

Collaborative Program in Neuroscience (CPIN)

University of Toronto

Newsletter – Vol. 36, No. 5 – January 2020

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2019-20 CPIN Distinguished Lectureship Series

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



Speaker | **V. Wee Yong**, PhD, Professor, Translational Neuroscience, Department of Clinical Neurosciences, University of Calgary

Title | *Overcoming lesional inhibitors to promote remyelination*

Date | **Monday, February 3, 2020**

Time | 8:00 AM

Location | Main Auditorium, Room 401, West Wing Second Floor, Toronto Western Hospital, UHN, 399 Bathurst St.

Host | Dr. Michael Fehlings, Co-Chairman UofT Spinal Program & Vice Chair Research, Department of Surgery, U of T

Sponsors | Krembil Research Institute; Toronto Western Hospital, UHN; University of Toronto Spine Program



Speaker | **Joshua Johansen**, PhD, Team Leader, Neural Circuitry of Learning and Memory, Riken Center For Brain Science (CBS), Wako, Japan

Title | *Teaching the amygdala to fear*

Date | **Monday, February 10, 2020**

Time | 4:00 PM

Location | MSB 3154, Medical Sciences Building, 1 King's College Circle

Host | Dr. Kaori Takehara-Nishiuchi, Associate Professor, Department of Psychology,

Department of Cell and Systems Biology, U of T

February lectures continued on next page...

CPIN Newsletter

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Biomaterials & Biomedical
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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

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Speaker | **Gregor Hasler**, M.D., Professor and Chair of Psychiatry and Psychotherapy, University of Fribourg, Switzerland

Title | *Psychotherapy, Psychedelics, and Neuroplasticity*

Date | **Tuesday, February 18, 2020**

Time | 9:30 AM

Location | Allan Waters Family Auditorium, Li Ka Shing Institute, 209 Victoria St., 2nd Floor

Host | Dr. Sidney Kennedy, Professor of Psychiatry, University of Toronto; Arthur Sommer Rotenberg Chair in Suicide and Depression Studies; Research Scientist, Li Ka Shing Knowledge Institute and Toronto Western Research Institute

Sponsor | Canadian Biomarker Integration Network in Depression (CAN-BIND)

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.

News – CPIN Trainees

http://www.neuroscience.utoronto.ca/communications/news_cpin_students.htm



Congratulations to CPIN student member **Joe Steinman** (Department of Medical Biophysics, Dr. John Sled) on recently completing the CPIN requirements and graduating from his PhD program.

Joe Steinman's research interests include development and application of vascular imaging technologies to assess vascular remodeling in response to brain injury and its effect on blood flow. Under the supervision of Dr. John Sled, Joe developed a methodology that combined 2-photon microscopy and Arterial Spin Labeling MRI to quantify the relationship between vascular structure and function in traumatic brain injury in mice. In addition, he applied an ultrasound methodology to non-invasively quantify cerebrovascular changes in mice.

Joe is a first-author on two publications (PLoS One and NeuroImage), with a third submitted. He is co-author on 3 additional papers. He presented at two international conferences and was awarded a Travel Award for presenting at the Canadian Traumatic Brain Injury Research Consortium in June 2019.

Joe was involved in the U of T CPIN community as a mentor, Workshop Coordinator, and Program Director for the CPIN Undergraduate Mentorship Program. For the past two years, he was one of the Graduate student leaders for CPIN Research Day. He also twice served as a judge for the Brain Bee high school competition.

Currently, Joe is pursuing a postdoc in the laboratory of Dr. Zhong-Ping Feng, CPIN Director.

Neuroscience Opportunities

http://www.neuroscience.utoronto.ca/communications/Positions_Available.htm

Laboratory Technician

Focused Ultrasound Lab (Dr. Kullervo Hynnen)
Physical Sciences, Sunnybrook Research Institute

Description: One of the areas of research our group focuses on is the use of ultrasound to increase blood-brain barrier permeability for targeted drug delivery. We are currently seeking a laboratory technician to perform in vivo two-photon imaging following focused ultrasound exposures in mice, as well as biochemical assays (e.g. qPCR, immunohistochemistry, etc.) and general lab duties (e.g. chemical inventory, replacing supplies, etc.). Ideally,

candidates should have a degree in neuroscience (or a related discipline), two-photon microscopy skills, and related research experience. If you are interested, please contact Kristina Mikloska (kristina.mikloska@sunnybrook.ca) for more information.

Research Programs Specialist

The Weston Brain Institute

Description: 1-year position (maternity leave). Information on the position and requisite qualifications can be found by visiting our [careers website](#). We aim to fill this role by March 1st, 2020.

