

# NEUROSCIENCE NEWSLETTER

## PROGRAM NEWS

### NEW PIN STUDENTS:

We would like to welcome the following students to the Neuroscience Program:

Student's Name	Degree	Supervisor	Department
Ava Elahipanah	PhD	Bruce Christensen	IMS
Jean Hum	MSc	Pascal van Lieshout	Speech-Lang Path

### GRADUATING STUDENT:

We would like to congratulate the following PIN graduate:

Student's Name	Degree	Supervisor	Department
Anne-Claude Bedard	PhD	Rosemary Tannock	IMS
<u>Thesis title:</u> "Impact of Methylphenidate on Working Memory in Children with Attention-Deficit Hyperactivity Disorder"			

### PIN POSTER DAY

I am pleased to announce the following 4 winners of our poster competition that took place on April 20, 2007:

**David Kideckel**, Department – IMS, Supervisor – P. Sandor  
Poster Title - NEUROANATOMICAL AND COGNITIVE PREDICTORS OF SEXUAL ORIENTATION IN RIGHT-HANDED MEN: AN MRI STUDY

**Viviane Labrie**, Department - IMS, Supervisor – J. Roder  
Poster Title - D-SERINE ENHANCES NMDA-NR2B RECEPTOR-MEDIATED LTD IN THE HIPPOCAMPUS AND SPATIAL REVERSAL LEARNING AND MEMORY IN MICE

Volume 23 Number 9

May 2007

### Program Committee Members

J.O. Dostrovsky / PHYSIOLOGY (Dir.)	J. Peever / CELL AND SYSTEMS BIOLOGY.
W.M. Burnham / PHARMACOLOGY	S. Nag / LAB. MED. PATHOBIOL.
P. Carlen / INST. MED. SCIENCE	J. Roder / MOL. MED. GENETICS
L.F.De Nil / SPEECH LANG. PATHOL.	B.J. Sessle / DENTISTRY
Z. Jia / PHYSIOLOGY	M. Shoichet / INST. BIOMAT. & BIOMED. ENG.
N. Kabani / MEDICAL BIOPHYSICS	W. Trimble / BIOCHEMISTRY
M. Lewis / HUMAN DEVELOPMENT AND APPLIED PSYCHOLOGY	J.W. Wells / PHARMACY
W. McIlroy / REHAB. SCI.	J.S. Yeomans / PSYCHOLOGY

**PIN Office:** Room 102, Tanz Neuroscience Building, M5S 3H2.

Telephone: 416-978-4894 Fax: 416-978-1878

e-mail: p.neuroscience@utoronto.ca.

<http://www.utoronto.ca/neurosci>

Office Hours: Wednesdays - 1:15pm-5:00pm;

Thursdays - 8:45am-5:00pm; Fridays - 8:45am-5:00pm

**Sarah Harrison**, Department - Psychology, Supervisor - J. Nobrega

Poster Title - DIFFERENTIAL RESPONSES TO THE D3 RECEPTOR ANTAGONIST U99194 IN DBA/2 VS. C57/B16 MICE TREATED WITH CHRONIC ETHANOL

**Nevena Simic**, Department - Psychology, Supervisor – J. Rovet  
Poster Title - THE EFFECTS OF THYROID HORMONE ON COLOUR VISION

There were many excellent posters at the PIN poster day and it was difficult to choose the top four. Many thanks to all the students for participating and presenting their work.

Special thanks to Zhen-Ping Jia, Pat Reed, and students Suhail Asrar, Sarah Johnson, Zarko Todorovski and ZiKai Zhou who helped organize and run the PIN Poster Day, and to the many PIN faculty who helped judge the posters.

*Jonathan Dostrovsky, Director, Program in Neuroscience*

### HONOURS & AWARDS

Recipient of 2007 First-Jus Annual Memorial Award in Neuropsychopharmacology:

PIN student Robert Bonin (Physiology Department; Supervisor: B Orser)

Congratulations Robert!

*from Physiolink, April 13, 2007*

**EXCITING PUBLICATION ..... Just out in April 20th issue of SCIENCE. Have a look!**

Science 20 April 2007:  
Vol. 316. no. 5823, pp. 457 - 460  
DOI: 10.1126/science.1139438

## REPORTS

Neuronal Competition and Selection During Memory Formation

Jin-Hee Han,<sup>1,2,3\*</sup> Steven A. Kushner,<sup>4,5,6\*</sup> Adelaide P. Yiu,<sup>1,3</sup> Christy J. Cole,<sup>1,2</sup> Anna Matynia,<sup>4</sup> Robert A. Brown,<sup>4</sup> Rachael L. Neve,<sup>7</sup> John F. Guzowski,<sup>8</sup> Alcino J. Silva,<sup>4</sup> Sheena A. Josselyn<sup>1,2,3</sup>

Competition between neurons is necessary for refining neural circuits during development and may be important for selecting the neurons that participate in encoding memories in the adult brain. To examine neuronal competition during memory formation, we conducted experiments with mice in which we manipulated the function of CREB (adenosine 3',5'-monophosphate response element-binding protein) in subsets of neurons. Changes in CREB function influenced the probability that individual lateral amygdala neurons were recruited into a fear memory trace. Our results suggest a competitive model underlying memory formation, in which eligible neurons are selected to participate in a memory trace as a function of their relative CREB activity at the time of learning.

