

## **Research Canada: An Alliance for Health Discovery**

### **Responses**

#### **1. Economic Recovery and Growth**

*Given the current climate of federal and global fiscal restraint, what specific federal measures do you feel are needed for a sustained economic recovery and enhanced economic growth in Canada?*

Investments in Canadian health research will help sustain Canada's economic recovery and enhance growth. Targeted investments in areas of immediate applications, commercial or otherwise, must be complemented by predictable and sustainable investments in discovery research that will profoundly increase our ability to keep the commercialization pipeline rich and deep. The Federal Government must consistently and sufficiently support the discovery research that is fundamental to our capacity as a nation to innovate. With this support in place, we can create a national economic environment and strategy that enable the public and private sector partnerships necessary for a robust innovation enterprise which will enhance R&D capacity and accelerate the translation of discovery research into both the health system and the global marketplace. It must be emphasized that harnessing these partnerships requires committed public investment that effectively shares the financial risks associated with advancing discoveries to the point of commercial viability. The Canadian Institutes of Health Research (CIHR) has designed two programs toward this end: the Strategy for Patient-Oriented Research (SPOR) and the Proof or Principle (PoP) program aimed at meeting the challenge of mobilizing and commercializing knowledge from research discoveries. Programs such as these catalyze the creation of teams of academic researchers and those with professional business acumen with the private sector, both investors and existing companies. Research Canada encourages the Government of Canada to continue investing in programs that assist in developing these linkages. To increase the effectiveness and outcomes of these programs, Research Canada recommends: Budget 2013 increase the base budget of the Canadian Institutes of Health Research (CIHR) in order to advance Canadian discoveries and leverage the public and private partnerships needed to accelerate the uptake of new knowledge/technology into the healthcare system and the global marketplace.

#### **2. Job Creation**

*As Canadian companies face pressures resulting from such factors as uncertainty about the U.S. economic recovery, a sovereign debt crisis in Europe, and competition from a number of developed and developing countries, what specific federal actions do you believe should be taken to promote job creation in Canada, including that which occurs as a result of enhanced internal and international trade?*

Research Canada suggests that a realignment of federal spending in health research would provide the opportunity to lay the foundation for an evolved national health system that is no longer a cost burden to the country but an economic engine paving the way for a healthy and prosperous future for Canadians. The economic engines of the future are the world's knowledge-based industries. The health system in Canada is our largest knowledge-based sector employing hundreds of thousands of Canadians and emerging as the largest and most important driver of the global economy. We can learn from our international partners in this regard. The US is taking an approach that Canada may wish to consider. The NIH is aggressively pursuing a strategy to enable a national network of health translation units (National Centre for Advancing Translational Sciences/NCATS), with the aim of ramping up the commercial application of health-related research. Similar strategies are being rolled out in the UK and

EU. The Centres of Excellence in Commercialization of Research (CECRs) are a good example of appropriate vehicles to form the regional cores required to run the network, of which MaRS Innovation (Ontario) and the Centre for Drug Research and Development (BC) are exemplars. Current Tri-Council initiatives—CIHR’s Strategy for Patient Oriented Research (SPOR; see above) and CIHR’s joint initiative with the Natural Sciences and Engineering Council (NSERC), the Collaborative Health Research Projects (CHRP)—already align with the concept. The CHRP program, for example, will support research that has a strong focus on knowledge translation which will lead to more effective health services, a strengthened health care system and where appropriate, economic opportunities that will contribute to the transformation of our health system into an economic engine that creates jobs and opportunities for Canadians. Additional infrastructure support could come from a realignment of portions of the Regional Diversification programs, Canada Foundation for Innovation, Genome Canada and SR&ED programs. Toward this end, Research Canada recommends: RECOMMENDATION 2: Budget 2013 supports an increase in Tri-Council base budgets to a level that will ensure ample support for programs that enhance research implementation (e.g. CECRs, CHRP).

