

Collaborative Program in Neuroscience (CPIN) University of Toronto

2015 Toronto Brain Bee Event Report

<http://www.neuroscience.utoronto.ca/events/brainbee.htm>



(Toronto Brain Bee Photography credits: Petri Takkala & Vladislav Sekulic)

The 17th Annual Toronto Brain Bee competition took place at the Medical Sciences Building at the University of Toronto on March 27, 2015. 48 students from 14 high schools in the Toronto area participated in the competition.

Following three rounds of questions, the top three winners were: Shannon Egan (first place), Laura Newcombe (second place) and Ruby Zhang (third place). Shannon and Ruby were from the University of Toronto Schools, while Laura was representing North Toronto Collegiate Institute. The Top Ranking Novice Participant Award went to Justin Lu (Upper Canada College). As the first place winner, Shannon Egan will represent Toronto at the 8th Annual CIHR Canadian National Brain Bee competition (www.brainbee.ca), which will take place at McMaster University in Hamilton on May 30, 2015.

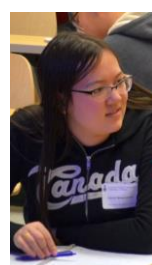
Between the competition rounds, two short research presentations were given by Ellen van der Plas (Psychiatry, Schachar lab) & Pieter Beerepoot (Pharmacology & Toxicology, Salahpour lab). CPIN also organized and provided lunch for all competition participants, attending high-school teachers and volunteers. Following the competition, all the participants were invited to visit the Anatomy Museum at the Division of Anatomy (led by Dr. Hong-Shuo Sun) & Research Laboratories located at the Medical Science Building at UofT (Feng lab, Lambe lab, Ramsey lab, Salahpour lab, Sun lab and Wojtowicz lab).



University of Toronto Brain Bee Volunteer Team



Shannon
Egan



Laura
Newcombe



Ruby
Zhang



Justin
Lu

Toronto Brain Bee Sponsorship The 2015 Brain Bee competition was sponsored by the Collaborative Program in Neuroscience, the Department of Physiology and the Division of Anatomy at the University of Toronto, the Firefly Foundation and the Ontario Ministry of Research and Innovation (via Early Researcher Award outreach funds provided by Dr. Ali Salahpour, Department of Pharmacology & Toxicology).

The students were welcomed by Professor Zhong-Ping Feng (Coordinator of Toronto Brain Bee, Department of Physiology) and Ms Sharon Zillmer (Program Manager, Firefly Foundation). The Brain Bee competition was hosted by Kasey Hemington (Graduate student, IMS) and Andrew Barszczyk (Graduate student, Physiology).

The organization committee of the 2015 Toronto Brain Bee comprised of: Ali Salahpour (Pharmacology), Amy Ramsey (Pharmacology), Ellen van der Plas (Postdoctoral fellow, Psychiatry), Hong-Shuo Sun (IMS/Surgery-Anatomy), Isabelle Aubert (Laboratory Medicine and Pathobiology), Jonathan Dostrovsky (Professor Emeritus Physiology; Advisor), Kasey Hemington (Graduate Student, IMS), Morgan Barense (Psychology), Suhail Asrar (CPIN Office) and Zhong-Ping Feng (Physiology; Committee Chair).

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The UofT Faculty judges (CPIN) included Ali Salahpour (Pharmacology), Amy Ramsey (Pharmacology), Hong-Shuo Sun (IMS/Surgery-Anatomy), Jonathan Dostrovsky (Professor Emeritus Physiology; Advisor) and Zhong-Ping Feng (Physiology).



The trainee volunteers included Kasey Hemington (IMS, Davis lab), Adeoye Oyefiade (Psychology, Mabbott lab), Ahmed Abussaud (Physiology, Sun lab), Alexandre Guet-McCreight (Physiology, Skinner lab), Alicia Hilderley (Rehabilitation Science, Darcy Fehlings lab), Amanda Easson (Psychology, Doesburg lab), Andrew Barszczyk (Physiology, Feng lab), Annette Ye (IMS, Taylor lab), Anton Rogachov (IMS, Davis lab), Denis Osipov (Physiology, Salter lab), Ekaterina Turlova (Physiology, Sun lab), Eliane Barras (Biochemistry, McQuibban lab), Ellen van der Plas (Psychiatry, Schachar lab), Eva Ta (IMS, Guerguerian lab), Jabir Mohamed (IMS, Burnham lab), Ji-Sun Kim (Physiology, Feng lab), Jonathon Chio (IMS, Michael Fehlings lab), Joshua Cheng (IMS, Davis lab), Kevin Himberger (Psychology, Honey lab), Laura Vecchio (Pharmacology, Salahpour lab), Marielle Deurloo (Physiology, Feng lab), Michael Tso (IMS, Macdonald lab), Nancy Dong (Physiology, Feng lab), Petri Takkala (IMS, Prescott lab), Philippe D'Onofrio (Rehabilitation Science, Koeberle lab), Pieter Beerepoort (Pharmacology & Toxicology, Salahpour lab), Sammen Huang (Physiology, Sun lab), Shannon Roberts (Surgery-Anatomy, Agur lab), Shraddha Pai (CAMH, Bader lab), Viji Easwar (Sick Kids, Gordon lab), Vladislav Sekulic (Physiology, Skinner lab), Yuxiao Sonny Chen (Pharmacology, Ramsey lab) and Zahra Emami (IBBME, Chau lab).



