CAN Connection

Spring **2018** Newsletter

Canadian Association for Neuroscience
Association canadienne des neurosciences

CAN - ACN

Dear Colleagues,

The 2018 federal budget included new financial support for Investigator-led fundamental research through historic investments in the granting councils of Canada. This reversal of the downward scientific funding trend was achieved by the mobilisation of scientists and science supporters across the country, who took the time to reach out to their members of parliament, to highlight the importance of scientific research for all Canadians. **I wish to thank each and everyone of you who have been actively mobilised, and who helped make this happen.**

While we applaud these historic investments, it is important to remain mobilised, and to keep science funding at the forefront of the public and elected official's mind. We must keep the momentum going in the right direction, towards reaching the goals outlined in the Science Review, also known as the Naylor report.

I invite you to read the advocacy section of this website, to view advocacy opportunities, and I specifically invite you to participate in the **Science Policy session at the upcoming CAN meeting on May 14th in Vancouver**. We are very excited to be hosting MPs from the four main political parties, who will present their vision of the role of government in supporting scientific research, and most importantly, who will participate in a discussion with scientists about these important issues. Science policy is about building relationships, and we hope you will take advantage of the great opportunity.

There are also a few people I would like to congratulate:

First, I want to offer my congratulations to **Karun Singh**, who will be awarded the CAN 2108 Young Investigator award. Dr. Singh's fundamental research, on the genetics of neurodevelopmental disorders, has important implications for human health. His successes, measured in important discoveries, publications, funding and reputation in the field of stem cell research, make him stand out as a very impressive young researcher.

The CAN 2018 Neuroscience outreach and advocacy award will be given to an impressive group of **graduate students from the University of British Columbia**, who communicate the excitement of historical neuroscience discoveries through the fun medium of cartoon imagery. Congratulations for this great initiative.

I also wish to thank the outgoing chair of the CAN advocacy committee, **Katalin Toth**. Katalin has done an incredible job of mobilising our membership, and of building bridges with our advocacy partners over the years she has led the advocacy committee.

Finally, congratulations to our **newly elected executives and Board members**!

The **CAN meeting** is an opportunity to engage with Neuroscientists across the country, and to hear the most exciting research discoveries made by your colleagues. **There is still time to register.** I hope I have the chance to welcome you to this event, which aims to unite and include all members of our community.

Lynn Raymond, President

Canadian Association for Neuroscience

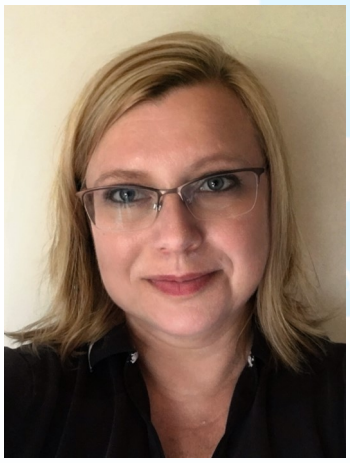
Advocacy news

Message from the Chair of the CAN advocacy committee

My term as chair of the CAN advocacy committee will end next month, and I want to take this opportunity to thank CAN members for their participation in our efforts to support the implementation of the Federal Science Review (Naylor report).

Budget 2018 showed that the voice of scientists has been heard, and that when we work together, and with partners, we can bring about change.

Change is gradual, and while the budget is a step in the right direction, we, as scientists, still have to work to ensure that increases in science funding are included in future budgets as well, and to eventually reach the full implementation of the recommendations of the Naylor report.



Scientific research is important for all Canadians, as it leads to improvements in the health and well-being of everyone. Medical and technological breakthroughs, which lead to the development of new cures to diseases, and to the development of life changing technologies, can only occur through the support of fundamental research.

Over the last few years, we have carried this message to Parliament Hill in Ottawa, to the general public through grassroots initiatives, and to individual elected officials through private meetings, and many other means.

It is important to continue this important advocacy work to ensure science stays in the spotlight.

Advocacy is a long game, and requires the development of long-term relationships with partners and decision makers. I invite you to participate in the advocacy opportunities in these pages, and to stay involved in these efforts that benefit us all.

