CAN Connection

The Canadian Association for Neuroscience Newsletter Winter Edition - January 2015

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Dear Colleagues,

Happy New Year! We are preparing a great annual meeting for 2015 - it is now time to register and submit your abstracts. The next Canadian Neuroscience Meeting will take place in Vancouver, May 24 - 27 2015. View the meeting website here: http://can-acn.org/meeting2015

An important highlight of our meeting is the presentation of the CAN Young Investigator Prize, which aims to recognize outstanding research achievements by a young neuroscientist at the early stage of his or her career. Please consider nominating a deserving Young Neuroscientist! Deadline for nominations is February 2nd 2015.

In the "Hot topics" section of this edition, you will find recent discoveries about nerve injury and repair, as many exciting papers have been published on this topic over the last few weeks.

I also want to congratulate all the neuroscientists who distinguished themselves recently, and received prizes and awards for their important research. Many of them are highlighted in this newsletter. Don't hesitate to contact us if you or a colleague of yours should be featured in a future edition of this newsletter.

Douglas Munoz
President
Canadian Association for Neuroscience

9th Annual Canadian Neuroscience Meeting May 24 - 27 2015 - Vancouver

Visit the meeting website to:

- Register at the early-bird rate
- Submit an abstract for poster presentation
- View the latest program updates including the selected parallel symposia
- Book your room at the Westin Bayshore
- Get information about sponsoring / exhibiting
- View the list of confirmed exhibitors
- Register for a satellite meeting

http://can-acn.org/meeting2015

CAN at SfN in Washington






We were happy to meet many of you at the CAN Social in Washington in November, at the Canadian Embassy Reception and at the CAN booth at the SfN meeting.

Events such as these help reinforce the links between members of the Canadian Neuroscience Community, and also allow us to meet new collaborators. And we had lots of fun!

We wish to thank everyone who participated and invite you to join us next for the CAN meeting in Vancouver!

View more pictures in the CAN flickr gallery






Hot neuroscience topic: **Nerve injury and repair**

Every week, we feature new press releases published by universities and research institutes from across Canada about significant neuroscience discoveries. Highlights of research from the last few weeks are posted here.

Nerve injury and repair

Results published by Dr. Samuel David (McGill University) explain how inflammation following spinal cord injury causes further damage. His team demonstrated that two factors, iron and TNF, contribute to the predominance of detrimental forms of microglia and macrophages in damaged tissues, thereby hindering damage repair. These results identify valid therapeutic targets that could help reduce inflammation-induced damage in cases of nervous system injury. Read more: Short summary | Paper in Neuron.

Work done at University of Saskatchewan by Valerie Verge and colleagues has led to the identification of a molecule, called Luman, that can sense stress and activate repair pathways. In response to stressful events in the axon, such as nerve injury, Luman is activated, and serves as messenger from the point of injury to the cell body, where it activates the production of repair molecules. As some axons can be long enough to run from hip to toe, the identification of a molecule capable of sensing damage at one point and sending back a signal is a major piece of the puzzle to understanding nerve repair. Read more: Press release | Paper in PNAS.

Understanding how neurons normally communicate is key to a successful rehabilitation following injury. Andrew Pruszynski, who will join Western University in 2015, has shown that touch neurons that are directly in contact with the skin can perform computations that were previously thought to be done by the cerebral cortex. These results suggest functional recovery following injury, which depends on regrowth of peripheral nerves, also depends on the specific in which these nerves regrow to send critical information to the brain. Read more: Press release | Article in PNAS.

New results by Gautam Awatramani (University of Victoria) show that gap junctions, which are connections that allow transmission of electrical signals between neurons, may be part of a complex series of interactions with other signals to fine-tune the signals transmitted by neurons. Read more: Short summary | Paper in Nature Neuroscience | News & Views.

Neurons also communicate through chemical signals that are transmitted by vesicles at synapses. How seemingly identical vesicles can transmit different messages has long puzzled researchers. New research by Katalin Toth and her team at Université Laval shows that vesicles produced by different pathways actually have different functional roles, and are destined to be release in different physiological conditions, to elicit different responses. Read more: Research Summary | Paper in Nature Communications.

