



# CAN Connection

The Canadian Association for Neuroscience Newsletter

Fall Edition - September 2014

## In this issue:

- CAN Social at SfN
- Membership renewal
- CAN 2015 Vancouver
- Hot topic: Brain mapping advances
- Neuroscientists in the news
- Congratulations - Prizes and awards

## **CAN Membership**

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## **Dear Colleagues,**

The Canadian Association for Neuroscience aims to connect neuroscientists from everywhere in Canada. I invite you to **renew your membership in CAN now** to show your support for the Canadian neuroscience community by supporting our association, which is dedicated to the promotion of neuroscience research.

I am pleased to invite you all to our much anticipated CAN Social at the SfN Meeting in Washington. This event, held yearly, is a great occasion to reconnect with colleagues close to you and to meet new collaborators. The social will take place November 18th at the Brixton Pub (see all the details on the last page).

As a way to inform you of the important work done by your colleagues, we have also recently added a "Hot topics" section to our newsletter, in which we highlight some of their recent discoveries. As many neuroscientist received important distinctions these last few weeks, we have also featured them.

We want this newsletter to be of interest to you, and to reflect what we are as a community, so please get in touch with us if you have comments or suggestions.

**Douglas Munoz**

President

Canadian Association for Neuroscience

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

Planning is underway for our next annual meeting, which will take place at the Westin Bayshore in Vancouver.

You can already reserve your room at the Westin at the CAN preferential rate by using this link:

[Book now!](#)

More information about the program and all the events planned for Vancouver 2015 will be posted on the CAN2015 meeting website, at:

<http://can-acn.org/meeting2015>



## Hot neuroscience topic: **Advances in understanding brain organization**

Every week, we feature new press releases published by universities and research institutes from across Canada about significant neuroscience discoveries. We have recently featured many stories where advances in neuroimaging techniques and methods to view connections in the brain have lead to a better understanding of brain organization.

Research done by **Sheena Josselyn** and her team at SickKids Hospital and published in **Neuron** help explain which specific neurons are selected to store a memory. Her team showed that neurons compete to get integrated in a memory trace, and that **the most active neurons were most likely to connect to each other to form a memory**. A better understanding of how memories form is key to developing new treatments for memory disorders. (Read more: [Press release](#) - Article in [Neuron](#))

Being able to distinguish what you are actually seeing and memories of a vision is very important, and understanding how these are represented in the brain will bring a better understanding of schizophrenia and other diseases that involve hallucinations. **Julio Martinez-Trujillo** and his team at McGill University have used advanced imaging and recording techniques to determine that images from these two sources, **vision and memory, are processed in two distinct, yet adjacent areas of the brain**. (Read more: [Press release](#) - Article in [Nature Neuroscience](#))

**Randall Flanagan** and his team at Queen's University investigated how another property of objects, namely its weight, is stored in the human brain. While they were expecting this information to be stored in motor-related areas of the brain, their

studies showed **information about an object's weight was stored in the ventral visual cortex, which stores visual information about objects**. By identifying brain areas that control and inform motor skills, this research could help assess patients suffering from neurological impairments such as strokes. (Read more: [Press release](#) - Article in [Current Biology](#))

Recent discoveries by **Andrew Lim**, from University of Toronto, show that neurons in a specific area of the human brain are essential to control sleep. He showed that many older adults, and individuals with Alzheimer's disease had a decreased number of cells in this area, and that this reduction was associated with a reduction in the amount and quality of sleep. A number of health issues, such as cognitive dysfunction, vascular problems and a tendency to develop type 2 diabetes are associated with a reduction in the quality of sleep. (Read more: [Press release](#) - Article in [Brain](#))

The hippocampus is a brain region that is crucial for memory storage and retrieval. **Sylvain Williams** and his team at the Douglas Mental Health Institute - McGill University have developed sophisticated new optogenetic approaches to study the flow of activity in this brain region. They have recently made the surprising discovery that information flows in both directions in this brain region, while it had been thought to be unidirectional for decades. A better understanding of the routes memory signals take will provide insight in normal neural circuits, and how they are disrupted in diseases such as Alzheimer's and schizophrenia. (Read more: [Press release](#) - Article in [Nature Neuroscience](#))

