

Collaborative Program in Neuroscience (CPIN)

University of Toronto

Newsletter – Vol. 31, No. 1 – September 2014

Announcements

Welcomes New Students See page 3 for details.

Welcomes New Faculty Members **Dr. Paul Comper** (Rehabilitation Science), **Dr. Sam Doesburg** (Psychology), **Dr. Christopher Honey** (Psychology), **Dr. Tianru Jin** (Physiology), **Dr. John Ratcliffe** (Ecology & Evolutionary Biology), **Dr. Etienne Sibille** (Pharmacology & Toxicology), **Dr. Maria Carmela Tartaglia** (Medicine) and **Dr. Laurie Zawertailo** (Pharmacology and Toxicology).

Welcomes New Members of the CPIN Academic Program Committee The Academic Committee is pleased to welcome new members **Dr. Cindi Morshead** (Institute of Medical Science) and **Dr. Melanie Woodin** (Cell & Systems Biology). We would like to thank Dr. Robert Chen (Institute of Medical Science) for his role on the CPIN Academic Committee and support for the program over the years.

Welcomes New Members of the CPIN Board of Directors The Board of Directors is pleased to welcome new members **Dr. Les Buck** (Cell & Systems Biology) and **Dr. Mingyao Liu** (Institute of Medical Science). We would like to thank Dr. Ulrich Tepass (Cell & Systems Biology) and Dr. Allan Kaplan (Institute of Medical Science) for their role on the CPIN Board of Directors and support for the program over the years.

News from CPIN Faculty Congratulations to **Dr. Karen Davis** on her highly-viewed TED-Ed video animation on pain. Congratulations to **Dr. Michael Tymianski** on the approval of his drug discovery (NA-1) to be administered to patients with suspected strokes by paramedics on the way to a stroke hospital. Please see page 2 for details.

NEU Courses From the 2014-2015 academic year, CPIN has introduced NEU 1000H *Neuroscience Distinguished Lecture Series (Master's)* & NEU 2000H *Neuroscience Distinguished Lecture Series (Doctoral)* as mandatory courses for all new students entering the program.

CPIN Annual Report The CPIN 2013-2014 Annual Report has been published and can be found at this link: <http://www.neuroscience.utoronto.ca/communications/annualreports.htm>

CPIN Website Homepage Updates We welcome you to visit our new website homepage: <http://www.neuroscience.utoronto.ca/>

Call for Submissions for News Updates The CPIN Office requests trainee and faculty members to submit updates in research discoveries, events, and other achievements involving CPIN members. Please send your submissions to p.neuroscience@utoronto.ca

2014-15 CPIN Distinguished Lectureship Series

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



Speaker | **Dr. Maiken Nedergaard, MD, DMSc**; Frank P. Smith Professor of Neurosurgery, Professor in Department of Neurosurgery, Center for Translational Neuromedicine; Departments of Neurobiology and Anatomy and Neurology, University of Rochester Medical Centre

Title | *The nightlife of the brain*

Date | **Thursday, October 23, 2014**

Time | 1:00-2:00 pm

Location | Auditorium 1105, Sandford Fleming Building, U of T

Host | **Dr. Sandra Black, MD, FRCP(C)**; Neuroscience Program Research Director, Sunnybrook Research Institute, Brill Chair in Neurology Department of Medicine, University of Toronto, Professor, Department of Medicine (Neurology), University of Toronto

Co-sponsor | Brain Sciences Research Program, Sunnybrook Research Institute

CPIN Newsletter

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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
Rehabilitation Science

Contributor:

St. Michael's Neuroscience
Research Program

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News from CPIN Faculty



Congratulations to CPIN faculty member **Dr. Karen Davis** (Institute of Medical Science, Link: [Web profile](#)) on her TED-Ed video animation on pain. TED-Ed's original lessons comprise of a collaboration between expert instructors, writers and animators. Each collaboration is based on lesson suggestions by the TED community. Dr. Davis' video can be viewed on the TED-Ed site: (<http://ed.ted.com/lessons/how-does-your-brain-respond-to-pain-karen-d-davis>) and Youtube (without the education materials, <http://www.youtube.com/watch?v=l7wfDenj6CQ>). The video has presently garnered over **half a million views!**



Congratulations to CPIN faculty member **Dr. Michael Tymianski** (Institute of Medical Science, Physiology, Link: [Web profile](#)) on the **approval of Health Canada and the FDA for a Phase 3 study** in which his laboratory's drug discovery (NA-1) will be administered to patients with suspected strokes.

