

# Collaborative Program in Neuroscience (CPIN)

## University of Toronto

Newsletter – Vol. 35, No. 6 – February 2019

### Featured In This Issue

**2019 Toronto Brain Bee will be held on Friday, April 12, 2019 at the University of Toronto.** High school student participant registration is still open and CPIN member volunteer opportunities are available. Please visit our website for details:

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

**News – CPIN Faculty Members** Congratulations to **Dr. Xi Huang** on his lab's recent publication in *Neuron*. Please see page 2 for details.

**Welcome New CPIN Faculty Members** We would like to welcome **Dr. John Vincent** as a new faculty member to the CPIN community. Please see page 3 for details.

**The Firefly Foundation launches Bright Lights in Neuroscience** See page 4 for details.

**Welcome New CPIN Students** Please see page 2 for details.

**Congratulations Graduating Students** Please see page 2 for details.

**Positions Available** Please see page 4 for details.

### 2018-19 CPIN Distinguished Lectureship Series

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



Speaker | **Dr. Ivan Soltesz**, James R. Doty Professor of Neurosurgery and Neurosciences, Department of Neurosurgery, Stanford University

Title | *Organization and control of hippocampal circuits*

Date | **Friday, March 1, 2019**

Time | 1pm

Location | Room 401, Main Auditorium, West Wing, 2nd Floor, Toronto Western Hospital, 399 Bathurst St, Toronto, Ontario

Host | Dr. Frances Skinner, Senior Scientist, Krembil Research Institute, University Health Network (UHN), Toronto Western Hospital; Professor, Departments of Medicine (Neurology) and Physiology, UofT

**Reminder:** CPIN Trainees: Please fill in the online Lecture Report & Evaluation Form as a record of your attendance to the Distinguished Lectureship Series within one week of attending the talk.

### CPIN Newsletter

Zhong-Ping Feng  
Director  
CPIN  
Graduate Studies

Iulia Park  
Administrator  
CPIN Office

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**Lead Faculty**  
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

## News - CPIN Faculty Members

[http://www.neuroscience.utoronto.ca/communications/news\\_cpिन\\_faculty\\_members.htm](http://www.neuroscience.utoronto.ca/communications/news_cpिन_faculty_members.htm)



Congratulations to **Dr. Xi Huang** on his lab's recent publication in *Neuron*.

Xi Huang (<http://lab.research.sickkids.ca/huang/>), PhD, is a Scientist at the Program in Developmental & Stem Cell Biology and the Arthur and Sonia Labatt Brain Tumour Research Centre at The Hospital for Sick Children, and an Assistant Professor at the Department of Molecular Genetics at University of Toronto. While extensive research has shed light on how genetics, epigenetics, and biochemical signaling regulate tumor growth, the role of bioelectrical and biomechanical properties in cancer is less defined. Ion channels regulate cellular bioelectrical and biomechanical signaling by controlling the flow of ions across membranes. With multi-disciplinary expertise in *Drosophila* genetics, mouse genetics, xenograft modeling of human brain tumors, cell biology, electrophysiology and bioinformatics, the Huang lab decodes the biophysical language mediated by ion channels in brain cancer and develops novel therapeutics for brain cancer patients by targeting ion channels.

### Paper

Chen X, Wanggou S, Bodalia A, Zhu M, Dong W, Fan J, Yin WC, Min HK, Hu M, Draghici D, Dou W, Li F, Coutinho FJ, mechanism for Whetstone H, Kushida MM, Dirks PB, Song Y, Hui CC, Sun Y, Wang LY, Li X, and Huang X (2018) A feedforward mechanosensitive ion channel PIEZO1 and tissue mechanics to promote glioma aggression. *Neuron*. 100(4):799-815.e7. PMID:30344046

[https://www.cell.com/neuron/pdf/S0896-6273\(18\)30848-1.pdf](https://www.cell.com/neuron/pdf/S0896-6273(18)30848-1.pdf)

### Video abstract

<https://www.youtube.com/watch?v=YQMnEfmQIww>

## Welcome New CPIN Students

<http://www.neuroscience.utoronto.ca/students/currentstudents.htm>

Last Name	First Name	Home Unit	Degree	Supervisor
Alanazi	Frhan	PSL	MSc	Dr. William Hutchison
Hamzeh	Amir	IMS	MSc	Dr. Anurag Tandon
Saghian	Rayan	PSL	PhD	Dr. Lu-Yang Wang
Zafar	Nadia	BCM	MSc	Dr. Liliana Attisano

## Congratulations CPIN Graduating Students

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

Last Name	First Name	Home Unit	Degree	Supervisor
Antonio	Patrick	REHSC	PhD	Dr. Stephen Perry

**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)

## Welcome New CPIN Faculty Members

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[http://www.neuroscience.utoronto.ca/communications/news\\_cpिन\\_faculty\\_members.htm](http://www.neuroscience.utoronto.ca/communications/news_cpिन_faculty_members.htm)



We would like to welcome **Dr. John Vincent** (Professor, Child and Adolescent, Brain and Therapeutics, Department of Psychiatry, Institute of Medical Science, University of Toronto; Senior Scientist and Head, Molecular Neuropsychiatry and Development (MiND) Laboratory, Campbell Family Mental Health Research Institute, and Director of Research Training and Mentorship, Centre for Addiction and Mental Health) as a new faculty member to the CPIN community.

