

Let's Talk Science  
University of Toronto  
St. George Chapter

# let's talk science

UNIVERSITY OF TORONTO — ST. GEORGE

2011-2012

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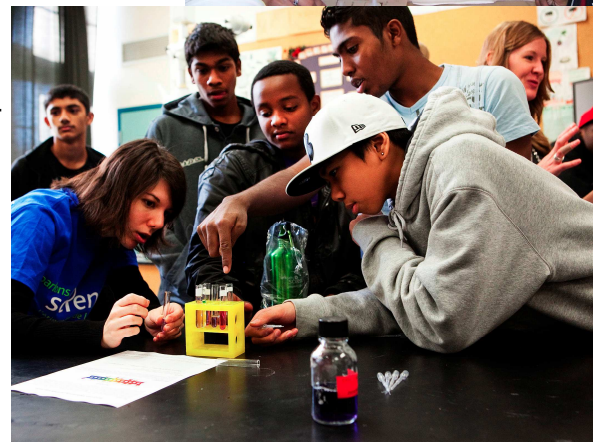
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## Science Outreach

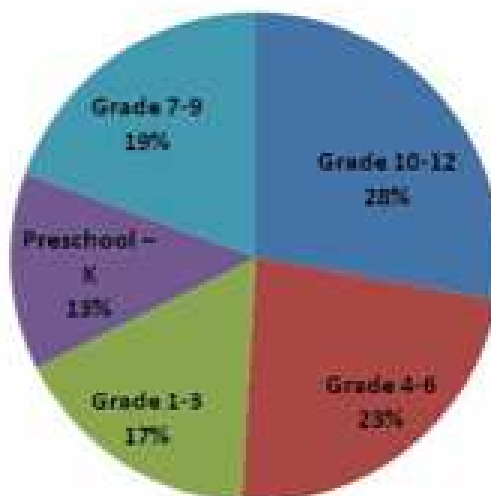
The Let's Talk Science Partnership Program is a **national science outreach organization** that strives to improve science literacy in the community through leadership, innovative educational programs, research and advocacy. We motivate and empower youth (**JK through grade 12**) to use science, engineering,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

winning Partnership Program, LTS reaches over **150,000 youth and educators annually**. These programs provide an excellent platform on which to build positive attitudes towards science and to enhance life skills, including critical thinking, problem solving, teamwork and communication.



## Our Milestones

### Who are we reaching?



- Through partnerships with different departments, we've **reached over 6,000 youth** and this number is still growing with upcoming events!
- **200 student volunteers** from **30** graduate programs
- Over **1,200 hours** of preparation and presentation time logged by graduate students this year
- Hosted the **All Science Challenge at the Great Hall at Hart House**. Grade 7 & 8 students from **12** elementary schools participated for over **\$1500** in prizes (see pg. 2)
- Raised **over \$40,000** in cash and in kind support
- Developed **StemCellTalks** into a National stem cell outreach initiative and hosted the third annual StemCellTalks in Toronto

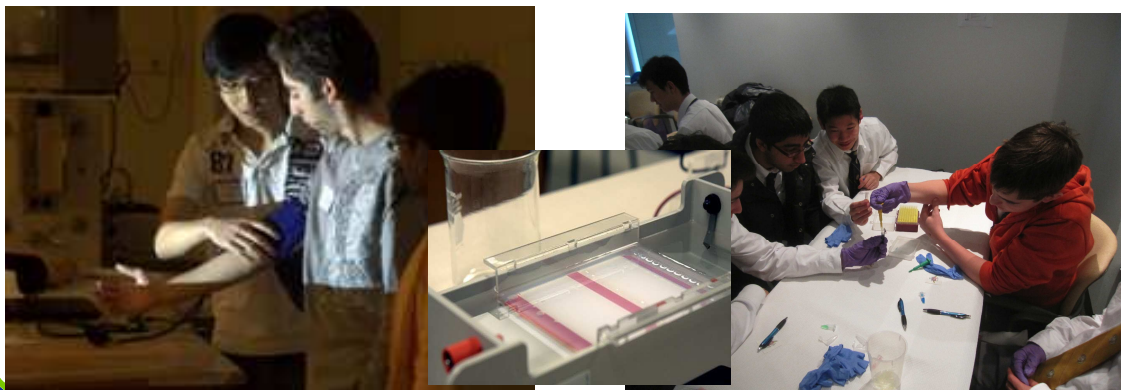
## Recent & Exciting Activities!