Neuroscience Enrichment Program

In order to help high school students prepare for the 2015 Toronto Brain Bee and promote neuroscience awareness, a free neuroscience course at the University of Toronto was organized by CPIN in the months before the competition. The Neuroscience Enrichment Program is an annual lecture series taught by CPIN graduate students and faculty members. This year, the Enrichment Program was coordinated by Kasey Hemington (IMS, Davis lab) and 35 students from 10 GTA high schools attended the lectures. Volunteer teachers included Cristina Saverino (Graduate student, Psychology, Grady lab), Danielle Douglas (Graduate student, Psychology, Barense lab), Hans Melo (Graduate student, Psychology, Anderson lab), Jason Charish (Graduate student, Physiology, Monnier lab), Jonathon Chio (Graduate student, IMS, Fehlings lab), Michael Tso (Graduate student, IMS, Macdonald lab), Shane Ellis (Graduate student, Physiology, Hutchison lab), Sophia Raitsin (Graduate student, IMS, Meyer lab), Trish Domi (CPIN Graduate Alumni, IMS, deVeber lab) and William Ju (Faculty, Human Biology).

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2015 Toronto Brain Bee Award Winners

Top 3 Ranking Participant Awards

	First Name	Last Name	Grade	School
1	Shannon	Egan	12	University of Toronto Schools
2	Laura	Newcombe	12	North Toronto Collegiate Institute
3	Ruby	Zhang	12	University of Toronto Schools

Top Ranking Novice Participant Award

	First Name	Last Name	Grade	School
	Justin	Lu	11	Upper Canada College

Top Ranking Participant Awards according to school (with at least 3 participants)

	First Name	Last Name	Grade	School
	Nathalie	Trinh	11	Branksome Hall
	Hawa	Latuke	12	York Memorial Collegiate Institute
	Justin	Lu	11	Upper Canada College
	Shannon	Egan	12	University of Toronto Schools
	Sophia	Song	11	Marc Garneau Collegiate Institute
	Stella	Mihevc	12	Cardinal Carter Academy for the Arts

Student Leadership in Promoting Early Education in Neuroscience Awards

	First Name	Last Name	Grade	School
	Adrian	Yip	10	Marc Garneau Collegiate Institute
	Elliott	Birman	11	Upper Canada College
	Justin	Lu	11	Upper Canada College

Teacher Recognition Awards

	Teacher Name	School
	Anand Mahadevan	University of Toronto Schools
	Chandra Boon	Branksome Hall
	Courtney Turner	Upper Canada College
	Mark Harding	York Memorial Collegiate Institute
	Michelle Blais	Cardinal Carter Academy for the Arts



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Participating Student and Teacher Interviews

By Vladislav Sekulic (*Physiology, Skinner lab*)

Shannon Egan, student, University of Toronto Schools, 1st place winner



For Shannon, the 2015 Brain Bee challenge was her third time participating at the event, and reinforced the saying that “third time’s a charm” with her 1st place win during the event. There was nothing lucky about her success, however, as her experience in previous events and preparation up to this year’s competition attest. Shannon runs a club for Brain Bee preparation and in fact leads the teaching and interactive activities for the participating students. Currently in Grade 12, her next steps will involve a neuroscience career hopefully in psychiatry (she already participated as a subject at a CAMH study). Her advice for future Brain Bee winners is to go deeper into the textbooks, to make connections between topics and chapters and to investigate material beyond the book.

Laura Newcombe, student, North Toronto Collegiate Institute, 2nd place winner



Laura single-handedly represented her school, North Toronto Collegiate Institute. Her motivation largely stemmed from a desire to learn, of knowing for the sake of knowing. She twice reached the finals of the Spelling Bee of Canada competition, and found the Brain Bee a good next step. Her desire is to study architecture at the University of Waterloo.

Justin Lu, student, Upper Canada College, Top Ranking Novice Participant Award winner



Justin described his time at the 2015 Brain Bee as an eye-opening experience. During the past school year, Justin and fellow student Elliott Birman started a Neuroscience club with the goal of getting other students interested in the science of the brain and recruiting participants for the competition. Justin thoroughly enjoyed learning about the various functions of the brain, anatomy and the different neurotransmitters and neuromodulators. He describes his favorite part of the Brain Bee study guide books being the lesson discussing vision, and that the involved mechanisms he learned were very different and more complex than he had initially assumed. Justin is very excited about taking part in the next Brain Bee competition and “can’t wait to learn more about the brain”.

Chandra Boon, teacher, Branksome Hall



Branksome Hall enjoyed a strong presence at the 2015 Brain Bee challenge with twelve participants and their teacher, Chandra Boon, representing the International Baccalaureate independent girls’ school. The school first participated at the Brain Bee in 2014, leaving their contestants feeling they weren’t fully prepared. Not this year. A Neuroscience club was started, with three club heads – Ashley, Natalie, and Destiny – that hosted various group preparatory events for this year’s Brain Bee competition. The students took turns giving presentations on each of the topics and chapters from the Brain Bee learning materials, and recognized that bolded words

warranted particular focus and study.

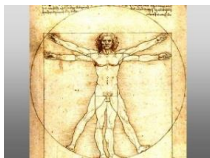
The girls participating this year, ranging from Grades 9 to 12, are all motivated to pursue studies in the life sciences. One of the participants, Miranda, found inspiration in her mother, a neuropsychologist, and Natalie has already worked an internship at the Rotman Research Institute within the Baycrest Health Sciences centre. Several of the other contestants attending this year from Branksome Hall have career aspirations as scientists as well. The high level of enthusiasm and motivation for neuroscience study and research demonstrated by the group was undoubtedly helped by the efforts of their teacher, Ms. Boon, who plays a pivotal role in fostering the study of STEM fields at Branksome Hall. This includes not only the Neuroscience club but also an Astronomy club. Through her example, her efforts encourage her students to pursue leadership opportunities beyond the classroom, and the strong showing at the 2015 Brain Bee competition was a concrete reminder of the fruits of that collaborative work.

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Division of Anatomy
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