

# Collaborative Program in Neuroscience (CPIN)

## University of Toronto

Newsletter – Vol. 34, No. 7 – March 2018

### Featured In This Issue

**Announcements - The 2018 CPIN Research Day** will be held on **Thursday, June 14, 2018** at the U of T Medical Sciences Building. The Symposium with the theme of *Mental Health* will be co-organized by the Li Ka Shing Knowledge Institute **ASR Suicide and Depression Studies Unit**, St. Michael's Hospital.

The event will feature a Keynote Talk delivered by **Michael Landsberg** (Canadian sports journalist and host of TSN Radio's *Landsberg in the Morning*) who suffers from generalized anxiety disorder and depression and is a robust supporter for mental health awareness (<https://www.sicknotweak.com/category/michael-landsberg/>).

Please visit the CPIN website for forthcoming information on Registration, Poster Abstract Submission etc.: [http://www.neuroscience.utoronto.ca/events/CPIN\\_Research\\_Day.htm](http://www.neuroscience.utoronto.ca/events/CPIN_Research_Day.htm)

A Call for **Poster Judges** will be sent out to CPIN faculty members shortly.

**2018 Jonathan Dostrovsky Award in Neuroscience** CPIN is pleased to announce that the award this year will be **increased to \$2000**. Please see page 2 for details.

**CPIN NeuroSci 101:** Please see page 3 for a year-end review of this free annual neuroscience course for high-school students in the GTA region.

**2018 Toronto Brain Bee** will be held on **Thursday, April 12, 2018 at the University of Toronto**. Please visit our website to view the schedule and other details: <http://www.neuroscience.utoronto.ca/events/brainbee.htm>

**News - CPIN Trainees** Congratulations to CPIN student member **Melissa Panicia** (Rehabilitation Sciences Institute, U of T; Supervisor Dr. Nick Reed) on recently completing the CPIN requirements and graduating from her PhD program. Please see page 4 for details.

**New BrainPost E-Newsletter** Please see page 4 for details.

**Neuroscience Opportunities** Please see page 5 for details.

### 2017-18 CPIN Distinguished Lectureship Series

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



#### CPIN Emerging Leaders in Neuroscience Lecture

Speaker | **Dr. Jason Shepherd**, Assistant Professor of Neurobiology and Anatomy, Biochemistry and Ophthalmology & Visual Sciences, University of Utah, School of Medicine

Title | *Viral-like mechanisms of intercellular trafficking of RNA in the nervous system*

Date | **Thursday, March 22, 2018**

Time | 1:30 pm

Location | Hollywood Theatre, SickKids Hospital

Hosts | 1) Dr. Paul Frankland, SickKids; 2) Dr. Tod Thiele, University of Toronto Scarborough

#### CPIN Emerging Leaders in Neuroscience Lecture

Speaker | **Dr. Shiva Tyagarajan**, Assistant Professor Neuro Developmental Pharmacology, Institute of Pharmacology and Toxicology, University of Zurich

Title | *GABAergic Inhibition: A case for dynamic thinking*

Date | **Friday, May 11, 2018**

Time | 2:00 pm

Location | Room 432, Ramsay Wright Building, Department of Cell & Systems Biology, 25 Harbord St., U of T

Host | Dr. Melanie Woodin, Professor, Cell and Systems Biology, U of T; Director, Human Biology Program, U of T

Co-sponsor | Department of Cell & Systems Biology Seminar Series, U of T



<http://www.neuroscience.utoronto.ca/communications/newsletter.htm>

### CPIN Newsletter

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Faculty of Medicine

#### CPIN Participating Units

Applied Psychology &  
Human Development  
Biochemistry  
Biomaterials & Biomedical  
Engineering  
Cell & Systems Biology  
Computer Science  
Dentistry  
Laboratory Medicine &  
Pathobiology  
Medical Biophysics  
Medical Science  
Music  
Pharmaceutical Sciences  
Pharmacology & Toxicology  
Physiology  
Psychology  
Public Health  
Rehabilitation Science

#### Contributors:

Heart & Stroke/Richard  
Lewar Centre of Excellence in  
Cardiovascular Research

Human Biology Program  
Krembil Research Institute  
St. Michael's Neuroscience  
Research Program

# Collaborative Program in Neuroscience (CPIN)

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## Jonathan Dostrovsky Award in Neuroscience

[http://www.neuroscience.utoronto.ca/award\\_opportunities/jonathan\\_dostrovsky\\_award.htm](http://www.neuroscience.utoronto.ca/award_opportunities/jonathan_dostrovsky_award.htm)



### Award Overview

**Student Application Deadline:** April 20, 2018 for the 2018 award

**Where to apply:** Office of the Collaborative Program in Neuroscience

**Value of the annual award:** \$2000 (for the 2018 award)

**Duration of award:** 1 year

**Level of study:** Graduate Studies

**Purpose:** Established by the generosity of Dr. Jonathan Dostrovsky, this annual award recognizes and supports excellence amongst graduate students enrolled in the Collaborative Program in

Neuroscience and will be selected based on academic merit.

