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**WRITTEN SUBMISSION FOR THE
HOUSE OF COMMONS STANDING COMMITTEE ON FINANCE
PRE-BUDGET CONSULTATIONS IN ADVANCE OF THE 2019 BUDGET**

**BY:
CANADIAN CONSORTIUM OF RESEARCH**

RECOMMENDATIONS

Students and Early Career: Students and early career researchers represent the next generation of researchers who will contribute to Canada's science culture, productivity and competitiveness by making ground-breaking discoveries and tackling the many economic, social, and cultural challenges facing Canadians. The CCR recommends

- enhanced personnel support for students and trainees at different career stages (total base increase of \$140 million per year be phased in over four years, in equal increments of \$35 million per year to harmonize, upgrade and strategically focus the system of graduate student and post-doctoral fellow supports)
- the creation of research chairs for excellent scholars and scientists with a focus on early career researchers making the transition to mid-career, with a \$35 million investment this year and a \$105 million the following year.

Institutional Research Support: To enhance the environment for science and scholarship by improved coverage of the institutional costs of research, the CCR recommends

- adding \$314 million to the existing \$1.7 billion per year the federal government currently pays through the Research Support Fund.

Research Infrastructure: Targeted spending is required for: i) infrastructure-related start up (small-scale equipment) costs; ii) ongoing costs to support major science facilities; and iii) replacements costs for research tools and instruments that are outdated. The CCR recommends

- that in addition to a stable annual budget for CFI of \$300 million, an additional \$35 million annually be provided to CFI for major research facilities (MRFs) matching ratio funding, and an additional \$5 million for research tools and instruments replacement costs
- that appropriate support be provided to national research facilities funded through other federal mechanisms (e.g., TRIUMF's operational funding that flows through the National Research Council), and that the Government move forward in a timely manner to implement the Fundamental Science Report's recommendation to better coordinate planning around national big science infrastructure.

ASSISTING CANADIANS AND BUSINESSES TO BE MORE PRODUCTIVE AND COMPETITIVE

Consistent with last year's theme of fostering productivity and competitiveness for Canadians, as part of the pre-budget consultation in advance of the 2019 budget, the government is seeking input on what steps the federal government can take to support and/or encourage Canadians and their businesses to grow the economy – from a productivity and competitiveness perspective – in the face of a changing economic landscape.

With 20 member-organizations, the Canadian Consortium for Research (CCR) represents more than 50,000 researchers and 650,000 students across disciplines. It is the largest advocacy coalition in Canada focusing on research funding in all disciplines and support for post-secondary education. It commends this Government's continued commitment to:

- fundamental science via the recent review conducted by a panel that was overseen by Dr. Naylor;
- the record investment of \$1.6 billion over 5 years for independent, investigator-led research made to increase the base funding of the research councils as part of the 2018 budget;
- the requirement that the above investment of funds is disbursed in a manner that supports diversity in research;
- creation of the Chief Science Advisor and subsequent appoint of Dr. Nemer;
- support for Indigenous students pursuing post-secondary education and excellence in Indigenous research; and
- expanded eligibility criteria for the Canada Student Grants program to support more part-time students and those with dependent children (beginning in 2018-19).

These commitments have been needed to help the research community – and Canada as a whole – prosper and thrive.

These commitments notwithstanding, more can and needs to be done, and as such the CCR maintains its stance that ensuring Canada's competitiveness can be further advanced by implementing the recommendations in the report from Canada's Fundamental Science Review – *“Investing in Canada's Future: Strengthening the Foundations of Canadian Research”* – which was released on April 10, 2017. The report was prepared by an independent, expert advisory panel and was commissioned by the federal Minister of Science, Kirsty Duncan.

Through its recommendations, the report offers a comprehensive plan to both change and improve Canada's research ecosystem and, in so doing, restore the position of Canadians as research leaders on the international stage. To date, unfulfilled recommendations include:

Support for Graduate Students and Postdoctoral Fellows. The report identified the need for harmonizing, upgrading, and bringing strategic focus to the system of graduate student and post-doctoral fellow (PDF) supports. To this end, it recommends that a total base increase of \$140 million per year be phased in over four years, in equal increments of \$35 million per year. The report also recommends the creation of research chairs for excellent scholars and scientists with a focus on early career researchers making the transition to mid-career, with a \$35 million investment this year and a \$105 million the following year.