Dr John B. Vincent undertook his undergraduate studies in biochemistry at the University of Manchester. He completed his Ph.D. at University College London Medical School, London, in 1994, with Prof. Hugh Gurling, in the Department of Academic Psychiatry. His work included early genetic studies of autism spectrum disorders (ASD), with Prof. Patrick Bolton and Prof. Sir Michael Rutter (Vincent et al, 1996; Gurling et al, 1997). Since graduating he has worked with Dr James Kennedy in the Neurogenetics Section at the Clarke Institute of Psychiatry (1995-1998) in Toronto. During this period, Dr Vincent cloned the SCA8 trinucleotide repeat expansion from a patient with bipolar disorder (Vincent et al, 2000). A second postdoctoral term was with Dr Stephen Scherer in the Program in Genetics and Genomics at The Hospital for Sick Children, Toronto (1998-2002).

Since 2002, he has worked as a Senior Scientist/ Principal Investigator at the Centre for Addiction and Mental Health (CAMH), and is a Professor in the Dept. of Psychiatry and cross-appointed as a full member in the Institute of Medical Science at the University of Toronto. His work is on the genetics of major psychiatric disorders, but with the main focus looking at the genetics and genomics of ASD, and intellectual disability (ID), including Rett syndrome. In 2004, he co-authored a seminal paper on the identification of an alternative version (isoform) of the Rett syndrome protein, MeCP2, identifying the first Rett mutation in MECP2 exon 1, with the implication that this new version is the relevant isoform for Rett syndrome (Mnatzakanian et al, 2004), which has since been shown by numerous studies to be correct (e.g. Yasui et al, 2014). Dr Vincent's group also identified the gene PTCHD1 as a new X-linked gene for ASD (Marshall et al, 2008; Noor et al, 2010; Chaudhry et al, 2015; Ung et al, epub). His work on Ptchd1 includes knockout studies in mice and in zebrafish.

In 2006, Dr Vincent embarked on a project to identify autosomal recessive genes ID, through the study of families from countries with high rates of consanguinity (Pakistan and Iran). His group have since identified 36 new ID genes (Harripaul et al, epub; and others). Many of these genes have become integrated into genetic diagnostic testing panels. Dr Vincent's group also published the first Canadian genome-wide association study (GWAS)(Xu et al, 2014) and first copy number variation (CNV) study (Noor et al, 2014) for bipolar disorder.

Dr Vincent has published over 140 peer-reviewed research papers.

## Upcoming Events

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### 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)

# Collaborative Program in Neuroscience (CPIN)

## University of Toronto

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### Firefly Foundation launches Bright Lights in Neuroscience

[https:// fireflyfoundation.org/ bright-lights-in-neuroscience](https://fireflyfoundation.org/bright-lights-in-neuroscience)



Firefly has been the local sponsor of the Toronto Brain Bee since 2011. They have recently launched an online learning system, **Bright Lights in Neuroscience**, that is based on two popular study guides ([Brain Facts](#)/ Society for Neuroscience and British Neuroscience Association/ [Science of the Brain](#)). This pilot program has been made possible with the support and expertise contributed by the Collaborative Program In Neuroscience (CPIN) at the University of Toronto, and University of Toronto Schools (UTS).

This online learning module, **Bright Lights in Neuroscience**, offers 18 subject areas to improve knowledge. High school students interested in neuroscience and particularly those interested in participating in the Toronto Brain Bee competition are invited to sign up for a free account at [this link](#).

[Research has shown that practice tests are as effective as relearning the study material](#). This system measures speed and accuracy because fluency leads to long term retention and helps students answer quickly in competitions.

### Positions Available

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

#### Assistant/Associate Professor

Max Rady College of Medicine, Rady Faculty of Health Sciences

Department of Pathology

University of Manitoba

The Department of Pathology in the Rady Faculty of Health Sciences, University of Manitoba invites applications for a full-time tenure-track position at the Assistant or Associate Professor level, commencing on July 1, 2019, or on a date mutually agreed upon. For further details please see:

[http:// www.neuroscience.utoronto.ca/ Assets/ Neuroscience+Digital+Assets/ Neuroscience/ UTNP+Digital+Assets/ Positions/ 2018-2019/ Univ+of+Manitoba.pdf](http://www.neuroscience.utoronto.ca/Assets/Neuroscience+Digital+Assets/Neuroscience/UTNP+Digital+Assets/Positions/2018-2019/Univ+of+Manitoba.pdf)

Applications will be accepted until **March 31, 2019** or until the position has been filled.

**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/](https://www.facebook.com/Collaborative-Program-in-Neuroscience-212564644049/)

LinkedIn: [https:// ca.linkedin.com/ in/ cpinuoft](https://ca.linkedin.com/in/cpinuoft)

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