

Hon. James Moore  
Minister of Industry

Hon. Greg Rickford  
Minister of State (Science and Technology, and Federal  
Economic Development Initiative for Northern Ontario)



Re. Science and Technology Consultations

January 7, 2014

Min. Moore and Min. Rickford,

On behalf of our members, which include more than 80 life science companies, service providers, academic and research institutes and other organizations in Ontario which together represent more than 17,000 employees, researchers and students; Life Sciences Ontario (LSO) would like to offer our response to Industry Canada's request for feedback on the Government of Canada's science and technology strategy, *Mobilizing Science and Technology to Canada's Advantage*.

LSO believes that the life sciences industry is uniquely positioned to move Canada's economy into a prosperous future. By providing jobs for our highly educated youth while tackling our biggest challenges such as healthcare sustainability, healthy food for a growing global population and clean energy to fuel our industries; life sciences has the potential to provide the largest socioeconomic return on investment of any sector. But we need to first make that investment in our science based industries.

Please find below our response to the specific questions requested as part of the science and technology consultations.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jason Field', is written over a large, faint, light blue and green graphic that resembles a stylized DNA helix or a flame.

Jason Field, PhD  
Executive Director  
Life Sciences Ontario



## **LSO Response to the Industry Canada Science and Technology Consultation**

### **A. Business Innovation**

**A1. Industry Canada Question:** On October 17, 2011, the Expert Panel on Federal Support to Research and Development released its report. The key recommendations of the report advised the government to: improve access to venture capital; shift resources from indirect to a smaller number of direct business innovation programs; simplify and streamline the SR&ED program; support innovation through procurement; and refocus the National Research Council. Building on the advice provided by the Expert Panel on Federal Support for Research and Development, what more can be done to improve business investment in R&D and innovation?

**LSO Response:** LSO members strongly support most of the key recommendations of the Expert Panel which have the potential to significantly impact the life sciences sector.

Access to capital is the preeminent concern of our membership and limited access to capital, primarily patient risk capital for product validation and commercialization, is a key barrier preventing Ontario life-science oriented companies from thriving.

Companies in the life-sciences sector would also strongly benefit from procurement strategies for their products and services. Canadians should be the first to develop, adopt and benefit from the biomedical, bioresource and bioagricultural innovations discovered in Canada.

The US has also been highly successful in supporting innovative companies through well designed direct funding programs; the most notable of which is the Small Business Innovation Research (SBIR) program. LSO strongly encourages the Government of Canada to consider the SBIR as a model when considering direct funding for early stage life science firms.

The SR&ED tax credit program has been an important resource for early stage Canadian life sciences companies looking to grow and commercialize technologies. However, some of the changes intended to “simplify and streamline” the program have had a net result of reducing support to these innovative companies. Further, the limitation of this program to only be accessible by CCPCs (Canadian Controlled Private Corporations,) while excluding public Canadian companies, only serves as yet another barrier to accessing capital within life sciences.

The access to capital challenge requires a multi-faceted solution that aims to create an investment ecosystem for innovation. The solution needs to be a coordinated strategy that aims



to enable access to capital from multiple sources that include private and angel investors, venture capital, government programs and tax credits and the public capital markets. Flow-through tax credits have been consistently identified by our membership as a mechanism that should be considered to attract private investment into innovative life-science companies.

**A2. Industry Canada Question:** What actions could be taken, by the government or others, to enhance the mobilization of knowledge and technology from government laboratories and universities, colleges and polytechnics to the private sector?

**LSO Response:** In the life-sciences sectors, there is a shortage of development and commercialization oriented companies available to receive the knowledge and technology created in the public sector. Access to capital is the key factor preventing such companies from being created in the life-sciences sector. While significant resources are being invested into the life-sciences at government laboratories, universities, colleges and polytechnics, little risk capital is available to develop and commercialize these discoveries in Canada.

