

## BIOTECCanada Submission to the 2011 Federal Budget Consultations by the Standing Committee on Finance

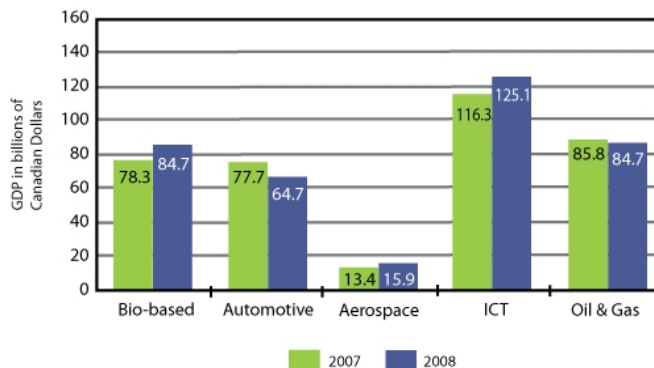
### The Bio-based economy: Next generation driver of Canada's growth

#### Executive Summary: Grow the economy of the future

The past year of economic recovery has continued to witness international government support for biotechnology and the broader life sciences sector. Foreign countries continue to competitively position their respective life sciences sectors at the international level. To stabilize and secure economic fortunes, Canada must address the reality of what competition looks like at the global level not only today, but tomorrow as well.

The Government of Canada has made tremendous investments in public research to boost the quality of science and technology at Canada's post-secondary schools and research institutions over the last two years. In order to realise the return on this investment, we need to create a sustainable and growing private sector community that will commercialise public research.

Canada's bio-based economy has an economic footprint across the entire country, but it requires attention for global competitiveness. Action is needed now to secure innovative technology researched and developed in Canada, to see technology adopted, to ensure our tax credit system remains competitive, and to modernize stipulations of existing tax policy frameworks to better reflect our trading realities.



We can start to take action by doing the following:

#### **FACILITATE SUSTAINABLE CAPITAL FORMATION:**

Extend the applicability of flow-through shares to Canada's biotechnology sector

#### **SUSTAIN VACCINE FUNDING:**

Create a permanent fund of a minimum \$100 million per year for innovative vaccines

#### **GROW THE SDTech FUND:**

Provide a minimum of \$100 million per year to SDTC to continue supporting the next generation of green bio-based technologies

#### **SUPPORT DOMESTIC JOBS:**

Remove the CCPC restriction from the SR&ED Tax Credit Program for emerging companies

There are two primary elements of the commercialisation cycle which feature strongly in the call to this committee for input into assessing and determining the best opportunities to frame a full fiscal recovery for Canada:

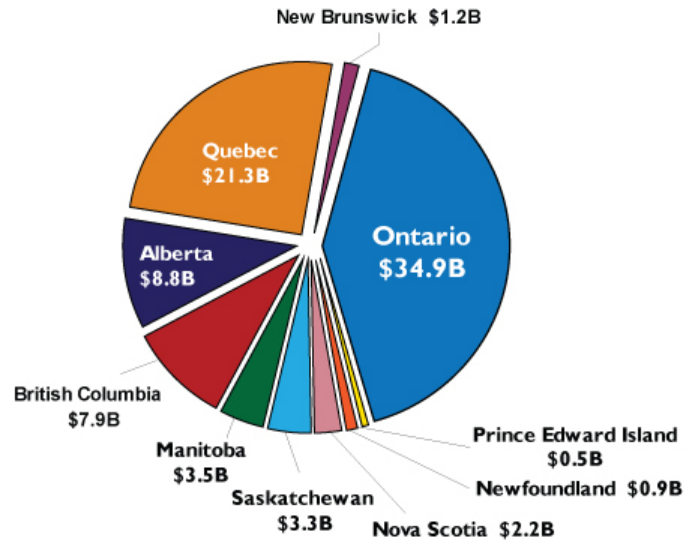
1. Realising the full return on investment for public and private investment into research
2. Creating programs to support the use of the products resulting from commercialisation.



