

February 19, 2016

Submission to the House of Commons Standing Committee on Finance's 2016 Pre-Budget Consultations

Introduction

As a national non-profit organization that develops and supports excellent and innovative brain research, Brain Canada was created to address the twin challenges of increasing the scale of brain research funding in Canada and widening its scope to encourage interdisciplinary collaboration to produce insights for treating multiple disorders. Through partnerships with the public, private and voluntary sectors, Brain Canada has been connecting the knowledge and resources available in this area to accelerate brain research and funding and maximize the output of Canada's world-class scientists and researchers.

The need for an accelerated investment in brain research has never been greater. Brain disorders impact 1 in 3 Canadians – more than 11 million people – and are the leading cause of disability in Canada, representing a \$60 million cost to our economy annually. Disorders, diseases and injuries to the brain can affect anyone, irrespective of age, socioeconomic background or gender, and the onset of these disorders can occur at any stage in life from childhood to the later stages of life. Many disorders of the brain and nervous system are progressive and degenerative. For instance, treatments exist for chronic pain, brain tumours, psychiatric disorders and addictions, however, there are currently no cures.

Clearly brain health is one of the most pressing challenges facing Canadians. Surpassing cancer and cardiovascular disease in their magnitude and impact, neurological disorders, mental illnesses, and brain and spinal cord injuries account for 38% of the global disease burden. While advances in research into brain disorders are improving our understanding of their etiology – enabling better diagnostics, screening, and therapeutic interventions, as well as improved frontline care and social support services – until very recently funding for brain research has been a lesser priority for government and non-government funders.

The Success of Brain Canada

Brain Canada's predecessor organization, Neuroscience Canada, was created in 1998 to accelerate learning in this area with three objectives: (1) increasing the scale of brain-research funding in Canada; (2) developing an excellence-based outcome-driven multi-disciplinary research model; and (3) widening the scope of brain research beyond neuroscience, to include other relevant fields such as chemistry, physics, engineering, mathematics, computer science, and ethics. Brain Canada's research model is based on the premise that our likelihood of success increases by looking at the brain as one system, and working on solutions as one community – one ecosystem – drawing on complementary

models and approaches, bringing different players together in different combinations—but all with shared goals.

Following the resounding success of the five pilot projects of the Brain Repair Program funded between 2004 and 2010, the federal government established the Canada Brain Research Fund (CBRF) in 2011 to expand Brain Canada’s work with a Multi-Year Funding Agreement (MYFA). Designed as a matching fund, the CBRF committed \$100 million in new public investment for brain research, research scientists and enabling technology to match \$100 million in contributions to be raised by Brain Canada and our partners.

Beyond contributing public money to this vital cause, the matching nature of the \$200 Million fund has engaged the entire brain research community at hospitals, research institutes and universities, as well as patient organizations and health charities. It has served to rally private donors, foundations and corporations to support transformative brain research on a scale never before achieved in Canada.

Brain Canada’s fundraising initiative has already generated impressive momentum on various fronts. The success of the CBRF has already produced remarkable results allowing for the development of non-invasive tests for early dementia and Alzheimer’s detection, the uncovering of the interplay of genes regulating dopamine neuron degeneration in Parkinson’s diseases, and the identification of a biomarker for Autism and Fragile X Syndrome.

These breakthroughs, among the many other research projects undertaken through the CBRF, have elicited both international attention and notable media presence. In fact, the CBRF has been recognized as a major policy innovation around the world. As countries such as the United States, the United Kingdom, Israel and the Netherlands grapple with the challenge of accelerating funding for brain research, their national governments are looking at the “Canadian model” as a prototype for their programs.

Ultimately, Brain Canada’s fundraising efforts have produced such extraordinary success that it met its objective of raising \$100 million in commitments from private donors and partners in the fall of 2015 – 18 months ahead of the anticipated March 2017 deadline. With the federal government match, this means that \$200 million of new funds will be invested in multi-year brain research projects. Funding has already been awarded to researchers across Canada whose projects cover the spectrum of brain disorders, along the continuum of research from basic science to population health, while supporting critical enabling technology like microscopy.