I am grateful to all of you who have been science advocates, each in your way. I now welcome the opportunity to continue to advocate with you under the leadership of the new Chair of the CAN advocacy committee, Melanie Woodin, who will take office next month.

I am certain Melanie will lead us in new and exciting advocacy avenues.

Katalin Toth

Chair of the CAN-ACN advocacy committee

We invite you to meet your Member of Parliament

Have you received funding from the federal government to support your research? Have you made a discovery that can lead to a better understanding of the brain and nervous system? Do you think government support of science is important?

We encourage you to meet with your member of Parliament, and to build a relationship with him or her. It is through an open-ended discussion with elected officials that we can work with them to build a better country for all Canadians. You can write directly to your Member of Parliament, to let them know what you do, and how investing in science is good for the health, prosperity and economy of all Canadians. Your MP is your representative in Ottawa, so bringing science to his or her office is a great way to keep this important topic at the forefront of the government's mind.

http://www.ourcommons.ca/parliamentarians/en/constituencies/FindMP

Advocacy opportunities

Science Policy Session at #CAN2018

Date & time: Monday May 14th 2018, at 5:30 - 7:00 PM
Location: Pavilion Ballroom, Sheraton Wall Centre Vancouver
Organiser: Katalin Toth
Moderator: Jaideep Bains
Panelists:

- **Joyce Murray**, Liberal MP for Vancouver Quadra
- **Matt Jeneroux**, Conservative MP for Edmonton Riverbend, and Conservative Shadow Minister for Science
- **Elizabeth May**, Green Party MP for Saanich – Gulf Islands, and Leader of the Green Party
- **Fin Donnelly**, New Democratic Party MP for Port Moody - Coquitlam

Do you live in one of these constituencies?

- Vancouver Quadra
- Edmonton Riverbend
- Saanich – Gulf Islands
- Port Moody - Coquitlam

Your MP will be at the CAN meeting - please make sure to drop by the CAN2018 Science Policy session to meet him or her, and tell them about the work you do, in their riding!

Free drink tickets will be given to the first 150 attendees.

Visit the CAN website often to stay informed of advocacy opportunities, and get in touch with us if you have ideas and opportunities to share with us!

advocacy@can-acn.org

http://can-acn.org/advocacy

Advocacy news (continued)

UBC Graduate students win 2018 CAN Neuroscience Outreach & Advocacy Award for the "Neuroscience Through the Ages" project

Neurohistory Team Top (left to right): Armin Mortazavi (cartoon),Jordan Shimell, Luis Bolanos, Brett Hathaway, Eli York, and David Cheng Bottom (left to right): Susan Lin, Asma Bashir, Samantha Baglot, Amy Smith, and Anne Liu Missing from the photo: Aarthi Gobinath, Jill Dosso, Katelyn Hudak, Ellen Koch, Samantha Feldman, Naila Kuhlmann, Blair Jovellar, and Matt Sacheli

Congratulations to a team of Neuroscience graduate students at UBC, led by Samantha Baglot, who developed an original and innovative outreach project which aims to present the history and fundamentals of neuroscience in an interesting and accessible manner – through the wonderful world of cartoon imagery.

Learn more about the project and team here:

http://can-acn.org/neuroscience-through-the-ages-wins-2018-can-advocacy-award

Visit the project website here:

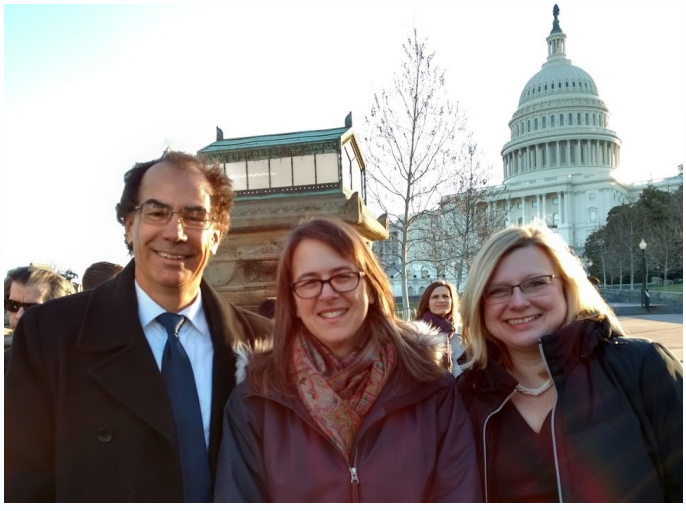
https://www.historyofneuroscience.com

CAN participates in SfN's Hill Day

CAN representatives were invited by SfN to participate in the 2018Hill day, March 8th 2018 on Capitol Hill, Washington, DC.