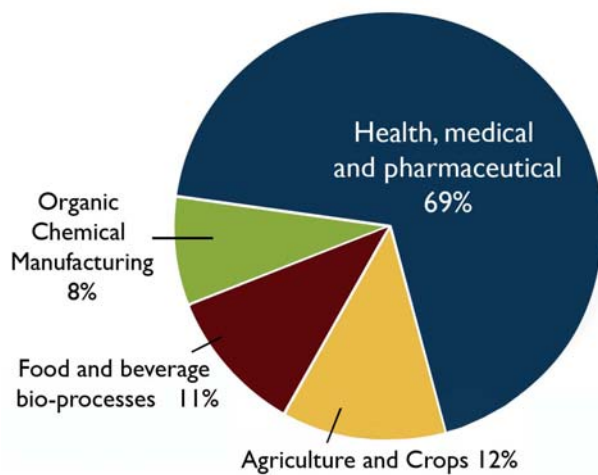
## What is Canada's bio-economy?

A bio-economy is one that focuses on biological tools and products in the production of treatments, diagnostics, foods, energy, chemicals, and materials. The bio-economy relies on sustainable sources of renewable goods, thereby protecting the environment. At the same time, the bio-economy seeks to create products with a reduced carbon footprint, thereby meeting our environmental obligations. From the nutraceutical hub in Prince Edward Island and Nova Scotia to the environmental biotech center in British Columbia, Canada's biotechnology industry has a tremendous economic impact across the country.

The bio-economy is made possible by the continuing surge in scientific knowledge and technical abilities that can be used to harness biological processes for practical uses both in Canada's traditional industries, and in exciting new areas. Canada's bio-based sector, which includes all those businesses that are active in biotechnology, use the products and services of biotechnology, or supply firms active in these areas, is now estimated to contribute roughly \$80 billion to Canada's GDP and touches more than 1 million jobs in Canada today.<sup>1</sup>



Capturing the return from public investment in research and development requires a robust domestic community of companies. Budget 2010 delivered significant funding for the three granting councils through which the federal government supports research at Canada's universities, colleges, and research hospitals. In order to realise a return on this important investment, Canada requires a sustainable community of biotechnology companies in which basic research from these public institutions can be transferred and commercialised.



Canada's biotechnology industry is providing solutions in relation to natural resource management, manufacturing development, and more effective systems of healthcare. Investment capital in technology-driven industries, such as biotechnology, has evaporated to some of the lowest levels in 13 years.<sup>2</sup> In the case of Canada's biotechnology firms, Ernst and Young estimates the number of operational companies has fallen by 20% over the last two years as a direct result of lack of access to capital.<sup>3</sup> This has had a profoundly adverse impact on Canada's productivity, economic growth, and international competitiveness.



## What needs to be done?

### **FACILITATE SUSTAINABLE CAPITAL FORMATION:**

#### **Extend the applicability of flow-through shares to Canada's life sciences sector**

Financial experts estimate Canada's biotechnology industry requires \$1-1.5 billion, per year, of private investment to sustain the existing sector in the long-run. To achieve sustainable capital formation for the industry, BIOTECCanada recommends the expansion of the federal government's flow-through shares program to Canada's biotechnology sector.

Biotechnology companies are not funded through traditional financial institutions such as banks. They require millions of dollars of risk capital to continue research and development activities. Similar to junior mining companies, Canada's junior biotechnology companies require a tremendous amount of time and capital to reach profitability. For more than two decades, the federal government's flow-through shares regime has permitted junior mining companies to pass on their exploration expenses to investors. This investment incentive has attracted a tremendous amount of private risk capital into the sector, effectively ensuring junior mining companies have the ability to continue exploration efforts in the long-run.