Dr. Tymianski's research goal is to devise pharmacological strategies to protect the brain following acute or chronic neurological insults. To this end, his laboratory is dedicated to the understanding of the cellular and molecular mechanisms of neuroprotection and neurodegeneration. The Tymianski lab possesses expertise ranging from protein chemistry and molecular biology, through to in-vitro assays, drug screening methods, neurophysiology (including fluorescent ion imaging and electrophysiology),

and through to animal models of disease, including models in rodents (rats and mice) and in non-human primates. A PSD95 Inhibitor termed NA-1 has been developed by them¹ through primate stroke studies^{2,3}, a Phase 1 safety trial and, recently, a Phase 2 multi-center trial in human patients⁴. NA-1 has recently been approved by both Health Canada and the FDA for a Phase 3 study in which it will be administered to patients with suspected strokes by paramedics in the ambulance on the way to a stroke hospital. The study will enroll 560 patients in Toronto, Peel region and in Vancouver. The study will be sponsored by Brain Canada, the Canadian Stroke Network, and NoNO Inc., the biotechnology company formed by Dr. Tymianski and his collaborators on the original NA-1 discovery.

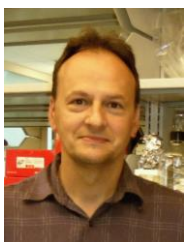
References:

1. Aarts M, Liu Y, Liu L, Besshoh S, Arundine M, Gurd JW, et al. Treatment of ischemic brain damage by perturbing NMDA receptor- PSD-95 protein interactions.. *Science*. 2002;298:846-850
2. Cook DJ, Teves L, Tymianski M. A translational paradigm for the preclinical evaluation of the stroke neuroprotectant Tat-NR2B9c in gyrencephalic nonhuman primates. *Sci Transl Med*. 2012;4:154ra133
3. Cook DJ, Teves L, Tymianski M. Treatment of stroke with a PSD-95 inhibitor in the gyrencephalic primate brain.. *Nature*. 2012;483:213-217
4. Hill MD, Martin RH, Mikulis D, Wong JH, Silver FL, Terbrugge KG, et al. Safety and efficacy of NA-1 in patients with iatrogenic stroke after endovascular aneurysm repair (ENACT): a phase 2, randomised, double-blind, placebo-controlled trial.. *Lancet Neurol*. 2012;11:942-950

Meet our new Faculty Members



Dr. Christopher Honey (Assistant Professor, Psychology): is a cognitive neuroscientist who studies large-scale neural dynamics, asking how brain regions communicate and how memory arises in hierarchical brain processes. Born and raised in southern Africa, Chris studied mathematics and literature at the University of Cape Town, obtained his PhD in psychology and cognitive science from Indiana University, and completed postdoctoral training at Princeton University. At the University of Toronto he will be teaching and studying brain function from computational, clinical and cognitive perspectives. Link: [Web profile](#)



Dr. Etienne Sibille (Professor, Department of Pharmacology & Toxicology): The Sibille lab focuses on translational research aimed at identifying the cellular and molecular bases of depression, and specifically of the mood, affect and cognitive components of the illness. Studies in the laboratory encompass parallel investigations in postmortem brains of depressed and control subjects, and in rodent genetic and environmental models, with the aims of characterizing the primary pathology of depression, and assessing causal links between identified molecular changes or candidate neurotransmitter systems and mood regulation. Current projects include translating human postmortem findings on the role of the GABA microcircuitry in mood regulation, and specifically of reduced somatostatin-positive dendritic targeting interneuron function. Link: [Web profile](#)

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Welcome New CPIN Students

Last Name	First Name	Home Unit	Degree	Supervisor
Aqrabawi	Afif	Cell & Systems Biology	MSc	Junchul Kim
Cajanding	Janine	Cell & Systems Biology	MSc	Junchul Kim
Garcia	Martha	Institute of Biomaterials & Biomedical Engineering	PhD	Milos Popovic
Ma	Eric	Institute of Biomaterials & Biomedical Engineering	MASc	Milos Popovic
Vonderwalde	Ilan	Institute of Biomaterials & Biomedical Engineering	MASc	Cindi Morshead
Chio	Jonathon	Institute of Medical Science	MSc	Michael Fehlings
Coakeley	Sarah	Institute of Medical Science	MSc	Antonio Strafella
Gnanasegaram	Joshua	Institute of Medical Science	MSc	Karen Gordon
Hird	Megan	Institute of Medical Science	MSc	Tom Schweizer
Marano	Maria	Institute of Medical Science	MSc	Anurag Tandon
Narinesingh	Cindy	Institute of Medical Science	MSc	Agnes Wong
Ng	Enoch	Institute of Medical Science	PhD	John Roder
Rogachov	Anton	Institute of Medical Science	MA	Karen Davis
Schneider	Raphael	Laboratory & Medicine Pathobiology	PhD	Janice Robertson
Atwi	Sarah	Medical Biophysics	PhD	Bradley MacIntosh
McMahon	Dallan	Medical Biophysics	PhD	Kullervo Hynynen
Steinman	Joseph	Medical Biophysics	PhD	John G. Sled
Yee	Yohan	Medical Biophysics	MSc	Jason Lerch
Haire	Catherine	Music	PhD	Lee Bartel
Liu	Celina	Pharmacology & Toxicology	MSc	Krista Lanctot
Olanbiwonnu	Temitope	Pharmacology & Toxicology	MSc	Laurie Zawertailo
Burke	Andrew	Pharmaceutical Sciences	MSc	David Hampson
Basa	Dielor	Physiology	MSc	William Hutchison
Boychuk	Jay	Physiology	MSc	Fang Liu
Cao	Feng	Physiology	PhD	Zhengping Jia
Gillon	Colleen	Physiology	MSc	Sheena Josselyn
Hou	Yi Bo	Physiology	MSc	Paul Frankland
Huang	Sammen	Physiology	MSc	Hong-Shuo Sun
Nasri	Flora	Physiology	MSc	Martin Wojtowicz
Nuwisait	Wanida	Physiology	PhD	Peter Carlen
Poon	Charissa	Physiology	MSc	Beverley Orser
Tran	Lina	Physiology	MSc	Paul Frankland
Easson	Amanda	Psychology	MA	Sam Doesburg
Lee	Christina	Psychology	MA	William Cunningham
Richard	Logan	Psychology	MA	Donald Mabbott
Thavabalasingam	Sathesan	Psychology	MA	Andy Lee
Van Kampen	Lyn	Psychology	MA	Paul Frankland
Downey	Rachel	Rehabilitation Science	MSc	Paul Comper
Lam	Timothy	Rehabilitation Science	MSc	Joyce Chen
Renton	Tian	Rehabilitation Science	MSc	Jane Topolovec-Vranic

