



Submission to House of Commons Standing Committee on Finance's Pre-Budget Consultations 2014

**Research Canada: An Alliance for Health Discovery
August 6, 2014**



About Research Canada

Research Canada is a national, broad-based alliance dedicated to increasing investments in health research through collaborative advocacy.

We believe health research is a shared benefit, a shared responsibility and an investment in Canada's future.

We engage government, academia, industry and non-profit sectors to build support for balanced and long-term health research funding – investments that strengthen Canada's innovation system and lead to better health, sustainable healthcare, new commercialization opportunities, and skilled jobs for Canadians.

Our Mission

To improve the health and prosperity of all Canadians by championing Canada's global leadership in health research.



Executive Summary

Research Canada applauds the Government of Canada's efforts to identify solutions to some of the most pressing challenges Canada faces in its effort to strengthen our nation's economy and the quality of life of Canadians.

The consultation framework for the House of Commons Standing Committee on Finance's 2014 pre-budget consultation is comprised of six key themes, two of which fittingly build upon the recent ST&I consultation's areas of focus, namely:

- Increasing the competitiveness of Canadian businesses through research, development, innovation and commercialization
- Improving Canada's taxation and regulatory regimes

Research Canada will address these two themes in its submission to the Committee and recommends that the best way to increase the competitiveness of Canada's businesses is to strengthen the country's healthcare system and life sciences sector through:

- 1) Sustained, predictable and generous support for excellence in discovery research—both through the Tri-Council operating grants program and programs that support talent such as the Canada Research Chairs (CRC) and Canada Global Excellence Research Chairs (CERC) programs. Further, Research Canada recommends re-instating publicly funded career development programs for Canadian scientists.**
- 2) Amplified and long-term commitment to targeted programs such as the CECRs, PoP and S²B programs that bridge discovery science to the private sector.**
- 3) Regulatory changes that address competitive disadvantages faced by Canadian start-ups and SMEs and enhance IP protection.**

The ability to capitalize on Canada's strengths and address the challenges the country faces depends on the Federal Government's leadership in ensuring that all aspects of the innovation ecosystem are supported, and that the government carries out *its* unique role in funding discovery research consistently and sufficiently over time.



Increasing the Competitiveness of Canadian Businesses through Research, Development, Innovation and Commercialization

1. Recommendation on Research and Talent

The Federal Government needs to provide sustained, predictable and generous support for excellence in discovery research—both through the Tri-Council operating grants program and programs that support talent such as the Canada Research Chairs (CRC) and Canada Global Excellence Research Chairs (CERC) programs. Further, Research Canada recommends re-instating publicly funded career development programs for Canadian scientists.

An innovative economy is built on excellence in knowledge creation and on the exploitation of the unpredictable fraction of that knowledge with commercial or direct social value. We must strengthen the commitment to basic science, which is the bedrock of discovery, innovation, commercialization and patient-oriented research, by ensuring the Tri-Council has consistent and sufficient funding to retain and support the productivity of top-flight talent while cultivating the next generation of scientific leadership. Over the past several years, Research Canada has advocated for increased investments in discovery research within the context of creating the balance required for a strong innovation system in Canada.

A recent report in the *New England Journal of Medicine* demonstrates a decline in Canada's financial competitiveness in biomedical R&D, which has implications for the debate over appropriate federal policy in this area, especially at a time when mature economies such as those in Japan and Europe have maintained their level of investment. Canada's rate of decline in biomedical research funding "leads" the world. Australia now spends more on biomedical research than Canada.¹

The OECD (2012) describes how Canada's granting agencies have been shifting funds away from curiosity-driven research and toward commercialization. The vision

¹ Justin Chakma, B.Sc., Gordon H. Sun, M.D., Jeffrey D. Steinberg, Ph.D., Stephen M. Sammut, M.A., M.B.A., and Reshma Jagsi, M.D., D.Phil *Asia's Ascent — Global Trends in Biomedical R&D Expenditures*, The New England Journal of Medicine, January 2, 2014, p. 4

statement of NSERC on its website puts as much emphasis on fostering collaboration between industry and science as it does on fostering basic science.²

The C.D. Howe Institute's 2013 Commentary entitled, *From Curiosity to Wealth Creation: How University Research Can Boost Economic Growth* points out that federal granting agencies should reorient their system of allocating public funding of academic research to give more weight to overall academic excellence rather than immediate practical payoff. The universities and researchers that generate the greatest benefit to industry are those that are rated most highly on general academic grounds, and the best way the agencies can help attract top university scientists and engineers is to fashion a research environment that is focused on supporting the kind of research in which these academics like to engage, for which they are most qualified and to which they can make the most substantial contribution.³

Talent

A robust innovation system depends on a critical mass of health and other researchers. Highly qualified and innovative people—whose training is delivered in Canada's universities, hospitals and research institutes—are critical to each stage within the innovation cycle. A key factor that underlies the competitive advantage of successful regionally-based innovative networks is the local talent pool. These trainees become a vital resource for industry—a material benefit that is recognized by Canadian businesses and is a draw to do business in Canada. Programs supporting the training of highly qualified Canadians must be increased—recognizing at the same time, however, the importance of balancing investment in salary support, infrastructure and operating grants.