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

**Physiology Day** (April 24th) for grade 11 students, ran in partnership with the Department of Physiology. 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** was soon after and came on April 27th, ran in partnership with the Department of Immunology for high school students across Toronto. 45 classrooms were reached in total! For this event, students learned about the immune system and diseases related to immune malfunction through in-class activities and an online component. Our last major event for the year is the **All Science Chal-**

**lenge** (May 28th). This is a trivia based event for students in grade 6-8 as teams of up to 4 students competed for the title of champion. They were joined by teachers and peer spectators for the day long event including funhouse and design challenges. The winning team was awarded acceptance to the Jr. DEEP summer program offered by the Engineering Outreach Office. See page 6 for more!



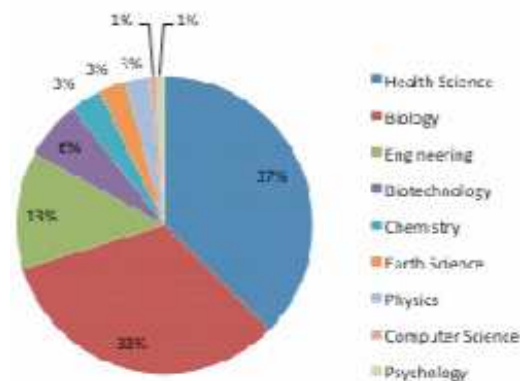
## Regional Let's Talk Science Conference

From February 3rd-5th, 2012, we had the opportunity to host 33 Let's Talk Science Coordinators and some of the National Office staff in the first annual Ontario regional conference. Over the course of two and a half days, we gave them a taste of our volunteer pub nights and showcased some of the most successful initiatives from our site, such as Physiology Day, Immunology Day and StemCellTalks. We also spent time sharing ideas about connecting with volunteers, online engagement, new kit ideas and training on the new online recording system.

## Our Impact on Graduate Student Life

Let's Talk Science (St. George) has recently partnered with the **Graduate Professional Skills (GPS) Program** from the School of Graduate Studies at University of Toronto. In doing so, Let's Talk Science graduate volunteers are now able to **earn up to 8 GPS credits** for their involvement in 4 different areas of our program, including: partaking in the Science With Impact Training module, judging science fairs, and career mentorship. These GPS points contribute to the professional development of our volunteers, allowing for their professional growth to be documented in their diploma.

Where do our volunteers come from?





# StemCellTalks

Opening dialogue on stem cell science and practical ethics

What first started out as a few in-class presentations to high school students quickly grew into a one-day symposium, and now StemCellTalks has become a national stem cell outreach/education initiative. StemCellTalks 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.

StemCellTalks reached over 100 high school students through in-class visits and was highlighted by a one-day symposium held on March 9th 2012 at the MaRS Collaboration auditorium. At the symposium, 200 students were welcomed with

an introductory lecture, Stem Cells 101, presented by Dr. Derek van der Kooy. This was followed by several debates between leading experts in the stem cell field regarding the ideal cell source for clinical stem cell applications.

Students spent the rest of the morning learning issues pertaining to stem cell biology and the use of stem cells for cardiac repair. Professors Peter Zandstra, Milica Radisic, Ian Rogers, and Mira Puri, discussed the topics of stem cell biology and bioengineering in the form of lectures and interactive debates. In the afternoon, Timothy Caulfield introduced the problem of stem cell tourism and was joined by a panel of experts (Dr. Peter Liu, Dr. Ines Lohse, Dr. Seema Mital, and Dr. Rahul Sarugaser). Following



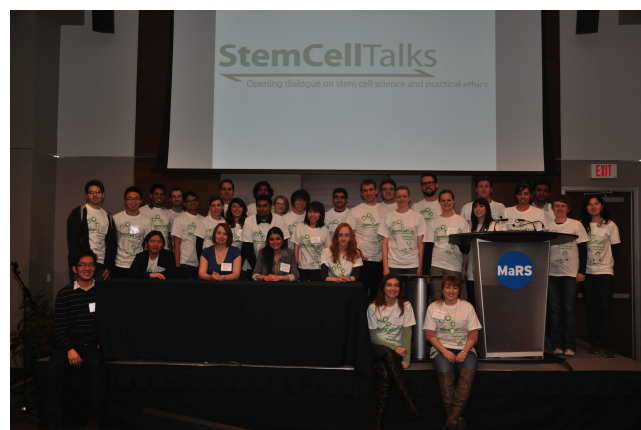
each presentation, the students continued the discussion in smaller groups led by graduate students and post-doctoral fellows. At the end of each session, the students lined up to share their thoughts with a panel of experts.