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Upcoming Events

U of T Neuroscience Seminars (October, 2014)

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

University of Toronto 2014-2015 Brain & Behaviour Seminar Series

Speaker | **Dr. Robert R. Hampton**, Emory University and Yerkes National Primate Center, Atlanta, Georgia

Title | Cognitive monitoring and cognitive control in monkeys

Date and Time | **Friday, October 3, 2014, 4:00 pm**

Location | Room 2117, Sidney Smith Hall, 100 St. George Street, University of Toronto. Reception to follow in Psychology Lounge, Room 4043, Sidney Smith Hall

NeuroConnect Brain Injury Research Seminar and Mock Trial

Speakers | **Dr. Leodante da Costa** (Neurosurgeon), Stacey Stevens and Wendy Moore Mandel (leading legal experts and partners at Thomson Rogers)

Title | Brain Injury Research Seminar and Mock Trial

Date and Time | **Wednesday, October 8, 2014, 6:00 – 9:00 pm**

Location | Sunnybrook E-Wing, EG61 (McLaughlin Lecture Hall). Registration is complimentary. Please email Sarah at info@neuroconnect.ca or call 416-999-2383 to register and save a seat.

Sick Kids Neuroscience and Mental Health Seminar

Speaker | **Dr. Robert Campbell**, University of Alberta

Title | Engineering optogenetic probes for watching and controlling cellular activity

Date and Time | **Wednesday, October 15, 2014, 10:00-11:00 am**

Location | Peter Gilgan Centre for Research and Learning, 686 Bay Street, The Gallery, 2nd floor

Conferences and Meetings (October, 2014)

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

Toronto Rehabilitation Institute's 6th National Spinal Cord Injury Conference: Bioinformatics Inform SCI Rehabilitation

Event Dates: October 2-4, 2014

Allstream Centre, Toronto (105 Princes' Blvd)

The 6th National SCI Conference will focus on the integration of bioinformatics and clinical care. How clinical care is designed, interpreted, delivered and evaluated using biological and clinical evidence to shape rehabilitation practice will be featured. Key note speakers, oral and poster presentations and workshops will provide SCI rehabilitation clinicians with knowledge and opportunities to utilize information generated from different sources (i.e. biomarkers and genetics; clinical guidelines, algorithms and assessment outcomes; data mining of registries, decision support and economic analyses; rehabilitation interventions, technologies and software, etc.) to customize and advance the rehabilitation of individuals with SCI over their lifetime. For further details, visit the [website](#).

Canadian League Against Epilepsy 2014 Biennial Meeting

Event Dates: October 17 to 19, 2014

London Convention Center in London, Ontario

Our goal is to develop, through research, innovative therapeutic and preventative strategies to avoid the consequences of epilepsy. We also want to translate these discoveries into applicable therapies for all Canadians. Finally, we want to promote national awareness and educate all Canadians about epilepsy and its consequences with the help of the Canadian Epilepsy Alliance. For further details, visit the [website](#).

Reminders

Trainee Record Updates The CPIN Office is currently updating its records & requests that all CPIN students & postdoctoral fellows provide information pertaining to awards, publications & other achievements on the online form at the link below. The form can be found at: http://www.neuroscience.utoronto.ca/students/Trainee_Awards_and_Publications_Form.htm