**Eligibility:** In order to be eligible, applicants must be registered in a PhD program in the Collaborative Program in Neuroscience at the time of application.

### Dr. Jonathan Dostrovsky:

Dr. Dostrovsky completed his undergraduate studies in physics and mathematics at the Israel Institute of Technology in 1969 and then proceeded to graduate studies in the Department of Physiology at University College London where he obtained his M.Sc. degree in 1971 under the supervision of John O'Keefe. His master's research project with O'Keefe led to the important discovery of 'place cells' in the hippocampus, and their seminal paper describing their findings has become a cornerstone in the field of spatial navigation and hippocampal function. Dr. Dostrovsky moved to Toronto where he obtained his PhD degree in the Zoology Dept. in 1974 for studies on pain processing in the spinal cord. Following 3-years of postdoctoral research in London on the somatosensory system with special emphasis on plasticity, with Pat Wall, he returned to the University of Toronto to take up a position in the Department of Physiology. He was promoted full professor in 1989 and is currently a Professor Emeritus in the Department of Physiology and Faculty of Dentistry.

Throughout his career Dr. Dostrovsky has made significant advances in our understanding of the neurophysiological basis of pain perception, somatosensory information processing, brain plasticity and basal-ganglia related movement disorders. A hallmark of these studies is the elegant combination of experiments executed in various animal models and in humans. For example, data from the Dostrovsky lab shed light on how thermal and noxious information is processed at the level of the thalamus in humans and in a rat model of allodynia. In a publication in *Nature*, Dr. Dostrovsky demonstrated how thalamic networks could contribute to phantom sensations in amputees. He also studied this question in animal models, where the plasticity of the sensory map in thalamic networks was demonstrated in rats after the removal of the hind-limb input. In a series of elegant studies he has unveiled the relationship between movement disorders and altered basal ganglia oscillatory activity. These studies have significantly contributed to our current understanding of central physiological mechanisms in the somatosensory and motor networks which underlie our perception of tactile, thermal and painful stimuli and the pathophysiological alterations that occur following certain traumatic or disease-induced injuries to the nervous system.

He was also very actively involved in neuroscience education at the University at the undergraduate, graduate and postdoctoral levels, and has served on many committees at all levels. In particular he served as Director of CPIN from 1993 to 2008, and as the President/Vice President of the Canadian Association for Neuroscience from 2003 to 2007.

**Application Process:** Completed applications will include the following:

- CV including publications
- 2 letters of support, including one from the student's supervisor, to be sent in PDF format to the CPIN Office ([p.neuroscience@utoronto.ca](mailto:p.neuroscience@utoronto.ca)) directly from the issuing professor's official email address
- Summary of student's current research project (1 page maximum)
- Future career plans (1/2 page maximum)

### Results:

All applicants will be notified of the results at the 2018 CPIN Research Day (summer 2018)

**Visit the CPIN website for the online application form:**

[http://www.neuroscience.utoronto.ca/award\\_opportunities/jonathan\\_dostrovsky\\_award.htm](http://www.neuroscience.utoronto.ca/award_opportunities/jonathan_dostrovsky_award.htm)

<http://www.neuroscience.utoronto.ca/communications/newsletter.htm>

# Collaborative Program in Neuroscience (CPIN) University of Toronto

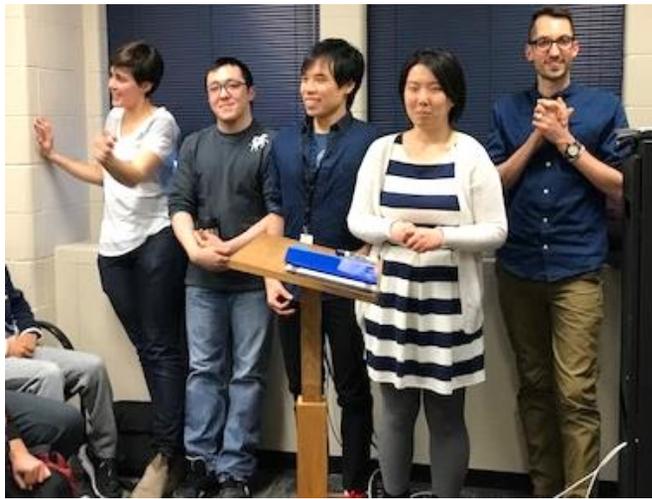
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## CPIN NeuroSci 101: Year in review