The StemCellTalks symposium has been so successful that satellite symposia currently being held in Calgary, Ottawa, and Vancouver, with plans to expand to Hamilton, Montreal, and Edmonton. The development of a StemCellTalks National Advisory Committee consisting of representatives from each city hosting a StemCellTalks event as well as representatives from the Stem Cell Network and Let's Talk Science National Office is also underway.



*"The information was very interesting and the debates were very helpful in understanding of the problems in science and ethics of the stem cells research field."*

-Gr. 12 student, William Lyon McKenzie Collegiate



**Thank You for Your Support!**

**Sick Kids**

**Molecular Genetics, UofT**

**Sunnybrook**

**Stem Cell Technologies**

# Loblaws Little Hands Event

By Ashleigh Wiggins, MSc Candidate, Department of Nutritional Sciences

Nutrition is an important part of a healthy lifestyle. This is highlighted every March when Canada celebrates Nutrition Month. This year (2012) the theme of Nutrition Month was Myth Busting. To aid Dietitians of Canada in spreading an accurate message of healthy eating to youth, the Let's Talk Science volunteers from the University of Toronto Department of Nutritional Sciences, in partnership with the Health & Wellness department at Loblaws® at Maple Leaf Gardens, ran an interactive digestive system activity and grocery store tour event March 26<sup>th</sup>, 2012 with the grade 6 and English as a Second Language (ESL) classes from Winchester Elementary

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## About the photographer:

Pedro Huot is finishing up his Ph.D. thesis which is focused on the effects of maternal over-nutrition during pregnancy in rats on offspring growth and development. A former executive of the Nutritional Sciences Graduate Students Association for many years, Pedro has many interests outside the lab, including volleyball, gymnastics, playing the saxophone, solving the rubik's cube and engaging in his passion for photography.

## A parting message from our outgoing coordinator...

By Julie Mason, Outgoing Let's Talk Science University of Toronto (St. George) site coordinator

As I reflect on my past three years as Site Coordinator of Let's Talk Science at the University of Toronto St. George campus, I am truly honoured to have been a part of such an amazing community and feel so grateful to have found a network of people who are passionate about science outreach. I would like to take this opportunity to thank those who have helped our program grow and who have made this experience so wonderful. First off, thank you to our base of volunteers whose willingness to donate their time, expertise and creativity makes this whole program possible. I feel very lucky to have had the opportunity to get to know so many bright and inspiring graduate students from diverse departments through Let's Talk Science. I owe a special thank you to the members of the 2011 and 2012 LTS

Sandy Lake Outreach team who, in partnership with the Sandy Lake Health and Diabetes Project, helped to create an amazing summer camp for the children and youth in Sandy Lake First Nation.

Let's Talk Science is fortunate to receive strong support from many faculties and departments at the University of Toronto. I would like to thank everyone who has shown their support for the program over the past three years. In particular: Dawn Britton of the Engineering Outreach Office who always goes above and beyond when we ask for help; Dr. Mary L'Abbé, Chair of the Department of Nutritional Sciences, who has been our Site Supervisor since 2009; Dr. Michael Reid of the Department of Astronomy and Astrophysics without whom I may not have survived hosting my first confer-

ence; Vijay Chetty, Business Manager of the Department of Nutritional Sciences for being so patient as we stored our supplies in the department storage room; and last, but certainly not least, Baljit Brar of the Faculty of Arts and Science for managing our financial account.

I would also like to express my immense gratitude to the staff members at the Let's Talk Science National Office who have been incredibly helpful and supportive of our program. I am always motivated and inspired by the passion, patience, encouragement and support of everyone at the National Office. I look forward to seeing the great things that Let's Talk Science will continue to do for the children and youth of Can-

ada in the years ahead. Finally, none of this would have been possible without the support and extraordinarily hard work of my fellow Site Coordinators over the years: Emily Beckett (2011-2012), Nika Shakiba (2011-2012), Janet Manias (2010-2011) and Paul Casar (2009-2011). It has been an honour and pleasure to get to know and work with all of you. Best wishes to Michael Weiss, Emily and Nika, the Site Coordinators for 2012-2013. I have no doubt that you will be very successful in continuing to drive Let's Talk Science forward! I will really miss my role as Site Coordinator but know that I will always be involved with Let's Talk Science in some capacity. Best wishes!



