

Canadian Society for Molecular Biosciences

Promoting and advancing molecular understanding of biology

Targeted Investment in Scientific Research

Submission to the Department of Finance Canada ahead of the 2025 Budget

Prepared by:

The Canadian Society for Molecular Biosciences (CSMB)

RECOMMENDATIONS

Recommendation 1: The Government increase its investment in the Research Support Fund by (at least) \$478 million over four years, based on the Fundamental Science Review, to maintain global competitiveness and continue investing in research and innovation activities in the long term to align research and innovation investments with the OECD average of 2.8% of GDP. This recommendation aims to elevate Canada's research and development investments to match those of other G7 countries.

Recommendation 2: That the Government of Canada prioritizes and delivers funding for fundamental research in addition to medical and translational research. Additionally, we request that the government reassesses and increases the level of funding to the tri-agencies every two years to ensure that the funding is continually benchmarked to an internationally competitive level.

Recommendation 3: That the Government of Canada create a Canada Research Talent Strategy and scale-up graduate scholarships, new fellowships for Indigenous and equity-deserving groups, support for post-doctoral and early-career researchers, streamline immigration for highly qualified global researchers, among other procedures to ensure skill development for science and innovation and to recruit and retain talented individuals.

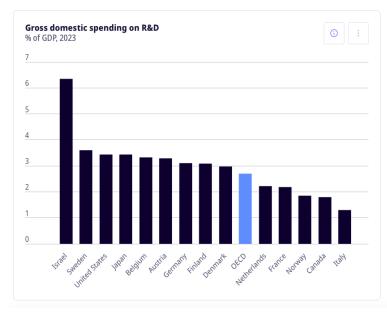
Introduction

The <u>Canadian Society for Molecular Biosciences (CSMB)</u> recognizes that the recently announced federal investments in science research, outlined in Budget 2024, which include a substantial boost to tri-agency funding and enhancements to Graduate and Postgraduate Scholarships, among other measures, represent a long-awaited positive step forward for Canada's research ecosystem. Investing in scientific research and our next generation of scientists is absolutely critical for retaining talent in Canada, emergency preparedness, economic resilience and addressing Canada's productivity gap in (1) Research and Development, (2) Training and Innovation, and (3) Science-based decision-making.

We recommend that the Department of Finance consider the following measures to further enhance and sustain basic science discovery research and to retain talent in Canada.

1. Strengthening Fundamental Research and Innovation Capacity

Fundamental research underpins applied science, technology and knowledge transfer, commercialization, breakthroughs in health and sciences, as well as leadership in formulating new policies. While Budget 2024's tri-agency funding boost is welcome, Canada still significantly lags behind peer nations in total research investment – just 1.8% of GDP compared to the OECD average of 2.8%.



Source: OECD

Canada's Research Support Fund (RSF) is critical to ensuring that research

institutions can manage infrastructure, administration, technical support, and IP management costs tied to federal research grants. The RSF has not kept pace with inflation or the expansion of research activity.

CSMB recommends an increase of at least \$478 million over four years to the RSF, bringing Canada closer to the 2.8% GDP target and enabling universities to modernize labs, manage utilities, maintain competitive infrastructure, and retain research talent.

We also recommend limiting the proportion of RSF funding allocated to administrative overhead, with priority given to:

- Facility maintenance and modernization
- Utilities and technical services
- IP and data management
- Staff and technical support

This type of institutional investment ensures long-term scientific excellence, enabling researchers to focus on scientific discovery rather than resource constraints. This investment becomes much more critical for provinces such as Newfoundland and Labrador, where the provincial government's annual budget cuts to the province's only university, Memorial University of Newfoundland and Labrador, significantly impact research training, the maintenance of research and educational laboratories, as well as the modernization of the university's research infrastructure.

In this regard, CSMB requests that the House of Commons and Government of Canada to prepare a report regarding the number of patents filed and approved per year by Canadians. Patents are essential to build a robust science and research system in Canada and the number of engineering, agricultural and biomedical sciences patents by Canadians between 2015-2025 is a key readout of our science ecosystem. Finally, CSMB offers to join any upcoming meetings between the Government of Canada with Roche, GSK, AstraZeneca, Novartis Pfizer, Johnson & Johnson and others to understand their needs within the Canadian science system and assist with future plans.

Recommendation 1: The Government should increase its investment in the Research Support Fund by an additional \$478 million (at least) over four years, based on the Fundamental Science Review, to maintain global competitiveness, and continue investing in research and innovation activities in the long term to align research and innovation investments with the OECD average of 2.8% of GDP.

2. Sustaining and Scaling Funding for Basic Science

While applied science garners public attention, fundamental or basic research is the well of knowledge from which all innovation flows, from cancer treatments to climate solutions. However, only 15.5% of applications were funded in the Spring 2025 CIHR Project Grant competition, leaving deserving science on the table.

Basic research not only leads to breakthroughs in the health sciences and the protection of environmental and natural resources but also serves as the seedbed for commercialization, startup creation, and economic growth. Investments made today will yield dividends in job creation and innovation capacity in the years ahead.