Brain Canada’s Research Funding Process

Research projects funded by Brain Canada involve multi-year grants (usually covering a period of 3-5 years), with funds paid out to research teams and other recipients on an annual basis. Every project is subject to an annual review of progress, after which funding may continue.

As of January 1, 2016, \$42 million in grants have been disbursed to researchers –\$21 million of which has been in the form of matching federal funds. A further \$114.7 million has been formally awarded to research projects through competitions and will be paid out over the period 2016-2020 – \$57.35 million of this amount is federal funds.

This combined funding is supporting 138 projects, employing more than 700 researchers at 70 institutions (e.g., universities, hospitals, research institutes) across Canada. The remaining \$16.5 million of federal funds will be awarded through competitions underway or in an advanced stage of development.

In total, since 2011 Brain Canada has awarded \$156.7 million in grants to research teams – close to 80% of the total fund – and competitions for the remaining \$33 million are well underway. Since these research projects are multi-year in nature, the payment of donor and partner pledges aligns with this timeframe rather than being made as single “lump sums.” Government rules require that matches from the CBRF may only be recorded as “paid” when Brain Canada receives payments from its partners (rather than when they make a contractual commitment to fund a competition or project).

Finally, and most impressively, Brain Canada’s structure also enables it to run a very lean organization to support the CBRF. Out of the \$200 million fund, just over 5% (\$10.3 million) has been invested in operations and program expenses – with the remaining \$189 million going directly to program grants. This efficient and nimble structure also gives Brain Canada the flexibility to move from concept to execution in short timelines.

The table that follows provides a full picture of the status of funds disbursed, awarded or committed to competitions currently underway.

	Federal Government	Donors/ Partners	Total
Funds disbursed as of January 1, 2016	\$21 million	\$21 million	\$42 million
Funds awarded to multi-year projects, to be disbursed in 2016-2020	\$57.35 million	\$57.35 million	\$114.7 million
Competitions underway, funds to be disbursed 2016-2020	\$16.5 million	\$16.5 million	\$33 million
TOTAL *	\$100 million	\$100 million	\$200 million

*** Please note: in order to balance to \$200 million, the \$10.3 million reserved for operations and program expenses must be added.**

The Path Forward

In light of our success – and to avoid losing the momentum that has been generated among the research community, health charities, the donor and foundation community – Brain Canada is seeking to renew its partnership with the Government of Canada in 2016. We

have many partners who are ready to engage in new phases of research that will help maintain Canada's place at the forefront of the field.

These represent significant commitments for "shovel ready" programs that would go forward if matching funding were made available in 2016, while the absence of matching funds would put these pending commitments on hold, leaving future projects in doubt.

Brain Canada is eager to be able to launch new competitions over the coming year. Without new competitions there is a risk that the ability of Canada's best labs to attract mid-career investigators and retain recent graduates in the field would be affected. This would increase the risk of a brain drain at a critical time in the field of brain research, and at a pivotal time for Canada's economy.

Given these considerations, Brain Canada is respectfully requesting the Committee's support, and that it recommend in its report:

- ***That the Government of Canada make targeted funds available in the 2016 Budget to match specific donor commitments to enable Brain Canada to run competitions this year, demonstrating the government's ongoing commitment to brain research.***

This would then set the stage for the renewal of the Brain Canada–Government of Canada partnership in a future budget, following the government's broader review of its plan to reinvigorate research and science funding in Canada

We are hopeful you will see the merit in supporting this request, and look forward to answering any questions committee members may have regarding Brain Canada and the impressive, world-leading brain research capacity being generated in Canada through the delivery of the CBRF.

Conclusion

Brain Canada wishes to thank the members of the House of Commons Standing Committee on Finance for their consideration of its submission to the committee's Pre-Budget Consultation Process. Brain Canada hopes that the Committee will consider recommending the renewal of the Brain Canada–Government of Canada partnership in its report, given the impact the fund's renewal will have on "shovel ready" projects we are prepared to launch with our researchers and partners, and the risk of losing momentum if these undertakings are put on standby.

There is widespread support for the fund across all of our partner organizations as well as the research community. Ultimately, we believe that a commitment to renew the partnership at this juncture would allow for continued pursuit of a "one brain community", working to benefit all Canadians.