# Let's Talk Science in the Media and Around Town

Let's Talk Science and Amgen Canada commissioned a survey of Canadian parents about their belief in the importance of post-secondary science education, scientific study as well as the role of science in their everyday lives. An overwhelming 82 per cent of Canadian youth turn to their parents for guidance on making decisions about their education and careers, yet many parents don't take time to discuss educational goals with their children. Results of a recent Angus Reid study show that, of the 60 per cent of youth who plan to pursue science beyond grade 10, 75 per cent were influenced by their parents to do so.

While these statistics may not come as a surprise, what's curious is that only 23 per cent of parents take the time to discuss their children's goals when

they clearly wield much influence in these decisions – especially when 74 per cent of parents agree that it is very important to be involved in their children's education.

Our volunteers were out in the community and on local news shows to promote the results of this study. Volunteers Danny Hickie (student at OISE) and Melissa Cheung (PhD Candidate, Pharmaceutical Sciences) appeared on Breakfast Television (CityTV) and on Leisure Talk (Fairchild TV) demonstrating some fun experiments. Thirteen LTS volunteers spent the day on November 23rd encouraging passerbys at Union Station and First Canadian Place to try out some science experiments and sent parents home with activity ideas to try out with their children.



Danny Hickie (OISE) demonstrates the Elephant Toothpaste experiment on Breakfast Television.



Melissa Cheung (PhD Candidate, Medical Biophysics) with Edward Eng (Volunteer at the Scarborough campus) and the host of Leisure Talk.



Anup Tuladhar (MASC Candidate, IBBME) shows off the Amazing Leak-Proof Bag at Union Station.

## Sandy Lake Aboriginal Outreach

A team of volunteers from the Departments of Pharmacology and Toxicology, Cell and Systems Biology, Immunology, Nutritional Sciences and the Institute for Biomaterials and Biomedical Sciences have been working very hard to prepare the curriculum for the second annual Let's Talk Science Sandy Lake Science camp. This program is built from a partnership between the Sandy Lake First Nation, the Sandy Lake Health and Diabetes Project and Let's Talk Science at the University of Toronto, St. George Campus. The curriculum for the 2012 camp builds on the topics covered last year and focuses on topics including the cardiovascular system, blood glucose regulation, nutrition, exercise science, immunology and ecology. The camp will run from August 20-24<sup>th</sup> in Sandy Lake First Nation, a fly-in community located 600 km northwest of Thunder Bay. We look forward to sharing a story from the camp in our next newsletter! A team of volunteers from the Departments of

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### Planning group

Let's Talk Science Sandy Lake Outreach volunteers at a planning meeting. From left to right: Julie Mason, Meghan Larin, Sharanya Rajendra, Shannan Grant, Zoryana Salo and Tom Curry. Missing from photo: Peter Chen, Ashleigh Wiggins, Katie Hopperton, Chuck Chen, Lilli Mauer, Maria Fernanda Nunez



### Children at camp with Shannan and Andre

Children design digestive system anatomy t-shirts with Project Coordinator, Shannan Grant, and Camp Counsellor, Andre Dias, at the Let's Talk Science Sandy Lake Summer Camp 2011

## All Science Challenge

This year we hosted the All Science Challenge (ASC) on Monday, May 28th. The ASC is a day-long trivia competition for teams of students in grades 6-8, with a design challenge component and a science fun house that allows every one to explore hands-on science. We were excited to welcome 27 teams of students from 11 different schools, who had spent the last five months studying from a handbook provided by the Let's Talk Science national office. We had distinguished guests in attendance, including an MPP, LTS board members and an executive director from Call2Recycle, a new supporter of LTS. TVO

Kids filmed during the day and were especially interested in the hydraulophone in the fun house, presented by its inventor Professor Steve Mann, and the design challenge to make the highest tower with Post-It notes and tape. Overall, everyone had a great time, teachers and parents gave us great positive feedback, and our volunteers once more shared their passion for science. Congratulations for team OXYGENE (from J.B. Tyrell) on winning the challenge and the Non-Newtonions (from Holy Name C.S.) for winning the spirit award!

