Canadian Society for Molecular Biosciences
Société Canadienne pour les Biosciences Moléculaires

Board of the Canadian Society for Molecular Biosciences (CSMB)
Submission for Pre-Budget Consultation to the
House of Commons Standing Committee on Finance
August 6th, 2014

Executive summary:

The board of the Canadian Society for Molecular Biosciences (CSMB) thanks the Standing Committee on Finance for the opportunity to provide feedback as part of the pre-budget consultation. Our society represents the interests of hundreds of faculty members and research personnel who are training thousands of students in basic bioscience and biomedical research departments at Universities and other research institutions across Canada. We confirm that past investments have considerably strengthened Canada's capacity for scientific research, for innovation, for training of highly qualified personnel and for the applications of results in biotechnology and medicine. In a very challenging budgetary environment the government has maintained support for science by continuing investments in government funding agencies and into the indirect cost program that provides crucial support for research institutions in all parts of the country. Whereas we applaud these investments we cannot ignore the fact that despite largely maintaining the budgets of the funding agencies, the available resources are not sufficient to leverage the increased capacity for research and innovation in our nation. If we want to "*Seize Canada's Moment*", citing a recent Industry Canada consultation document, audacious steps are necessary to leverage past investments for improved health of Canadians and to create more competitive companies and sustainable economic development.

CSMB recommendation for improved health and economic development by investing in basic discovery-oriented research:

Successive Canadian governments have increased and largely sustained investments in basic discovery-driven and applied research supporting world-class innovation in academic institutions across our country. Investments in the **Canada Foundation for Innovation (CFI)** have provided world-class equipment making our institutions competitive with the best in the world. The granting councils **Canadian Institutes of Health Research (CIHR)** and **National Sciences and Engineering Research Council (NSERC)** have provided operating funds to make world-class discoveries and to provide training to highly qualified personnel who will continue to innovate in academic as well as in industrial environments. Indeed, as Canadians we can all be proud of these achievements! The past investments have greatly broadened our capacity for innovation and knowledge creation, for training of highly qualified personnel who create companies and jobs and there has also been a net migration of excellent researchers to our country. The government of Canada has maintained the investments in the granting councils in challenging economic times, showing its continued commitment to supporting world-class basic discovery-driven as well as applied research. Modern technology used in hospitals to improve the health of Canadians and

innovative approaches used in the biotechnology sector now were developed in basic research laboratories 10-20 years ago. Continued investments into early stage discovery research are therefore crucial in order to reap the benefits of such discoveries in future.

We applaud the past investments, but the Canadian research enterprise is now at a crossroads! Research funding was largely maintained in recent years and even increased in some very targeted areas, but the granting councils CIHR and NSERC simply cannot keep up with the increased research capacity we have built over the last years. We feel that the government's science and technology policy risks to be a victim of its own success, if the government does not make audacious steps to build on our past successes and investments.

The most important issue is that the success rates at open operating grants competition of the granting councils CIHR and NSERC have been steadily eroding over the last years. Also, important support mechanisms such as equipment grants have almost disappeared due to increased budgetary and application pressure. Just as an example, the success rate at the CIHR open operating grant competition was about 25% just a few years ago, reflecting a healthy competition for the best ideas ensuring that only excellent and very promising work is being funded. However, this has steadily eroded and dropped to 14% in the last competition. In addition, even the funded grants were all cut by 26.8%! This low success rate is getting close to the situation at the National Institutes of Health (NIH) and at the National Science Foundation (NSF) implying that we have almost lost our competitive advantage that helped us attract many researchers from the United States. The upcoming reforms of the CIHR open operating grant funding and peer review system further aggravate this situation by restraining the number of competitions in which researchers can submit their most innovative and competitive ideas for funding. Also, the mechanism of implementation of these reforms causes important funding gaps, which has let to widespread concerns in the scientific community. **As a consequence of all these factors, there are dozens, if not hundreds of research laboratories across the country that have already contracted, will have to contract in the very near future and risk being closed down over the next few years.** Whereas researchers at many major research Universities appear still be able to compete in this environment, it is already clear that colleagues at many small and mid-sized institutions outside of the major urban centers are not able to sustain their activities at competitive levels. This is already leading to a loss of innovation and training capacity and to a loss of research capacity across the country so that costly CFI-funded equipment can not be used due to lack of operating funds.

Whereas the above may sound alarmist, we feel that it appropriately reflects the fragile situation in many research laboratories across the country at this point. **Further, we wish to underline that it is not too late for the government to react and to avoid the contraction of research capacity, the loss of past investments and the potential for future job creation and health benefits.** The board of the CSMB proposes three concrete and feasible measures to address this situation in the following.

First, the upcoming Federal budgets will be crucial for the Canadian research enterprise and even modest annual 3% increases for the granting councils CIHR and NSERC, if targeted to the most innovative open operating grant competitions, would stop the downwards trend that we have experienced. Additional cost about 30 million $ per granting council, 60 million $ total per year (2015-2017).

Second, the CFI should continue to play an important role to finance world-class infrastructure, but the reinstatement of the more modest equipment funding programs at NSERC and CIHR would be equally important. These programs finance urgently needed renewal of ageing infrastructure on a much broader scale that is not eligible for the CFI. Additional cost about 10 million $ per granting council, 20 million $ total per year (2015-2017).

Third, we suggest that the indirect cost program should be gradually increased from the current 20% to reach 40% in 2017 in order to enable research institutions to more adequately support their mission. This increase may indeed sound audacious, but it would coincide with the 150th birthday of our nation. It would very adequately show our vision of Canada's future as a nation of innovators dedicated to the generation of knowledge and of economic prosperity. Additional cost about 100 million $ per year (2015-2017).

To conclude, we applaud the continued commitment of the Canadian government to world-class discovery-based research and its applications for improved health, training and economic development. We hope that the government will agree that Canada must seize this moment and that the improving budgetary situation will enable modestly increased investments into the CIHR and NSERC, and sustained support for the CFI. This will ensure that our researchers can reach their full potential continuing to do world-class research and innovation that will stimulate economic development and job creation across our nation and improve the health of Canadians.

On behalf of the board I would like to thank the committee for the opportunity to provide our input and we would be happy to provide further information and insights in person if requested.

Sincerely,

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