Research Canada commends the government for continuing to support top-flight talent through the Canada Research Chairs (CRC) and Canada Global Excellence Research Chairs (CERC) programs that help attract and retain world-class talent so that we can benefit from their expertise and potential. At the same time, it is important for the government to recognize the enormous challenges young researchers face in finding public- or private-sector employment in relevant fields of study. We must be cautious not to squander our investment in training talented people by failing to support the critical early stages of their careers.

Research Canada encourages the government to reinstate publicly funded career development programs providing support along the career development path from junior to intermediate to senior scientists, including clinician-scientists. Sustainable funding models for salary support for health researchers are urgently required if we are going to protect our pool of talent for business innovation and productivity growth.

² Howitt, Peter, C.D. Howe Institute, *From Curiosity to Wealth Creation: How University Research Can Boost Economic Growth*, Commentary 383, p. 14

³ Op.cit. p. 23

Government matching of private sector investments in highly qualified personnel (HQP) is one meritorious way to strengthen career development support, and Research Canada encourages exploration of such a strategy; however, Canada needs integrated, sustained and comprehensive support across the career lifecycle. We do not want to tie the development of our future talent pool to current commercial interests alone. Research Canada underscores the importance of public sector leadership in supporting talent development programs that serve Canada's broader interests.

2. Recommendation on CECR, POP and S²B Programs

The Federal Government needs to make an amplified and long-term commitment to targeted programs such as the CECRs, PoP and S²B programs that bridge discovery science to the private sector.

Longer-term, government-funded programs that provide funding to de-risk discoveries emerging from academic and public sector labs will allow unimpeded uptake by private sector investors and/or companies. Designed to bridge the challenging gap between innovation and commercialization, the Centres of Excellence for Commercialization and Research (CECR) program brokers the dynamic partnerships that match clusters of research expertise with the business community to share the knowledge and resources that bring innovations to market faster. Research Canada commends the government for creating this program as part of the internationally-recognized Networks of Centres of Excellence suite of programs.

Research Canada's members have direct experience with the Centres of Excellence in Commercialization and Research (CECR) program, as well as CIHR's Proof of Principal (PoP) program. Both of these programs promise to accelerate the process of extracting economic value from knowledge through impressive centres such as MaRS Innovation and PREVENT.

The PoP program is an innovative approach to meeting the challenge of commercializing and mobilizing knowledge from research discoveries; at only \$5.7 million in grants for successful applicants, however, it is far from adequate to meet even current needs.

The S²B (Science to Business) program is also an excellent start to providing scientists with the business training to support the commercialization of their research and ongoing support is urgently needed.

Clearly, these programs have inherent sustainability challenges and it is not realistic to expect the new initiatives they fund to achieve financial independence within five years. Even if they do, they are more likely, in such a short period, to have become a Contract Research Organization (CRO), which was not the original intent of the program. Research Canada encourages the Government of Canada to invest in these programs

using a longer-term funding approach that reflects the temporal realities of knowledge translation and commercialization and the tremendous opportunity cost we will incur if we take a narrow and short-term view.

Research Canada recommends that the CECR program be renewed and extended, including continued support for current CECRs that have achieved commercialization and other high-impact milestones.

Research Canada recommends a federal-provincial matching grant program that could amplify support for the PoP program.



Improving Canada's Taxation and Regulatory Regimes

3. Recommendation on Regulatory Approval Times, Tax Incentives and IP

The Federal Government needs to make regulatory changes that address competitive disadvantages faced by Canadian start-ups and SMEs and enhance IP protection.

Research Canada agrees that Canada must find ways to attract increased private sector investment while ensuring that the public interest is protected. Successfully filtering ideas through the rigours of testing and validation requires a capital, regulatory and intellectual property environment that values and supports the risk-taking involved in innovation.

Risk-taking defines entrepreneurship. To support this spirit of risk-taking and maximize the likelihood of commercial success, Canada must create an environment that attracts venture capital and enables the recruitment and training of highly qualified company-builders.

Regulatory Approval Times

To seize this opportunity in the life sciences and ensure investors can defend a decision to work with Canadian healthcare professionals, our priority must be to ensure a fast and smooth approval processes for new products, clinical trial applications and for new investors. Canada needs to improve the timeliness of regulatory approvals.

Tax Incentives

The SR&ED tax credit, and in particular the refundable credit, is the lifeblood for small companies to invest in research in Canada. The definition of eligible research for credits is limiting. Research undertaken today goes beyond the definition written over 30 years ago. Research Canada encourages the government to consider broadening SR&ED eligibility to include a broad continuum of health-related research, in alignment with the Organization for Economic Cooperation and Development (OECD). In addition, permitting milestone payments to biotechnology firms acquiring drug or biologic intellectual property rights would be a powerful support to a crucial emerging sector.

In light of the increasing focus by regulators on the entire life cycle of drugs and biologics, the federal government should permit research in areas such as health economics and pharmacoeconomics, which assess the value of new technologies in terms of healthcare effectiveness and health outcomes; evaluation of healthcare management; studies that address socioeconomic factors; and studies to develop new methodologies and models for a broad continuum of health-related research. Further, given the potential commercial impact of the hundreds of millions of dollars spent on R&D by research hospitals, the federal government should review how SR&EDs apply to them, in particular examining the rules governing both the “expenditure limit” and who is deemed to be an “excluded corporation”.

IP

To be a global player, Canada must provide an operating environment that ensures intellectual property is protected. Building upon the recent CETA agreement, the creation of a world-leading intellectual property regime to protect capital investment, knowledge creation, publishing scale and creative capacity is essential for increasing private sector investments in Canadian R&D.