA base pairing occurs in living organisms. Students will also learn about the genetic code and how to use the amino acid table to decipher the information from DNA sequences. Lastly, students will get an opportunity to conduct DNA separation by size using gel electrophoresis. This activity will help students to understand a molecular biology technique used by many scientists in the lab and its applications in the field research!

H₂ OH NO! Workshop

Students will uncover the effects of toxic compounds when released into our environment through pollution. Students will examine how the acidification of our ecosystems impact wildlife and the role that carbon emissions play in the formation of acid rain. Students will then investigate the capillary action of plants through creating their own cardboard “crystal” tree! This will highlight the importance of acidification and how it can damage plants and shelled organisms.

Careers Panel

The Careers Panel will consist of experts in the field of biodiversity, cell, animal, conservation, and environmental biology. Speakers will include York university faculty and graduate students who are currently conducting research or professionals in their prospective STEM fields.

Registration

Open Date: February 23, 2022

Close Date: March 4, 2022

Link: {link here}

A \$30 deposit is required at the time of registration (*to be refunded on the last day of the event if all registered students attend the event*). If this fee or method of payment is an obstacle to your attendance, please let us know in advance and we will make alternative arrangements. All Let's Talk Science programs are **free**, the registration deposit is only for attendance purposes and will be **refunded to the educator**.

The symposium is targeted for grade 11 and grade 12 students with a keen interest in biology. We encourage registering a maximum of 35 students per school in order to engage students from as many schools as possible. Exceptions will be made if spots remain closer to the end of registration.

Note to Educators:

We will be shipping the kits to educators to be distributed to individual students. These kits provide the necessary materials to participate in the hands-on workshops during the symposium. Please ensure there is a method to distribute the kits to students if they are participating remotely from home.

We hope to see you!

Please email us if you have any questions:

yorku@outreach.letstalkscience.ca

Package downloadable at: yorku-symposium.netlify.app