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

The annual CPIN high school neuroscience lecture series NeuroSci101 held its final review on March 19th, 2018. The students had the opportunity to review all that they had learned throughout the year and chat with the graduate student lecturers about neuroscience and life beyond high school. Students who had fulfilled the course requirements were present with certificates of recognition by the CPIN director, Dr. Zhong-Ping Feng. Finally, everyone celebrated the year-long journey with a pizza party.

The 2017-2018 NeuroSci101 lecture series was organized by **Nancy Dong** (Physiology), **Jonathon Chio** (IMS) and **Dulcie Vousden** (Medical Biophysics). We would like to thank the graduate student lecturers who introduced the students to a wide range of key neuroscience concepts and cutting edge research (in alphabetical order): **Samantha Audrain** (Psychology), **Philippe D'Onofrio** (Rehabilitation Science), **Alexandre Guet-McCreight** (Physiology), **Shahin Khodaei** (Physiology), **Chantel Kowalchuk** (IMS), **Saffire Kranc** (Pharmacology and Toxicology), **Eileen Liu** (IMS), **Josiane Mapplebeck** (Physiology), **Yash Patel** (IMS), **Dana Swarbrick** (Rehabilitation Sciences), **Vivian Szeto** (Physiology), **Abanti Tagore** (IMS) and **Raymond Wong** (PhD, Physiology). Lastly, we sincerely thank Dr. Zhong-Ping Feng and CPIN for supporting and sponsoring this event. *(Review by CPIN Grad Student Exec Nancy Dong; Photos by Dr. Zhong-Ping Feng)*



## News - CPIN Trainees

[http://www.neuroscience.utoronto.ca/communications/news\\_cpिन\\_students.htm](http://www.neuroscience.utoronto.ca/communications/news_cpिन_students.htm)



Congratulations to CPIN student member **Melissa Paniccia** (Rehabilitation Sciences Institute, U of T; Concussion Centre, Bloorview Research Institute, Supervisor Dr. Nick Reed) on recently completing the CPIN requirements and graduating from her PhD program.

Melissa is an occupational therapist by background and pursued her PhD following her MScOT. During her doctoral program, Melissa explored objective neurophysiological variation (heart rate variability) in youth athletes following concussion in the context of subjective symptom reporting. Her work: (1) established the foundation for understanding healthy autonomic nervous system function in youth athletes; (2) identified the longitudinal trajectory of recovery when examining clinical and physiological correlates; (3) explored the impact of a novel clinical intervention (mindfulness-based yoga) on heart rate variability in youth with persistent concussion symptoms.

Melissa's novel contribution in bridging neurophysiological indicators with functional outcomes has resulted in: 11 publications, 6 of which are first-author contributions; 40 presentations across local, national and international conferences; and 23 invited oral presentations. Notably, Melissa presented her clinical intervention work as a TED Talk at the Annual Bloorview Research Institute Symposium and won the "Evidence to Care" award for her work. Melissa's research was funded by the following awards and scholarships: Canadian Traumatic Brain Injury Research Consortium PhD Award, Bloorview Research Institute Student Fellowship, Ontario Graduate Scholarship, and the Canadian Occupational Therapy Doctoral Scholarship. Melissa is currently a part-time post-doctoral fellow at the Children's Hospital of Eastern Ontario and Holland Bloorview Kids Rehabilitation Hospital. She is also a clinical consultant for individuals with traumatic brain injury following a motor vehicle accident.

## New BrainPost E-Newsletter

BrainPost makes it easy to keep up with the latest neuroscience. BrainPost delivers easy-to-read summaries of recent neuroscience publications to your inbox weekly, so you can keep up without the hassle! Sign up for BrainPost by visiting [brainpost.co](http://brainpost.co)

One of the founders of BrainPost is CPIN PhD student **Kasey Hemington** (Institute of Medical Science, Davis lab). Kasey is a PhD candidate at the University of Toronto (Canada). She studies the neural mechanisms of pain with neuroimaging techniques. Her work helps to discover how pain and chronic pain are perceived, and how they are represented in the brain.

