

UNIVERSITY OF TORONTO - ST. GEORGE CHAPTER 2014 - 2015 Annual Report

THANKS TO:

Faculty of Medicine

Faculty of Engineering

Faculty of Arts & Science

McEwen Centre for Regenerative Medicine

Stem Cell Network

Nutritional Sciences
Department

Institute of Medical Science

Immunology Department

Training Program in Regenerative Medicine

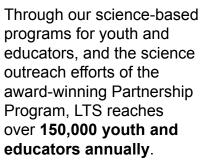
Institute of Biomaterials and Biomedical Engineering

Physiology Department

MaRS

Science Outreach

The Let's Talk Science program is a national science outreach organization that strives to improve science literacy in the community through leadership, innovative educational programs, research and advocacy. We motivate and empower youth (JK through grade 12) to use science, engineering, and technology to develop critical skills, knowledge and attitudes needed to thrive in our world.



These programs provide an excellent platform on which to build positive attitudes towards science to enhance life skills, including critical thinking, problem solving, teamwork, and communications.









Our Milestones

- Over 110 volunteers from 30 graduate programs
- Over 960 hours of preparation and presentation time logged by graduate student volunteers this year
- Hosted the Let's Talk Science Challenge at the Great Hall at Hart House. Grades 6 to 8 students participated for over \$3,700 in prizes
- Hosted StemCell Talks at MaRS featuring presentations by Dr. Derek van der Kooy and Dr. Timothy Caulfield

Recent Activities!

Recently our site completed some very exciting events just in time for the end of the school year!

Physiology Day. In partnership with the Department of Physiology, Grade 11 students were invited to take part in this year's Physiology Day event. This year, we brought in 75 grade 11 students from 10 different schools for a day-long visit. These high school students have been invited to experience education in a university setting and the science of physiology through hands-on experiments and lectures

Immunology Day ran in partnership with the Department of Immunology for high school students across Toronto, reaching 31 classrooms in celebration of World Immunology Day! For this event, students learned about the immune system and diseases related to immune malfunction through in-class activities and hands-on demonstrations.









Our last major event for the year was the **Let's Talk Science Challenge**. This year, we had 31 teams of students signed up for the day-long event. Over 70 graduate volunteers donated their time to helping lead all the teams! The LTS Challenge is a trivia-based event for students in grades 6 to



8, who form teams of up to 4 students to compete for the title of Champion. They were joined by teachers and peer spectators for the day long event including Fun House activities and design challenges! The winning team was awarded acceptance to the Jr. DEEP summer program offered by the Engineering Outreach Office and a \$400 BestBuy gift card.

StemCellTalks

What first started out as a few in-class presentations to high school students quickly grew into a one-day symposium. Now StemCell Talks has become a national stem cell outreach/education initiative! StemCell Talks was developed by the Let's Talk Science program at the University of Toronto in partnership with the Stem Cell Network in 2010 with the goal of facilitating knowledge transfer between academia and high school students pertaining to the science and practical ethics of stem cells.





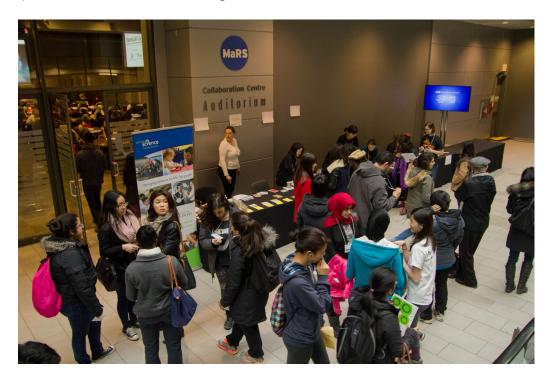
Students who asked the best questions during the debates happily receiving their award onstage!

StemCell Talks was highlighted by a one-day symposium held on March 13th, 2015 at the MaRS Collaboration auditorium. This year's theme was stem cells in the context of diabetes, and 200 students were welcomed with an introductory lecture, Stem Cells 101, presented by Dr. Elia Piccinini. This was followed by several debates between leading experts in the stem cell field regarding the ideal cell source for clinical stem cell applications.



Our dedicated team of volunteers happy to wrap up another successful StemCell Talks!

Students spent the rest of the morning learning issues pertaining to stem cell biology and the use of stem cells for treating Type 1 Diabetes, as well as learning the pros and cons of cell therapy versus acellular medical devices for managing diabetes. In the afternoon, Dr. Timothy Caulfield introduced the problem of stem cell tourism and was joined in a panel dicussion with clinician Dr. Ravi Retnakaran, research scientist Dr. Ian Rogers, patient advocate Alexander Ivovic, and biotechnology company representative Dr. Rahul Sarugaser.



SPECIAL THANKS TO:

McEwen Centre for Regenerative Medicine Stem Cell Network MaRS

STEMCELL Technologies
Ontario Institute for Regenerative Medicine
Centre for Commercialization of Regenerative Medicine
Inseption Lifebank
Sunnybrook
Institute of Biomaterials and Biomedical Engineering
SickKids

Sandy Lake Outreach

This year Let's Talk Science continued our longstanding collaboration with the Health and Diabetes Centre at the Sandy Lake First Nation in northern Ontario. Two volunteers, Swapna and Yonatan, flew into Sandy Lake for a week of activities with the elementary school students. Our volunteers in Toronto designed a series of hands-on activities to teach the students about soil and gardening, nutrition, diabetes, and astronomy.

The week started off with the Tomatosphere activity, where students planted two sets of tomato seeds – one normal set of seeds and a second set of seeds that had been to space on a recent mission. After learning about space and growing plants in space, students learned more about growing plants here on earth, and what plants needed to survive.

Next, we learned about how fresh fruits and veggies are an important part of a balanced diet that includes grains, meat, and dairy, as described in Canada's Food Guide. The students took all of this knowledge and proceeded to create their own healthy meal plan and present it to the class. Students also had the opportunity to take part in









a gardening project which allowed them to plant various vegetables such as squash, peas, and spinach as part of their community garden. One evening, a community presentation was held which included hands-on activity booths for students and some curious parents to learn about planting and gardening techniques, earth sciences and soil quality, as well as the glycolytic index and diabetes. This evening was a big success and we had a great turnout from the Sandy Lake community.

Without the clutter of high rises and distracting artificial lights, Sandy Lake's night sky was an ideal setting





for Astronomy Night to take place. On this evening, students had the opportunity to build a telescope and learned how to use one. Students also learned about different constellations and created star charts in order to map out different celestial objects. In keeping with the First Nations' story-telling traditions, students wrote creative star legends about different constellations to share with their peers. After an exciting week of science outreach with over 200 students, Yonatan and Swapna headed back to Toronto excited to have had the opportunity to visit the Sandy Lake community!

For more details about Yonatan and Swapna's trip to Sandy Lake, please visit: http://outreach.letstalkscience.ca/blog/2015-outreach-trips/sandy-lake-first-nation-on.html



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Coordinators:

Yonatan Lipsitz
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Rachel Newsome (outgoing)
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Temitope Olanbiwonnu Osman Mahamud Swapna Mylabathula