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

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Welcome New CPIN Students

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

CPIN extends a warm welcome to the following new CPIN Trainees:

Last Name	First Name	Home Unit	Degree	Supervisor
Javadzadeh	Yasaman	IBBME	MASc	Dr. Peter Carlen
Kim	William	MBP	MSc	Dr. Bradley MacIntosh
Medlock	Laura	IBBME	PhD	Dr. Steve Prescott
Musikic	Nevena	IBBME	PhD	Dr. Milos R. Popovic
Nikolopoulos	Marina	IMS	MSc	Dr. Sunit Das
Oproescu	Ana-Maria	LMP	MSc	Dr. Carol Schuurmans

Welcome New CPIN Faculty Members

http://www.neuroscience.utoronto.ca/communications/news_cp_in_faculty_members.htm



We would like to welcome **Dr. Jean Martin Beaulieu** (Associate Professor, Psychiatry and Neurosciences, Department of Pharmacology & Toxicology, U of T) as a new faculty member to the CPIN community.

Dr Beaulieu received a PhD in Neurological Sciences from McGill University and completed his post-doctoral training at Duke University. Prior to his recruitment Dr. Beaulieu was associate professor and Canada Research Chair (Tier2) in the department of Psychiatry and Neuroscience at Laval University.

Dr. Beaulieu's research is aimed at understanding how cellular and molecular mechanisms regulated by psychoactive drugs intersect with genetic risk factors for mental illnesses such as schizophrenia, depression and bipolar disorder. Dr. Beaulieu has pioneered work establishing a role for Beta-arrestin signaling in the brain in vivo and has established its importance in D2 dopamine receptors (D2R) functions. These receptors belong to the super-family of G-protein coupled receptor (GPCR), the major molecular target for drug development. In particular, D2R are the main pharmacological target of antipsychotic drugs prescribed for schizophrenia and bipolar disorders. Work by the Beaulieu Lab has demonstrated that mood stabilizer drugs (e.g. lithium) used for bipolar disorder therapy target signaling mechanisms regulated by dopamine receptors, thus providing a framework to understand how different drug classes can engage overlapping cellular mechanisms to exert their action. The Beaulieu group is presently investigating how cell surface express proteins can act as allosteric modulators of D2R signaling and explores the potential usefulness of beta-arrestins for the development of new pharmaceutical agents.

Translational validation is important to validate findings obtained from experimental models research and bridge the gap between bench and bedside. Working in collaboration with geneticists, the Beaulieu-Lab has identified interactions between cellular mechanisms engaged by D2R and psychiatric drugs with genetic risk factors implicated in schizophrenia by large whole genome association studies (GWAS) in human. These investigations have led to the identification of an RNA binding protein (FXR1P) involved in the regulation protein synthesis as a potential downstream effector of the action of mood stabilizers and other psychoactive drugs.

In addition to basic research, the Beaulieu group is also actively implicated in translational research and industry collaboration to develop new drugs and drug development technology.

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

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CPIN Research Day 2020

http://www.neuroscience.utoronto.ca/events/CPIN_Research_Day.htm



Photo Credit CPIN

Please save the date for this year's CPIN Research Day events taking place in May 2020.

The annual **Southern Ontario Neuroscience Association (SONA) symposium**, in partnership with CPIN, will take place on **Friday, May 22, 2020** at the Medical Sciences Building. Please follow our newsletter, mailing lists and the CPIN website for upcoming details.

John Roder Symposium

http://www.neuroscience.utoronto.ca/events/Conf_M.htm

Established in honour of Dr. John Carlin Roder and his science, the **John Roder Symposium** is scheduled for the afternoon of **April 27th, 2020** in the 18th Floor Auditorium at Mt. Sinai Hospital (approximately 3 PM - 5 PM). A wine and cheese reception will follow. **Dr. Mauro Costa-Mattioli** from Baylor College of Medicine, Houston, Texas, will be speaking on *New Strategies and Approaches Tackle Neurological Disorders*.

Dr. John Carlin Roder, FRSC, was a Senior Scientist at the Lunenfeld- Tanenbaum Research Institute, Mount Sinai Hospital, a Professor in the Departments of Molecular Genetics and Physiology, and the Institute of Medical Science at the University of Toronto. He held a post as a Canada Research Chair in Learning and Memory and made significant contributions to both the fields of immunology and neurobiology throughout his career. Dr. Roder passed away on Saturday, January 6, 2018.

For more information on Dr. Roder's work, please visit: <http://www.lunenfeld.ca/researchers/roder>

Call for Volunteers

http://www.neuroscience.utoronto.ca/events/cpin_volunteer.htm

CPIN is looking for volunteers for our upcoming spring events:

To sign up to be a volunteer at the **Toronto Brain Bee** competition, please fill out the form on the CPIN website at http://www.neuroscience.utoronto.ca/events/brainbee/brain_bee_volunteer_form.htm

Thank you to those who have submitted volunteer forms already. A first Brain Bee organizational committee meeting will be called in February.

To volunteer for the **CPIN Research Day events**, please fill out the form at

http://www.neuroscience.utoronto.ca/events/CPIN_Research_Day/research_day_volunteer_form.htm

Reminder: 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/communications/newsletter.htm>