Policies and incentives that support private investment into innovative life-science companies, tied to the development and commercialization of Canadian discoveries, would mobilize knowledge and technology from the public to the private sector.

## **B. Developing Innovative and Entrepreneurial People**

**B1. Industry Canada Question:** How can Canada continue to develop, attract and retain the world's top research talent at our businesses, research institutions, colleges and polytechnics, and universities?

**LSO Response:** Difficulty accessing appropriate scientific talent has not been considered as pressing a concern for Ontario based Life Science companies, notwithstanding the lack of capital required to hire and retain staff. The larger issue is youth unemployment, particularly in those disciplines most related to innovation – Science, technology, engineering and mathematics (STEM). According to the 2011 National Household Survey Data tables (available on statscan.ca), the unemployment rate for Ontario graduates between the ages 20-24 (our youngest graduates) with a minimum bachelor degree from STEM disciplines was a staggering 19.4%.



BioTalent Canada released a labour market information report (available on [www.biotalent.ca](http://www.biotalent.ca)) last year that identified access to capital and soft skills training as the two biggest challenges for employers hiring in the life sciences sector.

As such, LSO recommends the following:

1. Academic institutions need to teach entrepreneurship as a viable career path for STEM graduates. This includes providing the business education and developing the soft skills necessary for young science entrepreneurs to succeed.
2. Companies need to provide on the job training opportunities to help develop our science talent. This can be done by through closer partnership with academic institutions on curriculum development, participation in co-operative education programs or through internal corporate career development initiatives.
3. Government needs to put policies in place that support a robust capital environment, both for the companies that can hire and train new STEM graduates and for new entrepreneurs seeking to commercialize discoveries and create new technology companies.

Canada is well positioned in terms of research talent. What we lack is development and commercialization talent and that should be the focus of future efforts.

### **C. Excellence in Public and Post-Secondary Research and Development**

**C1. Industry Canada Question:** How might Canada build upon its success as a world leader in discovery-driven research?

**LSO Response:** LSO members agree that Canada is a world leader in discovery-driven research, particularly in the life sciences sector, but that our success should be measured not only by research, but also by development and commercialization of that research. For our research to be of value, it must be translated into products and services that benefit people and are commercially successful. It is now more critical that we encourage the flow of investment capital into the life sciences sector to create Canadian companies that can develop and commercialize Canadian discoveries, rather than focus on producing increasingly high-quality intellectual property that withers unexploited or is sold-off outside of Canada.



Further, by leveraging strategic procurement policies to be first adopters of innovation; Canada has an opportunity to help accelerate the commercial success of innovative life sciences companies.

**C2. Industry Canada Question:** Is the Government of Canada's suite of programs appropriately designed to best support research excellence?

**LSO Response:** Research “yes”, commercialization “no”. While Canada’s life sciences research is world class, we need to strengthen our ability to move discovery toward commercial success. LSO members see great value in building on our current strengths in research by developing policies and initiatives that strengthen the translation of research excellence into commercial success by:

1. Enabling a strong risk capital environment for innovative companies
2. Facilitating academic/industry partnerships that focus on commercialization
3. Being first adopters of innovation

LSO members recommend further streamlining the understanding and coordination of the various funding programs available across both federal and provincial governments.

### **About Life Sciences Ontario**

Life Sciences Ontario is a member-driven organization that represents and promotes the province’s vibrant and diverse life sciences sector. LSO collaborates with governments, academia, industry and other life science organizations in Ontario and across Canada to promote and encourage commercial success throughout this diverse sector.

Membership in Life Sciences Ontario includes individuals, students, emerging companies, investors, service providers and companies with marketed products. The organization provides a wide range of networking and educational events, and operates a vibrant mentorship program that is helping to develop high-skilled talent and build new business opportunities for the life sciences sector. LSO is an effective conduit for delivering policy options to governments, and is dedicated to promoting Ontario's life sciences sector internationally.

### **Contact**

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