### **3. Demographic Change**

*What specific federal measures do you think should be implemented to help the country address the consequences of, and challenges associated with, the aging of the Canadian population and of skills shortages?*

A robust economy relies on a vibrant innovation system, the latter of which is dependent 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. 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. Hence programs supporting increased capacity for training 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 encourages the re-instatement of publicly funded career development programs similar to those programs which were the precursor to the current Canada Research Chairs program that provided support along the career development path from junior to intermediate to senior and clinician scientists. The Canada Research Chairs program is a critical program for supporting established scientists; it is not, however, a replacement for a continuum of career-development programs that protects our human capital at every stage of their training. 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. The S2B (Science to Business) program is an excellent start to provide scientists with the business training to support the commercialization of their research and ongoing support is urgently needed. New programs and ongoing support of existing programs like CECR and PoP dedicated to increase the ability of academic institutional offices of technology transfer to assist researchers in finding external investors to further the transition from discovery to innovation would enhance Canada’s ability to extract economic value from knowledge. A properly funded health research enterprise will attract the best and brightest minds from other shores to Canada and strengthen this country’s competitive advantage among highly-qualified immigrants. Health research is critical to the advances that will improve the quality of life of aging Canadians and extend their contribution to the country’s social and economic well-being.

#### **4. Productivity**

*With labour market challenges arising in part as a result of the aging of Canada's population and an ongoing focus on the actions needed for competitiveness, what specific federal initiatives are needed in order to increase productivity in Canada?*

By aligning current federal funding instruments to enhance research implementation, Industry Canada has the opportunity to create a Canadian Commercialization Network (CCN). This network would be the engine of regional small business creation and positioned to partner with the Industrial sector, US NCATS and the EU initiatives. It would be designed to tether and strengthen linkages among the public sector research engines, colleges, universities and research hospitals, with private sector receptors. The mandates of the proposed CCN would be: 1. Enabling enhanced information and technology flow among regional centres. 2. Bundling novel technologies from across Canada. 3. Facilitating, through private sector partnerships, the establishment of seed funding to support development of early stage technology and new company start-ups. A successful CCN must exist within a balanced policy, regulatory and funding environment across the health research continuum. Opportunities to strike effective, commercially-oriented public-private partnerships are ultimately predicated on the strength of the assets available for development and commercialization; we must therefore fuel the pipeline of discovery needed to attract industry, while creating enhanced regulatory approval processes, a progressive intellectual property regime and streamlined and improved tax incentives to facilitate effective commercial relationships. While it is beyond the scope of this submission, it is underscored that an essential component of the proposed CNN would be a national grid of enabling policies and legislation—SR&ED and harmonization of IP policies with international jurisdictions. Toward this end, Research Canada recommends: Recommendation 3: Budget 2013 create a Canadian Commercialization Network (CCN) that aligns current federal funding instruments to enhance research implementation , drive regional small business creation and partner with the industrial sector, U.S. NCATS and EU initiatives in a bold effort to increase productivity in Canada .

#### **5. Other Challenges**

*With some Canadian individuals, businesses and communities facing particular challenges at this time, in your view, who is facing the most challenges, what are the challenges that are being faced and what specific federal actions are needed to address these challenges?*

Research Canada contends that Canada is forfeiting economic opportunities in the health and life sciences as a consequence of the imbalance in investments across the innovation system. Canada's capacity to capitalize fully on investments in people, infrastructure and projects made thus far requires a framework to guide ongoing investments. Success is predicated on an integrated approach to health and health research investments, one that maps to all of the activities required to best capitalize on investments. A national health research agenda will impact in five arenas: (i) knowledge/technology creation; (ii) knowledge/technology development; (iii) extracting economic value from knowledge/technology; (iv) translation of knowledge/technology into an evolving healthcare system (v) translation of knowledge to guide the development of public policy The work products of this health innovation continuum will have direct impact on the health and prosperity of Canadians and Canada, and would accelerate our nation's transition from largely a resource/service-based economy to a knowledge-based economy, and in turn our nation's global competitiveness. The success of the recommendations proposed in Research Canada's response to the Finance Committee's 2012 set of questions is dependent upon the federal government fully adopting consistent and sufficient support of the discovery research that is fundamental to our capacity as a nation to innovate. The federal government must also create a national economic environment that enables the public/private partnerships required for a robust innovation enterprise that will enhance R&D capacity, create high-

quality jobs and accelerate the translation of knowledge into both the healthcare system and the global marketplace.