It is estimated every federal government dollar of assistance in the flow-through shares program has spurred 3.0 times in incremental exploration spending for the mining sector and 2.0 times in incremental exploration spending for the oil and gas sector.<sup>4</sup> Similar to exploration and discovery in mining, junior biotechnology companies can be self-sustaining by utilising their significant research expenses, generated throughout the long development cycle, in a much more efficient manner by passing them onto investors, raising capital to continue research, and keep highly skilled jobs in Canada. The federal government should extend the flow-through share regime to biotechnology and incentivize private sector risk capital to fill the funding gap.

### **SUSTAIN VACCINE FUNDING:**

#### **Create a permanent fund of a minimum \$100 million per year for innovative vaccines**

Immunization programs are widely recognized as among the best investments in health, yet represented under 0.3% of national health care expenditures in 2008. This year preparations for H1N1 flu have placed the spotlight once again on the value of immunization programs and vaccines. In Canada we are fortunate to be home to leading global vaccine production facilities as well as cutting edge, early-stage Canadian-based companies which are developing vaccine-based interventions for H1N1, HIV, Alzheimer's and several types of cancer.

In 2003 the federal government launched the National Immunization Strategy (NIS) which has since contributed \$600 million to immunization programs, ensuring that all Canadians have access to five innovative vaccines against chickenpox (varicella), invasive pneumococcal disease/pneumonia, whooping cough (pertussis), meningitis, and HPV-related diseases.

Continued leadership by the federal government in promoting the adoption of vaccine technologies is needed now more than ever. Innovative vaccines for meningococcal disease, rotavirus and shingles have been approved by Health Canada. In addition, new combination vaccines against measles, mumps, rubella, varicella, and therapeutic vaccines are in the pipeline. BIOTECCanada encourages the federal government to build on the tremendous success of previous rounds of funding and renew the National Immunization Trust Fund by creating a permanent fund of a minimum \$100 million per year to ensure new recommended vaccine technologies can reach all Canadians.



### **GROW THE SDTech FUND:**

#### **Provide a minimum of \$100 million per year to SDTC to continue supporting the next generation of green bio-based technologies**

Canada is home to leading companies who are developing new dedicated biomass crops, transitioning our forest industries into centers of biorefining, and developing renewable materials for our auto and housing sectors – all helping Canada to achieve commitments to reduce greenhouse gas emissions and deliver a new source of economic growth and employment. A key partner in developing this next-generation industry is the SDTech Fund administered by Sustainable Development Technology Canada (SDTC).

Since the government created SDTC in 2002, The SDTech Fund has contributed nearly \$550 million to more than 150 commercial projects to bring innovative Canadian technologies that address climate change, air quality, clean water, and clean soil to market. These funds have leveraged an equivalent amount from the private sector and have established a Canadian footprint in industrial biotechnology and cleantech. In fact, 41% of the total cleantech venture capital investments in Canadian cleantech companies went to SDTC supported companies; a mark of the promise offered by these early-stage innovations.

Given the global importance of these technologies, the pace of Canadian innovation in this sector has outstripped the funding allocated to the SDTech Fund. Given the \$76 billion recently committed by the United States to renewable energy alone, we risk losing our best technologies to foreign nations unless additional resources are provided to SDTC to support their development here at home.

BIOTECCanada encourages the federal government to secure Canada's place in the bio-economy by providing a minimum of \$100 million per year to SDTC to continue its support to the next generation of green bio-based technologies that have the potential to utilize our forest and agricultural biomass resources to fuel our economy for decades to come.

### **SUPPORT DOMESTIC JOBS:**

#### **Remove the CCPC restriction from the SR&ED Tax Credit Program for Emerging Companies**

The refundable credits under the Scientific Research & Experimental Development (SR&ED) tax credit program offer globally competitive value to emerging companies investing in research in Canada. However, non-CCPCs are essentially penalised as a result of the CCPC restriction simply because of their ownership structure. Non-CCPC companies are moving their research investment out of Canada thereby decreasing their investment in high-paying, highly-skilled research jobs.

