



# CAN-ACN

CANADIAN ASSOCIATION FOR NEUROSCIENCE  
ASSOCIATION CANADIENNE DES NEUROSCIENCES

**Douglas Munoz, Ph.D.**  
President  
Queen's University

**Freda Miller, Ph.D.**  
Vice-President  
University of Toronto

**Katalin Tóth, Ph.D.**  
Secretary  
Chair of the Advocacy  
Committee  
Université Laval

**Ellis Cooper, Ph.D.**  
Treasurer  
McGill University

**Members of the Advocacy  
Committee:**

**Jaideep, Bains, Ph.D.**  
University of Calgary

**Jean-Claude Béique, Ph.D.**  
University of Ottawa

**Michael Hendricks, Ph.D.**  
McGill University

**Beverly Orser, MD, Ph.D.**  
University of Toronto

**David Kaplan, Ph.D.**  
University of Toronto

**Doug Zochodne, MD, Ph.D.**  
University of Alberta

**Communications Director:**  
Julie Poupart  
julie.poupart@can-acn.org

**Secretariat:**  
Caitlin Mooney  
Podium Conferences  
2661 Queenswood Drive,  
Victoria, BC  
V8N 1X6  
Canada  
secretariat@can-acn.org  
1.250.472.7644

January 21<sup>st</sup>, 2016

The Honourable Bill Morneau  
Minister of Finance  
90 Elgin Street  
Ottawa, Ontario K1A 0G5

**Recommendations to the pre-budget consultations**

Dear Minister Morneau,

The Canadian Association for Neuroscience represents neuroscientists in Canada who are dedicated to advancing brain research. Our association is composed of approximately one thousand researchers, who work at academic institutions across the country. We share the common goal of ensuring neuroscience remains one of the greatest research and innovation strengths of Canada.

We are writing this letter to bring your attention to the need to increase funding for biomedical research in Canada. Our members are deeply concerned about the current funding situation and are increasingly worried about the future of their laboratories. In the last decade two main factors have altered the funding environment in biomedical research: A) government initiatives have increasingly emphasized industry partnerships, short-term applications and commercialization. This change in funding priorities happened at the expense of discovery (basic) research that provides the fundamental ideas that lead to industry partnerships and commercialization. B) The budgets provided in operating grant budgets that were made available through peer-reviewed competition did not keep pace with inflation. The budget for operating grants distributed by the CIHR (Canadian Institutes of Health Research) was effectively reduced by approximately \$150 million since 2010.

*Why invest in neuroscience research?*

Neuroscience research impacts all Canadians. One in three Canadians will be affected by a neurological disorder, injury or psychiatric disease in their lifetime. Unfortunately, there are no clear causes or cures



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ASSOCIATION CANADIENNE DES NEUROSCIENCES

for the vast majority of conditions that affect the brain and spinal cord. Health Canada estimates the economic burden of neurological and psychiatric conditions represents 14% of the total burden of disease in this country. The cost of neurological disorders exceeds those of cardiovascular disease and cancer. The costs of neurological diseases will continue to increase as life expectancy increases and the population ages.

## Current status of investment in research and development:

- Investment in research in Canada has fallen from 2 % of total GDP in 2004 to 1.6% in 2014. ([www.oecd.org](http://www.oecd.org)). In 2013 Canada was ranked 24<sup>th</sup> among the 41 countries while it was 16<sup>th</sup> in 2006. (Annex 1, page 47 of the 2015 Report of the Science, Technology and Innovation Council (Advisory Council to the Government of Canada))
- The compound annual growth rate in biomedical R&D in Canada currently is negative, as it has decreased 2.6%. (N Engl J Med 2014; 370:3-6)

## Current status of biomedical research and neuroscience in Canada

The vast majority of our members operate their laboratories with funds that are provided by federal granting agencies including the Natural Sciences and Engineering Research (NSERC), the Canadian Institutes of Health research (CIHR) and Brain Canada.