Interested in learning about other recent discoveries made by Canadian Neuroscientists? Visit our website to read the Neuroscience News section, updated weekly with new stories. <http://can-acn.org>

You can submit your press release for review by our web content review committee to [info@can-acn.org](mailto:info@can-acn.org)

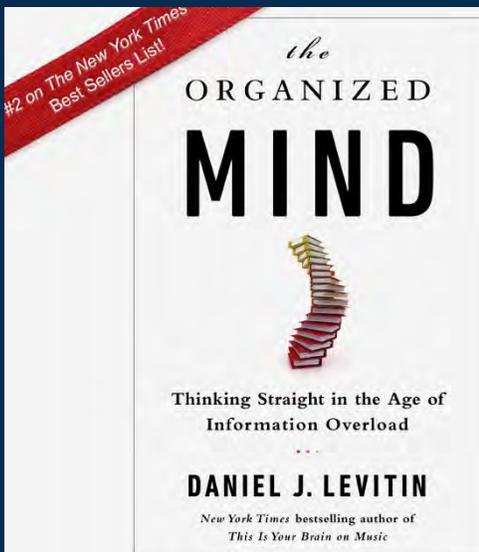
## Canadian neuroscientists in the news



**Judes Poirier** (McGill University) was named personality of the week by LaPresse, for his work that led to the identification of a genetic variant that confers protection against Alzheimer's disease. Read about it: [Judes Poirier personnalité de la semaine LaPresse](#) (in French). (article in [Molecular Psychiatry](#))



Recent research led by **Yves De Koninck** (Université Laval), suggests a new way to erase pain in chronic pain patients (Article in [Nature Neuroscience](#)). His work was featured on many news outlets, including on [PBS's NovaNext website](#) and [Nature's Neuropod podcast](#). The same podcast also featured important discoveries about the biology underlying schizophrenia made by a large international collaborative effort, in which [University of Toronto's Jo Knight](#) participated.



**Dan Levitin** (McGill University) recently published a book called The Organized Mind, which is currently on the New York Times Bestsellers list, and #1 on the Globe & Mail bestseller list, and was featured in many news outlets, including the [New York Times](#). More on [Dan Levitin's website](#).

**Howard Chertkow** was featured in a [feature video interview by the Globe and Mail](#). Dr. Chertkow reviewed what is currently known about Alzheimer's disease, and what this means to patients.

**Antoine Hakim** (University of Ottawa) published a [perspective in Nature](#), highlighting the importance of covert strokes as a leading cause of dementia, and how these can be prevented by healthier life habits. More on the [OHRI website](#).



Research by **John Gaspar** and **John McDonald** (Simon Fraser University) was featured in Scientific American in an article titled [How the Brain Ignores Distractions](#)

## Congratulations!

**Dr. Brenda Milner** was awarded the Kavli Neuroscience Prize “for the discovery of specialized brain networks for memory and cognition”. More details on the [Kavli prize website](#).

**Dr. Gustavo Turecki** (McGill University) was awarded the [2014 Samarthji Lal award](#). The Dr. Samarthji Lal Award recognizes a Canadian researcher making an outstanding contribution to the field of psychiatry, with a focus on major mental disorders.

**Alan Evans** (McGill University) was recently awarded the [Margoese National Brain Disorders prize](#) is also listed on [Thomson Reuters' 2014 list of the world's most highly cited researchers](#).

**Ingrid Johnsrude**, named first [Western Research Chair](#)

**Jean-Martin Beaulieu** (Université Laval) was named [2014 IMHRO / Johnson & Johnson Rising Star](#).

### CAN Social in Washington DC

We invite you to join us for our annual get-together during the SfN Meeting

Join us at :

**The Brixton Pub** 901 U St NW  
Washington DC

**November 18th 2014 - 6-9PM**

<http://brixtondc.com>

[Google map directions from Convention center](#)



### We'd love to hear from you!

Send us your ideas and comments about this newsletter, our website or our activities at [info@can-acn.org](mailto:info@can-acn.org)

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Visit our website for more neuroscience news, a list of upcoming events, job offers, and more!

<http://can-acn.org/>

You can view archives of all neuroscience news stories posted on our website this year here:

<http://can-acn.org/2014/>