Even with Budget 2024's measures, this systemic underfunding continues to jeopardize:

- Canada's ability to lead globally in discovery
- The retention of early-career researchers and recruitment of global talent
- The morale and productivity of established labs

These low success rates mean many meritorious projects led by top-tier researchers are not funded.

Without adequate resources, early-career researchers face burnout or career abandonment, while others are recruited abroad. The situation is much more challenging for researchers at universities in geographically isolated areas. We recommend that the Government of Canada allocate additional research funds to universities on isolated islands with limited research facilities and infrastructure in their province of residence, where feasible access to other academic or research institutions in Canada's mainland provinces is unavailable. For instance, researchers, both established and early-career, at universities located in Prince Edward Island or Newfoundland and Labrador, encounter a broad range of challenges in managing their research costs due to the lack of necessary research tools and funding limitations. Unlike many researchers in other provinces of Canada, they often have limited access to advanced and highly equipped research infrastructure, laboratories, and technologies. Their collaborations with other academic institutions are restricted by their geographical locations and the associated travel costs for both PIs and their trainees to conduct some of their necessary experiments in another research or academic institution.

CSMB urges the government to establish a biennial review of triagency funding levels (CIHR, NSERC, SSHRC) to adjust for inflation, maintain international competitiveness, and support investigator-led, curiosity-driven research.

Internal institutional grants, which are not subjected to external review, also play a critical role in ensuring the continuity of research and training, particularly for students and researchers ineligible for federal scholarships. Sustained, predictable funding for internal university grants, which support highly qualified but often ineligible international students should also be part of this model.

One of the eligibility requirements for applying to most tri-council scholarships or awards for undergraduate and graduate students is being a Canadian citizen or a permanent resident of Canada. Our recommendation is either to modify these requirements to include international students or to allocate a considerable amount of funding for scholarships for non-Canadian students, as the federal government's long-term investment in the future advancement of Science and Technology in Canada through contributions from the integrated talents trained at Canadian institutions. We appreciate that the tri-council has taken some steps in this regard.

Recommendation 2: That the Government of Canada prioritizes and delivers funding for fundamental research in addition to medical and translational research. Additionally, we request that the government reassess and increase the level of funding to the tri-agencies every two years to ensure that the funding is continually benchmarked to an internationally competitive level.

3. Canada Research Talent Strategy

Canada must develop a comprehensive inclusive strategy to develop, attract, and retain the next generation of researchers and innovators. Budget 2024 took an important first step by boosting the Canada Graduate Scholarships and Postdoctoral Fellowships, but the proposed amounts still barely exceed Canada's poverty threshold in major urban centers.

For example, a \$27,000 Master's scholarship is just above the \$26,426 poverty line in cities of over 500,000 people (Statistics Canada, 2024). Without additional support, many students must seek extra employment or abandon academic research altogether.

CSMB recommends:

- Annual or biennial reassessment of scholarship values to reflect costof-living and global benchmarks
- Expansion of fellowships for equity-deserving groups and Indigenous students
- Allocating additional tri-council funding to support scholarships for non-Canadian students or modifying eligibility criteria to allow and include talented international students to apply, compete and receive scholarships from tri-council funding agencies. New support for international and postdoctoral researchers.
- Streamlined immigration for highly qualified researchers
- Improved mentorship and career transition support for early-career scientists

Canada must also compete globally to attract and retain top-tier talent. Streamlining immigration pathways and providing adequate funding for international postdocs and researchers is vital for maintaining our edge. This Canada Research Talent Strategy would not only address "brain drain" but also reinforce Canada's commitment to inclusive, world-leading science.

Recommendation 3: That the Government of Canada create a Canada Research Talent Strategy and scale-up graduate scholarships, new fellowships for Indigenous and equity-deserving groups, support for post-doctoral and early-career researchers, and streamline immigration for highly qualified global researchers ensuring skill development for science and innovation, and recruiting and retaining talented individuals.

Conclusion

Canada's scientific research community, led by Canadian scientists, has met immense societal challenges due to the investments and support from the Canadian federal government. A commitment to Basic Science helped us understand and apply knowledge to the problems Canadians faced, such as the novel vaccines developed over the past years. Similarly, a sustained commitment to supporting curiosity-driven Scientific research and supporting the next-generation of scientists will help us understand the root causes of many other problems that Canadians currently face or might face in the future including life-altering diseases such as cancer, diabetes, and

dementia, and challenges such as climate change, natural disasters, antibiotic resistance and contaminated drinking water, to name a few. Only sufficient funding and support from the federal government of Canada will enable Canadian scientists to face these challenges and help establish Canada as a leader in research, innovation, and knowledge-based economic development, ultimately preparing a resilient Canadian community that is less reliant on other countries to help address challenges Canadians face.

About CSMB

Conceived in 1957, the <u>Canadian Society for Molecular Biosciences (CSMB)</u> is a professional association of scientists involved in research and knowledge translation in Biochemistry, Cell Biology, Molecular Biology and Genetics. Our members are primarily from universities and academic research institutions from across the country and are the scientists responsible for investigator-driven research. Their work generates new knowledge that fuels innovation and discoveries and trains the next generation of scientists who will continue to innovate and contribute to our knowledge-based economy through academic, industry, and business opportunities.

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