Infrastructure. The report also proposes a bold and much needed plan to strengthen Canada's research ecosystem through recommendations for stable annual funding for CFI (\$300 million) and another \$35 million annually for major research facilities (MRFs) matching ratio funding; increased support for facilities and operations (targeted 40% reimbursement rate for all institutions with more than \$7 million per year of eligible funding – additional \$314 million to the current \$1.7 billion currently paid); and consolidated long-term funding for a merged entity to oversee national digital research infrastructure.

Strengthening the Foundations of Canadian Research. The report also outlines a comprehensive agenda to strengthen the foundations of Canadian research. Among its recommendations is legislation to create an independent National Advisory Council on Research and Innovation (NACRI) that will work closely with Canada's new Chief Science Advisor (CSA).

The CCR supports efforts to improve coordination and harmonization, promote collaboration, and share best practices among CIHR, SSHRC, NSERC and CFI. Consistent with the CCR's recommendations to the panel, the report also called for balance across all research disciplines (social sciences and humanities, health, and natural sciences and engineering) as a foundational principle for funding; new forms of support for multidisciplinary and international funding; support for indigenous researchers, diversity in research, and research that cross-cuts disciplines; and improved agility and timeliness in responding to emerging research issues.

Conclusion

Science – social sciences and humanities, natural sciences and engineering, and health – is a fundamental part of Canada, having relevance to societal well-being, human functioning, health, technology, innovation, entrepreneurship, productivity and the economy; its relevance can be measured at the individual, business, and community levels.

It is critical to develop, promote and support a culture that values discovery and innovation in all sciences – including but not limited to natural sciences and engineering, technology, social science and humanities, health, and mathematics – to foster an interest in Canada's youth and underrepresented segments of society, and to achieve and benefit from the vast impacts of scientific inquiry. Achieving this requires continued and sustained investments in funding for research.

Students represent the next generation of researchers who will contribute to Canada's science culture, productivity and competitiveness by making ground-breaking discoveries and tackling the many economic, social, and cultural challenges facing Canadians; these contributions will ultimately help Canada's people, businesses and communities. Supporting graduate-level (masters, doctoral and post-doctoral fellows) teaching, research, and real-world experience through internships and fellowships, across diverse disciplines and settings, will encourage Canadians to pursue graduate-level education and build a foundation for economic and social development.

Equally important to supporting students and early career scientists is supporting the institutions that house them and the facilities/equipment they use to conduct their research. The Government has made significant, strategic investments in establishing world-class research facilities that have positioned Canada as an international leader in many areas (e.g., Sudbury Neutrino Observatory which led to the co-awarding of the 2015 Nobel Prize in Physics). While funding for individual research projects carried out within these facilities are available through the granting Councils (NSERC, SSHRC, CIHR), and capital costs are available through the CFI, there is no specific program to fund the ongoing operational costs of these facilities (salaries, utilities, infrastructure stewardship and facility maintenance, repair and overhaul). For example, CLS and SNOLAB obtain their operating funds through the CFI-MSI program, along with matching funds from several other Federal organizations and Provincial awards to the partner universities. The Government needs to ensure that adequate funding for the operations of Canada's national research facilities – which accounts for inflation, new infrastructure, future planning, staff growth, and increasing client demand – is made available through their funding providers at the time of renewal. As the fundamental science report notes, all post-secondary research depends upon maintaining and replacing common-use equipment; meeting regulatory standards; regularly upgrading institutional information technology services; keeping libraries stocked; cleaning, lighting, and heating

laboratories and research spaces; and administering grant awards. The Government is urged to move forward in a timely manner to implement the recommendation in the Fundamental Science Report to manage its investments in Big Science in a more coordinated manner from conception/approval, building, and operations through their lifespan to decommissioning.

Science advances and innovations happen when students and researchers from all disciplines and sectors (e.g. universities, government departments, data collection agencies, libraries), are supported with graduate scholarship, research funding, infrastructure support, institutional support, and career development opportunities. Implementation of the remaining recommendations outlined in the report from the Fundamental Science Review would help Canadians be as productive as possible in their workplaces and their communities; help Canadian businesses to be more productive and competitive; enhance the well-being of Canadians; and support a strong science culture upon which the development of good policy and programming is based.

The CCR extends its thanks to the House of Commons Standing Committee on Finance for welcoming input as part of the 2019 pre-budget consultation. We also once again thank the Minister of Science for convening this necessary review of Fundamental Science in Canada, and the distinguished panel of scientists for conducting the review in as systematic, transparent, and inclusive a manner as possible. For further information contact the CCR Chair, Dr. Lisa Votta-Bleeker, at 613-237-2144 ext. 323 or executiveoffice@cpa.ca.