**BrainPost is also looking for students who are interested in writing for BrainPost. If interested, please email [founders@brainpost.co](mailto:founders@brainpost.co) to request further details.**



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## Upcoming Events

**U of T Neuroscience Seminars**

<http://neuroscience.utoronto.ca/events/seminar.htm>

**Conferences and Meetings**

[http://neuroscience.utoronto.ca/events/Conf\\_M.htm](http://neuroscience.utoronto.ca/events/Conf_M.htm)

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## Neuroscience Opportunities

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[http://www.neuroscience.utoronto.ca/communications/Positions\\_Available.htm](http://www.neuroscience.utoronto.ca/communications/Positions_Available.htm)

### Graduate Student Position

**Dr. Jeffrey Henderson lab, Division of Biomolecular Sciences, Director, Murine Imaging and Histology (MIH) Core Facility, Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, ON, Canada**

**Description:** We are currently interviewing strong enthusiastic candidates for graduate studies in the areas indicated (See additional description of research topics in the attachment below).

The laboratory's research is organized along three main themes:

- 1) Post-mitochondrial regulation of regulated cell death in the mammalian CNS.
- 2) EphB-mediated control of neural connectivity.
- 3) Development and analysis of small molecule therapeutics to neurodegenerative injury.

**For further information, please see the attachment with the posting on the CPIN website:**

[http://www.neuroscience.utoronto.ca/communications/Positions\\_Available.htm](http://www.neuroscience.utoronto.ca/communications/Positions_Available.htm)

### Postdoctoral Position

**Centre for Addiction and Mental Health (CAMH), Toronto, Ontario, Canada**

**Description:** The Violence Prevention Neurobiological Research Unit (VPNRU) at the Centre for Addiction and Mental Health (CAMH) in Toronto, Ontario, Canada, which is fully affiliated with the University of Toronto, seeks a motivated and enthusiastic post-doctoral fellow to join our team to help better understand the neural correlates of violence and aggression. The successful candidate will have expertise in MRI data analysis and collection as well as extensive experience working with psychiatric populations in research settings. The VPNRU is a multi-disciplinary group led by Dr. Nathan Kolla, MD, PhD, that uses MRI, positron emission tomography, and genetics to investigate different patient populations at heightened risk for violent behavior.

**For further information, please see the attachment with the posting on the CPIN website:**

[http://www.neuroscience.utoronto.ca/communications/Positions\\_Available.htm](http://www.neuroscience.utoronto.ca/communications/Positions_Available.htm)

### Human Biology Program LAB BootCamp Facilitator Position

**University of Toronto, Toronto, Ontario, Canada**

**Description:** The Human Biology Program seeks up to 4 Facilitators for intense 2-week LAB BootCamp Program. LAB BOOTCAMP will simulate the experience of working on a life science research project in a basic research workplace. Successful candidates will work with small student teams (~ 6 students) that will be provided a research question to solve. Student groups will develop their own experimental strategies to address the research objective. Successful candidates will guide the students in working collaboratively to hypothesize, design, execute, analyze, troubleshoot, and problem-solve to reach their goals-considering such things as technique sensitivity, cost, time required to execute, and limitations of approach.

**For further information, please see the link:** [http://hmb.utoronto.ca/wp-content/uploads/2018/03/Facilitator\\_Job-Ad-2.pdf](http://hmb.utoronto.ca/wp-content/uploads/2018/03/Facilitator_Job-Ad-2.pdf)

## Reminders

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**Call for CPIN 2018-2019 Distinguished Lecturer Nominations** CPIN trainee & faculty members are welcome to nominate potential speakers for the 2018-2019 Neuroscience Distinguished Lectureship Series. Please submit your nominations at the following link: [http://www.neuroscience.utoronto.ca/events/lectureship/distinguished\\_lecturer\\_nominations.htm](http://www.neuroscience.utoronto.ca/events/lectureship/distinguished_lecturer_nominations.htm). Nominations will be reviewed by the CPIN Committee for approval.

**Follow CPIN on social media:** CPIN faculty and trainee members are welcome to follow us at the following links:

Facebook: <https://www.facebook.com/Collaborative-Program-in-Neuroscience-212564644049/>

LinkedIn: <https://ca.linkedin.com/in/cpinuoft>

Twitter: [https://twitter.com/CPIN\\_UofT](https://twitter.com/CPIN_UofT)

**CPIN Student Completion Form** CPIN graduate students who have completed both their home department and CPIN trainee requirements must fill in the online completion form located at the link below:

[http://www.neuroscience.utoronto.ca/students/cpin\\_student\\_completion\\_form.htm](http://www.neuroscience.utoronto.ca/students/cpin_student_completion_form.htm)