In the last decade federal funding has shifted towards applied research, commercialization and industry-partnerships. While these initiatives can be useful when done in concert with basic research initiatives, they were introduced at the expense of curiosity-driven basic research. Successful industry partnerships and commercialization only occur when they take advantage and build upon made-in-Canada basic research discoveries. Basic research also enables us to understand how to keep our brains healthy, and repair the injured and diseased brain. Our members experienced decreased opportunities for funding for their basic research projects. Overt emphasis on applied research robs the scientific community and eventually the population from the benefits of original discoveries.

Canada has continued to invest in research infrastructure; however, in stark contrast, operating funds available from the CIHR budget have not kept up with inflation. Under the current conditions an increasing number of labs must compete for a continuously shrinking pot of operating funds. Success rate of CIHR applications was 34% in 2000. This rate has steadily decreased throughout the years, reaching 14.5% in



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ASSOCIATION CANADIENNE DES NEUROSCIENCES

2014. These drastic changes in the funding environment lead to lab closures and our community has lost several leading scientist who now continue their careers in the USA, Europe, and Asia.

These changes, in combination with the newly introduced peer-review system at CIHR, hit particularly hard early- and mid-career scientists. The chances of young scientists of obtaining operating funds are seriously compromised. We risk losing a whole generation of researchers, a loss that would be impossible to compensate for later.

According to the latest report of the Science, Technology and Innovation Council (Advisory Council to the Government of Canada): *“Despite its priority status, however, Canada is not investing in neurosciences at a competitive scale in comparison with the United States (U.S.). Total federal funding for neuroscience research is only about 40% of that in the U.S., even after adjusting for the size of the U.S. economy which is about 11 times larger than Canada’s economy.”*

With these facts in mind, the Canadian Association for Neuroscience proposes the following recommendations to the Canadian government.

## Recommendations:

### **1) An immediate increase of \$150 million to the 2016 Budget for CIHR.**

This money should be earmarked for investigator-initiated projects in order to mitigate the critical shortage of operating funds that are available to independent research laboratories.

### **2) A one-time investment of \$50 million over two years earmarked for operating funds for early- and mid-career scientists.**

These funds would help to stop the loss of young scientists who have not had a reasonable chance to establish their own research programs.

### **3) The long-term objective should be a doubling of the operating budgets of the NSERC and the CIHR.**

Open operating budgets represents 50% of the total budget of CIHR. Doubling funds that are available in open competitions would stop the downward trend experienced by basic research laboratories across Canada.



# CAN-ACN

CANADIAN ASSOCIATION FOR NEUROSCIENCE  
ASSOCIATION CANADIENNE DES NEUROSCIENCES

These investments would ensure that the standard of research excellence is maintained in Canada. Canadian scientists are willing and ready to continue to make important contributions that benefits all Canadians. It is important to ensure we have the means to do so.

Sincerely yours,

Douglas P. Munoz, Ph.D.  
President of the Canadian Association for Neuroscience  
Canada Research Chair in Neuroscience  
Director, Centre for Neuroscience Studies  
Professor in Biomedical and Molecular Sciences, Psychology, and Medicine  
Queen's University  
Kingston, Ontario  
Canada  
K7L 3N6  
Phone: (613) 533-2111  
Fax: (613) 533-6840  
Email: doug.munoz@queensu.ca

Katalin Tóth, Ph.D.  
Chair of the Advocacy Committee  
Canadian Association for Neuroscience  
Professor  
Quebec Mental Health Institute  
Department of Psychiatry and Neuroscience,  
Faculty of Medicine,  
Université Laval  
2601 chemin de la Canardiere, Québec  
Québec, G1J 2G3, QC, Canada  
Tel: 1 (418) 663 5747 ext. 4702  
Fax: 1 (418) 663 8756  
e-mail: katalin.toth@fmed.ulaval.ca

CC. The Honourable Jane Philpott, Minister of Health  
The Honourable Navdeep Bains, Minister of Innovation, Science, and Economic Development  
The Honourable Kirsty Duncan, Minister of Science