More researchers featured recently:

Gerald Zamponi | Calcium in pain signaling

Stan Floresco | Decision making and dopamine

Brian MacVicar | Microglia - neuron communication

Beverley Orser | Memory and anesthesia

Frédéric Charron | Preventing brain tumors in children

Sylvain Chemtob | Preventing blindness in prematures

Adrian Owen | Detecting consciousness

Fang Liu | New drug target for schizophrenia

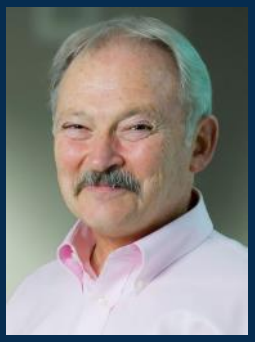
Benjamin Blencowe | Microexons and autism

Nahum Sonenberg | Drug target for autism

Denise Klein | Detecting lost languages in brain

Keith Murai | Science behind total recall

Congratulations!



University of British Columbia's Max Cynader inducted in the Canadian Medical Hall of Fame for his vital contributions to our understanding of the mechanisms by which early use or misuse of our brain affects its functioning for the rest of our life.

CAMH President and CEO Dr. Catherine Zahn was included in the list of the Top 25 Women of Influence in 2014, and made the cover! CAMH News release.

The American College of Neuropsychopharmacology presented the 2014 Efron Award to Sheena Josselyn (SickKids). This award is given on the basis of outstanding basic research contributions.

Michael Meaney (Douglas Institute - McGill University) received the Wilder Penfield - Prix du Québec prize and the 2014 Klaus J. Jacobs Research Prize in recognition of his ground-breaking achievements in child and youth development.

University of Toronto's Donald Stuss received the Gold Key Award, in recognition of extraordinary service in the field of rehabilitation, the highest honour given by the American Congress of Rehabilitation Medicine.

University of British Columbia's Adele Diamond received the Urie Bronfenbrenner Award for Lifetime Contributions to Developmental Psychology in the Service of Science and Society from the American Psychological Association.

Two researchers from Université Laval were recently awarded Barbara Turnbull awards for their world-class work to advance research on spinal cord injury and find new treatments.

Frédéric Bretzner - *2013 Barbara Turnbull award*
for his study of pathways between the brain and the spinal cord that are important to movement.

Yves De Koninck - *2014 Barbara Turnbull award*
for his research that increases our understanding of how to alleviate pain after spinal cord injury.

Stephen Scherer (SickKids Hospital) was named on MacLean's Power list of 50 most important people in Canada.

Congratulations!

Newly elected Fellows to the Royal Society of Canada

- ◊ Yong, V. Wee - University of Calgary
- ◊ McPherson, Peter S. – McGill University
- ◊ Hachinski, Vladimir – Western University
- ◊ Fehlings, Michael G. – University of Toronto
- ◊ Eggermont, Jos J. - University of Calgary

New inductions to the Canadian Academy of Health Sciences

- ◊ Weiss, Samuel - Hotchkiss Brain Institute
- ◊ Brownstone, Robert M. - Dalhousie University
- ◊ Chertkow, Howard Mark - McGill University
- ◊ Fehlings, Michael G. - University of Toronto

Congratulations to all project leaders and participants funded through the Canada Brain Research Fund (administered by Brain Canada).

List of funded projects

New opportunities have been announced!

Brain Canada

View on to the Brain Canada website

Top 10 discoveries of 2014, by Québec Science

You can now vote for the Québec Science discovery of the year. Amongst these, work by two researchers from the Douglas Institute - McGill University:

- Gustavo Turecki's research on the role of the miR-1202 microRNA in depression
- Judes Poirier's discovery of a gene variant that reduces the risk of developing Alzheimer's disease

Visit the Québec Science website to vote.

Board member elections

CAN will be holding elections this Summer for

- two members of the CAN Board of Directors
- CAN Secretary

A call for nominations will be sent in the Spring, with a nomination deadline after the CAN meeting, June 19th.

Documents required:

- A CV
- nomination letter from a CAN member.

Consider becoming part of the CAN team!

Keep in touch!

E-mail: info@can-acn.org

Twitter @can_acn!

Facebook!

Website http://can-acn.org/ for neuroscience news, a list of upcoming events, job offers, and more!