## Snapshots of Amazing Volunteers



Name: **Shannan Grant**

Program/Department:  
**PhD Candidate, Department of Nutritional Sciences**

### **Let's Talk Science volunteer since 2009**

Shannan Grant, has been an invaluable member of the Let's Talk Science Outreach Program at the U of T, St. George. Most notably Shannan was one of the project coordinators for the Let's Talk Science Sandy Lake Outreach Project. Her experience as the Research Coordinator/Registered Dietitian of the Sandy Lake Health and Diabetes Project 2007-2009 and her experience and training as a Registered Dietitian provided important insight into how to develop and evaluate our outreach program. Shannan's close personal ties to the community and already established work relationships within the community provided our outreach team with insight into Sandy Lake's rich culture before we even hit the ground. Shannan is once again working hard in planning the curriculum and logistics for the 2012 summer camp in the Sandy Lake First Nation with Julie Mason, Site Coordinator for LTS, U of T St. George. Recently, Shannan also took on a leadership role in initiating a novel outreach program for Nutrition Month event in partnership with Loblaws. Shannan has also contributed many hours of outreach at the First Nations School of Toronto and with Girl Guides groups. Shannan is also a certified yoga instructor who kindly lead Karma yoga classes in the spring/summer of 2011 for students and faculty in the Department of Nutritional Sciences and proceeds were donated to the Sandy Lake Outreach Project. Evidently, Shannan is committed to science outreach! When asked what her favourite memory of her time with Let's Talk Science, Shannan replied: "There are so many stories and memories, I can not choose. I know it is cliché, but every time I see that I have taught a child something new or "cool" I feel like it is my favorite memory in that moment."



Name: **Agnes Soos**

Program/Department:  
**Institute of Biomaterials and Biomedical Engineering**

### **Let's Talk Science volunteer since 2010**

Agnes Soos, a student in at the Institute of Biomaterials and Biomedical Engineering is a new volunteer with our site this year. This year, Agnes has volunteered with six separate activities and has contributed over 50 hours to preparation and activity delivery. Her activities have included a kindergarten class visit, two Boy Scout groups and helping as a logistics volunteer at the StemCell-Talks event. We have received great feedback from each of her activities. The children reached have benefitted greatly from her efforts and Agnes has enjoyed seeing the students' excitement about science: "When I asked one of the grade 3 students if he was excited to learn about science and do some fun activities he said: 'Yes! I have two science kits at home that I can do experiments with too! I love science!' and then promptly went on for several minutes, explaining to me what sort of things he's learned about from each of his science kits and all the exciting science experiments he's completed. I loved his enthusiasm and seemingly endless curiosity for all things science-related!"



# Volunteer Tales

**M**y volunteer experience with Let's Talk Science has focused on reaching high school students. I have led outreach activities ranging from biodiversity and engineering to genetics and gel electrophoresis. This year I helped to create a national stem cell education outreach initiative called *StemCellTalks* that brought concepts of this the cutting edge research into the classroom. Let's Talk Science has re-kindled my passion for science, and allowed me to cultivate a new passion – teaching Science! Let's Talk Science is an important program because it emphasizes discovery and creativity, promotes the fun parts of science, and aims to engage everyone."

— Margot Arntfield

Doctoral Student in

Dept. Molecular Genetics

Let's Talk Science Volunteer since 2009

**A**s a Let's Talk Science volunteer I have been able to spark the interests of children for science. My experiences as a volunteer has taken me into a kindergarten classroom to teach the little ones about magnetism; the Fun Fair at Adam Beck P.S. took me into the community and the Science Rendezvous event at U of T literally reached all corners of the city. In all cases, it is evident that animating science experiments intensifies children's curiosity for science. This is what makes the Let's Talk Science program special - it transforms what are tedious paragraphs in textbooks into engaging hands-on experiments that lets children understand the principles behind the science with a element of fun and self discovery. At the end of the day, seeing the look of inquisition and wonderment in the faces of the children is simply gratifying - it reminds me of why I became a scientist."

— Chuck Chen

Doctoral Student in Dept. Nutritional Sciences

Let's Talk Science Volunteer since 2009



One of our volunteers, Chuck Chen, demonstrating some chemistry to high school students

let's talk  
science  
inspiring discovery

University of Toronto St. George Chapter

## Coordinators:

Nika Shakiba

Emily Beckett

Michael Weiss (incoming)

Julie Mason (outgoing)

[Its.grad@utoronto.ca](mailto:Its.grad@utoronto.ca)

## Lasting Partnerships

University of Toronto School of Graduate Studies  
Graduate Professional Skills Program

Science Rendezvous at the University of Toronto

Royal Winter Fair

Boys & Girls Club

Girl Guides of Canada

Canadian Centre for Victims of Torture

Elementary and Secondary Schools throughout the GTA

Our program would not be possible without your  
generous and continued support!