It was a great opportunity to learn from our partners at SfN how to effectively lobby for increased funding for research to elected officials and their staff.

Picture: Doug Munoz, CAN Past President, Julie Poupart, CAN Advocacy Officer, Katalin Toth, Chair of the CAN Advocacy Committee

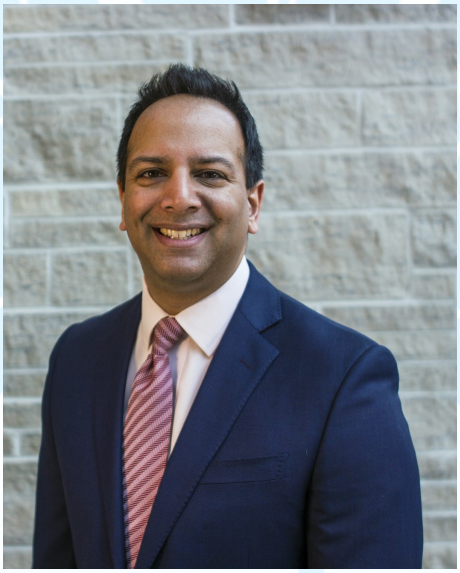


Karun Singh is the 2018 CAN Young Investigator awardee

The Canadian Association for Neuroscience (CAN) is proud to announce that Karun K Singh, from McMaster University, will receive the 2018 CAN Young Investigator Award at the upcoming 12th Annual Canadian Neuroscience Meeting in Vancouver, on May 15th 2018.

Karun Singh: A leader in stem cell research, human genetics and brain development

Dr. Karun Singh's research has made significant impact on our knowledge of signaling mechanisms that regulate brain development, and of the genetic risk factors underlying neurodevelopmental disorders. Neurological disorders of the developing brain such as autism impacts 1 in 66 individuals in Canada while schizophrenia affects 1% of the population. Affected individuals and families are burdened by life-long health, social and economic issues. Unfortunately, there are no specific therapies for individuals because these disorders remain poorly understood. However, since neurodevelopmental disorders have a strong genetic basis, this provides a starting point to identify underlying disease pathogenesis mechanisms.



Dr. Singh's work combines powerful human genetic studies and animal models. Using this approach, he has made novel insights into how autism and schizophrenia risk genes disrupt neural development. For example, in complex brain disorders where there is a loss of multiple genes (named microdeletions), Dr. Singh's team recently identified that in each disorder, a single gene plays a strong role in the development of the disease. In addition, his work has uncovered that patient-derived mutations in multiple genes disrupt synaptic communication between neurons in the brain. These discoveries have pinpointed precise signaling pathways that are disrupted by mutations in high risk genes, providing a path forward for screening and identifying therapeutics that will reverse the neural impairments.

Building on these discoveries, Dr. Singh has established clinical and genetic sequencing collaborators to create a resource of human induced pluripotent stem cell (iPS cell) models to study brain development disorders. He is combining this approach with CRISPR gene editing to better dissect the precise mechanisms by which genetic mutations cause defects in neural development. His platform has established a mechanism to identify drugs that will be streamlined for future clinical trials.

In earlier work, Dr. Singh identified new signaling mechanisms regulating how the peripheral nervous system is established. These fundamental studies have uncovered how peripheral nerve cells form appropriate connections with target organs, while incorrect connections are eliminated. These studies provide new insights into pathology and treatment peripheral nerve diseases and injury.