As opposed to many sectors, Canada's core biotechnology companies engage in public listings as a means to raise capital in order to support research activities; a publicly-traded listing is not indicative of a mature stage of product development. We must recognise that public companies, or those whose majority ownership is located outside of Canada, face a competitive disincentive to build research capacity and invest in Canada by not qualifying for refundable SR&ED tax credits. Changing the eligibility requirements and allowing all emerging companies performing research in Canada to benefit creates a globally competitive program and supports more domestic jobs and investment.

According to Finance Canada, SR&ED credits generate more value for government than the program costs. Therefore, the marginal increase in costs to allow all companies to benefit from the credit would be more than offset by the return. Provincial SR&ED programs, such as those in Ontario and Alberta, make this recognition and do not limit refundable credits. BIOTECCanada estimates removing this restriction for refundable tax credits would stimulate more research investment and jobs by non-CCPC firms and create almost \$1 billion in value to the Canadian economy. With our world-class science, we can be the magnet for foreign dollars today by removing the CCPC restriction to refundability.

<sup>1</sup>Industrial Biotechnology. December 1, 2008, 4(4): 363-366. doi:10.1089/ind.2008.4.363

<sup>2</sup>Canada Venture Capital Association (CVCA) press release, February 17, 2010

<sup>3</sup>Ernst & Young, Beyond Borders 2010

<sup>4</sup>Finance Canada, Flow-through Shares: An Evaluation Report, 1994

<sup>5</sup>BC (Winters at al., Can J Pub Health 2008)

<sup>6</sup>Canada Communicable Disease Report 2007 33:17



## APPENDIX A: Global Investment Incentives

	Support Program	Description of Program
Australia	<b>R&amp;D Tax Credit</b>	45% refund for those with less than \$20 million turnover; 40% for those with more than \$20 million. Foreign-controlled firms are not restricted. R&D limit is increased from \$1 million to \$2 million per company.
	<b>National Biotechnology Fund</b>	\$250 million public-private biotechnology fund intended to expand Australia's biotechnology sector.
	<b>Commercialisation Australia</b>	\$173 million for the setup of a new initiative designed to assist researchers, entrepreneurs and innovative firms to commercialise their ideas.
China	<b>Emerging Technologies Fund</b>	\$9.2 billion investment over 2 years specifically earmarked for emerging technologies.
	<b>Investment in New Drug Development</b>	Government plans to invest \$1.5 billion (\$300 million per year) into new drug development between 2011 and 2016.
France	<b>R&amp;D Tax Credit</b>	Research tax credit limit increased to 30% for expenses less than \$159 million a year. Budget increase from \$2.1 to \$4.5 billion. Eliminated research tax credit ceiling of \$24 million.
	<b>Grand Loan</b>	\$50 billion national loan targeting technologies of the future. \$3.6 billion is earmarked for biotechnology and health care.
	<b>National Biotechnology Fund</b>	\$206.5 million biotechnology fund to support the development of medical industry and biotechnology research in France.
India	<b>National Venture Capital Fund</b>	\$430 million public-private venture capital fund to finance R&D work in the pharmaceuticals industry.
Taiwan	<b>National Biotechnology Fund</b>	\$315 million public-private venture capital fund for the biotech industry. Fund is planned to go up to \$2.18 billion within 10 years.
United Kingdom	<b>Strategic Investment Fund for Advanced Technologies</b>	\$1.09 billion fund directed at research intense sectors such as biotechnology.
	<b>UK Innovation Investment Fund</b>	\$250 million public-private fund that will invest in high-growth sectors including biotechnology. Goal is to build the fund to \$1.7 billion in 10 years.
United States	<b>Therapeutic Tax Credit</b>	\$1 billion competitive tax credit program over 2 years. Provides a 50% refundable credit to emerging health care companies with less than 250 employees.
	<b>Small Business Innovation Research (SBIR) Program</b>	Threshold to the grants will be increased to \$150,000 for SBIR Phase I awards and \$1 million for Phase II awards.

