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Written submission for the study “**The Mission, Mandate, Role, Structure and Financing of the New Capstone Research Funding Organization Announced in Budget 2024**” by the House of Commons standing committee on Science and Research

Brief submitted by the **Canadian Association for Neuroscience**

The Canadian Association for Neuroscience is the largest association of neuroscientists in Canada, with over 1000 members dedicated to advancing research towards understanding the brain, associated disorders, and developing diagnostics and cures.

The Canadian Association for Neuroscience supports the establishment of the Capstone organization to support and strengthen scientific research in Canada

The Canadian Association for Neuroscience strongly supports the effort to establish the Capstone organization promoting collaborative, international, and interdisciplinary research in Canada. The Capstone organization offers a great opportunity to build on our research strengths to bring the Canadian research enterprise to a higher level.



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This is an opportunity to build connections across disciplines and communities to foster new ideas and ways of thinking. It also has the potential to better support the link between basic research, applied research, commercialization and knowledge transfer.

We have identified key priorities that should be guiding principles during the development of the Capstone organization, and are thankful for this opportunity to share them with the government.

1. **Building Capstone on a strong foundation:** Investigator-initiated research and discoveries are the building blocks of the Canadian research ecosystem and must be supported explicitly

“Fundamental, investigator-initiated research is the cornerstone of the research endeavour and must be supported at internationally competitive levels.”

– 2023 Report of the Advisory Panel on the Federal Research Support System¹

The focus of government funding must remain investigator-initiated research. Fundamental research is the basis for Canadian-made discoveries that lead to innovation and economic growth.

¹ <https://ised-isde.canada.ca/site/panel-federal-research-support/en/report-advisory-panel-federal-research-support-system>



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- Fundamental research funded by the federal government through NSERC over the last decade has been foundational to the development of artificial intelligence, as demonstrated by the recent attribution of the 2024 Physics Nobel prize to University of Toronto's Geoffrey Hinton.
- James Till And Ernest McCulloch, working at the Ontario Cancer Institute decades earlier, demonstrated the existence of stem cells, which now hold promise to promote regeneration and repair in a wide range of tissues, including cells damaged by chemotherapy or disease
- Researchers at Sunnybrook hospital studying focused ultrasounds have been able to use this technology to temporarily disrupt the blood-brain barrier to deliver life-saving drugs to treat aggressive brain tumours in children.
- Work done over decades by Dr. Pieter Cullis at the University of British Columbia on lipid nanoparticles has led to them being used to develop mRNA vaccines that have saved millions of lives during the COVID-19 pandemic.

These recent and not so recent examples serve to illustrate the importance of investments made in Canadian research that have led to improvements in the lives of many Canadians.

A guiding principle of the Capstone organization must be to protect and increase funding for investigator-initiated research to promote discovery research. Tri-agency granting programs are the cornerstone of Canadian research and their budgets must be protected.

In health research, the mandate of the Canadian Institutes of Health to **improve the health of Canadians** must be maintained as a guiding principle, and links to the health portfolio strengthened. Health challenges are amongst



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the most important Canada faces today, and scientific research conducted in Canada is one of the most important ways to address these issues.

2. Using Capstone to **support ambitious new research initiatives** for the benefit of all Canadians

Canada has an opportunity to support research in areas of expertise where our leadership is recognised across the globe. Brain research is one area in which Canada shines particularly brightly.

Given the rising prevalence of neurological and mental health disorders, it is imperative that the Government of Canada prioritize brain and mental health research. To address this urgent need, a comprehensive moonshot program dedicated to understanding the brain should be launched. This initiative will drive innovation and lead to significant improvements in public health across the country. The Capstone organization represents an opportunity to support an ambitious research program such as this one.

Canada's scientists are highly respected on the world stage and are leaders in brain research including mental health, neuropathies, stroke, autism, memory and dementia, sleep, pain, artificial intelligence, and spinal cord injury.

Knowing that brain disorders will afflict 50% of the population, it is imperative that we invest massively in brain research. It is an investment in our health, our economy, and a better future for all Canadians.

The attribution of a dedicated budget for transdisciplinary and mission-driven research would allow our researchers to develop a comprehensive research strategy to improve the lives of all Canadians. Mission-driven



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research should be developed in close consultation with the scientific community to ensure alignment with current priorities and maximize impact.

3. **Giving Capstone the means for its ambitions:** The new organization must receive funding at levels commensurate with its broad mission and objectives

Funding for research and development in Canada must be aligned with international benchmarks, grow with inflation and become a strategic priority for Canada. Capstone should use the opportunity to bring research support to international levels including a major investment to substantially improve upon existing levels of tri council research support.

The reality of scientific research today is that it is highly collaborative and occurs across disciplines, and we welcome Capstone's promise to create new opportunities for collaborative research across fields.

To reach this objective, dedicated funds must be attributed to support new initiatives and the dedicated and highly qualified personnel developing them.

Our brains are our most important resource in the modern economy. Research laboratories train highly qualified personnel who generate new ideas and intellectual property that fuel the innovation economy. Canada must invest in researchers at all stages of their careers.

4. Using Capstone to **foster the development of a broad and diverse scientific workforce**

Research excellence can only be achieved by capitalizing on talent from diverse and representative sources. Principles of Equity, Diversity and Inclusion



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and Equitable distribution of research funds must inform the development of the Capstone organization, as they have tri-agency decisions in the past.

The Capstone organization offers new opportunities to diversify support for research in an equitable and fair way, by considering diversity as a whole. Institutions of different size and in all provinces will benefit from consideration for their unique perspective and talent pool to ensure the contributions of all stakeholders are considered to strengthen the Canadian scientific research ecosystem.

5. The **independence of research and funding decisions must be respected** for all research funding programs funded by the government

A coherent and forward-looking approach to research requires that the evaluation of research proposals be done in an independent and objective manner. Scientific peer review is the gold standard for the evaluation of research projects and is crucial to ensure Canada funds the best proposals.

We thank the Science and Research committee for this opportunity to provide feedback on the implementation of the Capstone organization.

Contact:

Julie Poupart, Chief Operating and Advocacy Officer
Canadian Association for Neuroscience

Julie.Poupart@can-acn.org



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