His work has been published in several top neuroscience and genetics journals (both first and/or corresponding author) including Neuron, Nature Neuroscience, Molecular Psychiatry, American Journal of Human Genetics, and Cell Reports. In addition, his recent published papers have received a significant amount of attention in several media outlets. He currently holds a prestigious David Braley Chair in Human Stem Cell Research, and his success has allowed him to become the Neural Program Lead at the Stem Cell and Cancer Research Institute at McMaster University. His program is funded by multiple National and International sources including CIHR, NSERC, Ontario Brain Institute, Brain Canada, and the European Research Area Networks.

Dr. Singh has quickly become a leader in the brain development and neurodevelopmental disorders fields. His work is uncovering new disease mechanisms for autism spectrum disorder and schizophrenia, which is paving the way forward to identify new therapeutics. **The Canadian Association for Neuroscience is very proud to present Karun Singh with the 2018 Young Investigator Award.**

2018 Young Investigator Award Lecture

Investigating signaling mechanisms controlling neuronal growth and brain development disorders

May 15, 5:30PM at the Sheraton Wall Centre Grand Ballroom, Vancouver

12th Annual Canadian Neuroscience Meeting
May 13 - 16 2018 Vancouver

Program

View the full program here

http://can-acn.org/2018-meeting-program

Registration

There is still time to register!

http://can-acn.org/registration-2018

2018 CAN Satellite Meetings & Public Lectures

You can register for a satellite meeting when you register for the CAN meeting. Registration is limited for these events, so register today!

Satellite 1: CAPnet/CPS

Canadian Action and Perception Network (CAPnet)
Date: May 13 2018, 8 am to 4:30 pm
Venue: Sheraton Wall Centre Vancouver
http://can-acn.org/satellite-1-capnetcps

Satellite 2: 6th Annual Canadian Neurometabolic Meeting

Date: May 12 6-7PM Keynote lecture (open to all) & May 13, 2018 8:30AM – 4:00PM
Venue: Sheraton Wall Centre Vancouver
http://can-acn.org/satellite-2-6th-annual-canadian-neurometabolic-meeting

Satellite 3: Canadian Neurophotonics Platform

Date: May 13th 2018 8:30AM - 4:00PM
Location: Sheraton Wall Centre
Satellite theme: Image Analysis
http://can-acn.org/satellite-3-canadian-neurophotonics-platform-2

Satellite 4: Neural stem cells in development and adulthood

Date: May 13 2018, 8:30 am to 4:30 pm
Venue: Sheraton Wall Centre Vancouver

http://can-acn.org/satellite-4-neural-stem-cells-in-development-and-adulthood

Satellite 5: Neural Signal and Image Processing: Quantitative Analysis of Neural Activity

Date: Saturday, May 12th, 2018, 8AM - 5PM
Location: Center for Brain Health – University of British Columbia
http://can-acn.org/satellite-5-neural-signal-and-image-processing-quantitative-analysis-of-neural-activity-2

CAN Public lectures

Come hear two free public lectures by addiction experts at **Science World - May 12th 4-6PM**.

Dr Catharine Winstanley

Associate Professor, Department of Psychology, University of British Columbia

Against the odds: insights into the nature of addiction from studying decision making in rats

&

Dr Luke Clark

Director, Centre for Gambling Research at UBC Department of Psychology

Deconstructing the modern slot machine: gambling, game features and addiction

Host: Dr. **Liisa Galea**, Director of the Graduate Program in Neuroscience at UBC

http://can-acn.org/meeting-2018

CAN 2018 Elections results

Congratulations to our newly elected executives and board members! Thank you to all the CAN members who took the time to vote.