To whom correspondence should be addressed. E-mail: sheena.josselyn@sickkids.ca

<sup>1</sup> Program in Neurosciences and Mental Health, Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8, Canada.

<sup>2</sup> Department of Physiology, University of Toronto, Toronto, Ontario M5S 1A8, Canada.

<sup>3</sup> Institute of Medical Sciences, University of Toronto, Toronto, Ontario M5S 1A8, Canada.

<sup>4</sup> Departments of Neurobiology, Psychology, and Psychiatry, and Brain Research Institute, Gonda Building, 695 Young Drive South, University of California, Los Angeles, CA 90095, USA.

<sup>5</sup> Department of Psychiatry, Columbia University, New York, NY 10032, USA.

<sup>6</sup> New York State Psychiatric Institute, New York, NY 10032, USA.

<sup>7</sup> Molecular Neurogenetics Laboratory, Department of Psychiatry, Harvard Medical School, McLean Hospital, Belmont, MA 02478, USA.

<sup>8</sup> Neurobiology and Behavior, School of Biological Sciences, University of California, Irvine, CA 92697, USA.

\* These authors contributed equally to this work.

*from Physiolink, April 20, 2007*

## NOTICE TO GRADUATING STUDENTS

Please notify the PIN office upon your graduation to ensure that you will receive the notation "completed Collaborative Program in Neuroscience" on your degree transcript as well as a separate certificate suitable for framing from the PIN office to indicate that you have completed the program's requirements. Please let the office know the address you wish your certificate sent to and please also send us your thesis title. If you have transferred from a Master's degree to a Ph.D., please notify the PIN office.

## OTHER U of T NEUROSCIENCE NEWS

### 2nd International Conference on Neurons and Brain Disease August 29-31, 2007 Toronto, Canada

You are cordially invited to join the second international conference on Neurons and Brain Disease to be held in beautiful downtown Toronto. In addition to invited speakers, additional speakers will be selected from attendees. All are invited to submit abstracts, and a poster session will be included in the program. There will be an award for the best 5-10 posters in the competition.

Website for registration: <http://2007.icnbd.com/index.html>

Major Aim of the meeting:

Promoting new and cutting edge research in neuroscience; encouraging international information exchange and scientific collaboration; providing a platform for active scientists to discuss new findings.

Full details at: <http://2007.icnbd.com/index.html>

## OTHER NEUROSCIENCE NEWS

### Julius Axelrod Prize

The Society for Neuroscience is pleased to announce the inaugural year of the Julius Axelrod Prize. The prize was established to honor a scientist with distinguished achievements in the broad field of neuropharmacology or a related area and exemplary efforts in mentoring young scientists. The prize includes an honorarium. For more details, please visit [www.sfn.org/axelrod](http://www.sfn.org/axelrod).

## **Principles Of Autonomous Neurodynamics 2007**

Meeting Dates: August 20-22, 2007

Location: Quebec City, Canada

Website: [www.utoronto.ca/sand/](http://www.utoronto.ca/sand/)

### **CALL FOR PRESENTATIONS**

The 4th annual meeting of the Society for Autonomous Neurodynamics (SAND) will take place on August 20th, 21st and 22nd at Centre de recherche Université Laval Robert-Giffard (CRULRG), Quebec, Canada. We are now soliciting participants from a range of fields interested in free dynamics in networks and the relation of autonomous neurodynamics to neurological conditions.

If you would like to present work relating to these issues please send a 250-word abstract by June 1, 2007 to: [conference.sand@utoronto.ca](mailto:conference.sand@utoronto.ca)

Or register online at:

<http://www.utoronto.ca/sand/PAND2007/register.html>

Presentations should be 15 minutes in length. We encourage entries from a diversity of backgrounds and welcome both exploratory and advanced research. Sessions are meant to be multi-disciplinary, dynamic, fun and will include open discussions.

### **Call for Suggestions for Symposia**

IUPS Congress

Kyoto, Japan

July 2009

Please go to:

<http://www.cps.cfbs.org/pdfs/CallSymposiaJapanIUPS.pdf> to access the letter from Yoshihisa Kurachi with the call for suggestions for Symposia for the IUPS Congress in Kyoto, Japan, in July 2009.

This is a brief reminder that the deadline for receipt of proposals for Symposia for the 2009 IUPS Congress in Kyoto is 18 June 2007.

Further information can be found on the congress website

<http://www.iups2009.com>