Charles Bourque, Next CAN Vice-President-Elect

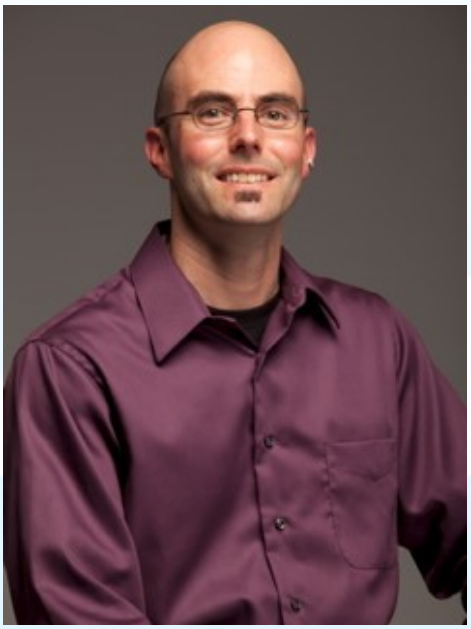
Dr. Charles Bourque holds a Certificate in Biophysics from the Marine Biological Laboratory (Woods Hole USA) and a Ph.D. in Physiology from McGill University (Montreal). Following post-doctoral training at University College (London UK) he was recruited to McGill University's Centre for Research in Neuroscience and Department of Neurology, where he is currently a James McGill Professor. Dr Bourque has published >140 scientific papers, co-edited 1 book, and delivered >150 invited presentations at National and International venues.

The Bourque laboratory is investigating the molecular and cellular mechanisms by which the brain monitors body hydration, fluid electrolytes and core temperature. The team is particularly interested in defining how networks of thermosensitive and salt-sensitive neurons interact with neurons in the central clock and other brain cells to preserve homeostasis by controlling the perception of thirst and secretion of the water conserving hormone vasopressin.

Life-threatening defects in body fluid balance are featured in many clinical conditions, including drug overdose, heart failure, sepsis and traumatic brain injury. Moreover, plastic changes in the neurons and circuits that underlie the central control of fluid balance likely link dietary salt intake to various forms of hypertension. The Bourque team is investigating how changes in neuronal properties and inter-neuronal communication contribute to such conditions.

Honors awarded to Dr. Bourque have included the Medical Research Council of Canada's Scholarship, Scientist and Senior Scientist awards, as well as a Senior Investigator award from the Canadian Institutes of Health Research. He has received the Joseph Erlanger Distinguished Lecturer Award from the American Physiological Society and the Jacques Benoit Lectureship from the Société de Neuroendocrinologie (France). Dr. Bourque is a Fellow of the Royal Society of Canada.

David Stellwagen, Next CAN Treasurer-Elect



David Stellwagen PhD is an Associate Professor in the Department of Neurology and Neurosurgery at McGill University, and a member of the Centre for Research in Neuroscience. He received a BSc in Neuroscience from Brown University, working with Dr Mark Bear, and received a PhD from the University of California, Berkeley, under the supervision of Dr Carla Shatz. He received post-doctoral training with Dr Rob Malenka, at the Stanford Medical School, where they first described the pro-inflammatory cytokine tumor necrosis factor alpha (TNF) as a critical mediator of homeostatic plasticity. His lab investigates the role of inflammation and homeostatic synaptic plasticity in both normal brain function and during various disease states, including neurodegenerative disease, addiction, and developmental disorders such as autism.

Congratulations to the newly elected CAN Board members!

Susanne Schmid, Western University

Susanne Schmid is an Associate Professor at the University of Western Ontario and studies sensory processing, filtering, and sensorimotor gating mechanisms in health and in animal models for neurodevelopmental disorders (see theschmidlab.com). She is the Associate Dean for Graduate and Postdoctoral Studies, the Director of the interdisciplinary Neuroscience Graduate Program at Western, and the past President of the Southern Ontario Neuroscience Association (a regional SFN chapter). Dr. Schmid has been very active at Science outreach events and she is a tireless advocate for investigator initiated research funding.

Soheila Karimi, University of Manitoba

Dr. Soheila Karimi has dedicated her career to neuroscience research with a long-standing interest in spinal cord regeneration. Soheila is currently an Associate Professor in the Department of Physiology and Pathophysiology, and a member of the Regenerative Medicine Program and Spinal Cord Research Center at the University of Manitoba. Soheila directs a productive research program that focuses on therapeutic development for spinal cord injury and multiple sclerosis. Impact of her research is evident as there is currently an unmet need for effective therapies for these devastating conditions. In addition to her research, Soheila has been passionately involved in outreach activities to promote neuroscience research in Canada, and increase public awareness on advances in spinal cord injury, MS and stem cells therapies.

Keep in touch!

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Share your neuroscience news:
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