



Research Canada **On the Move**

President and CEO's Message

In early September, Statistics Canada released its Labour Force Survey for the month of August. It showed the economy lost 11,000 jobs in August, following an unprecedented decline of 112,000 private sector jobs. The economy has been in a growth and employment slump since 2010, with economic growth and employment growth steadily declining.

In response to the recession, a number of economists are advising the government to eliminate the deficit, shrink the size of government and patiently wait for the private sector to start hiring again. But in the face of a six billion dollar surplus predicted by the Minister of Finance for this year's Budget, is it really too risky for increased government spending and directing stimulus funding to one of the country's best growth industries: Canadian R&D?

The economic returns from research are far in excess of the initial costs of the research itself. The US Department of Defense recently concluded that basic research was the principal contributor to product development in the U.S. We know that basic research has a substantial impact on productivity, that new technology depends on advances in discovery research, and that there is an interdependence between national strengths in industry and strengths in our health research enterprise.

"Investment in biomedical research is vital not only for improving health and quality of life, but for its contribution to jobs, a stronger economy, and international competitiveness. Shortsighted decisions lead to greater expense, as well as lost potential for health improvements, reduced health care costs, and a stronger economy in the long run," Dr. **Jeffrey A. Lieberman, M.D.** President of the American Psychiatric Association recently wrote in a Huff Post blog.

In her recent book, *The Entrepreneurial State: debunking public vs. private sector myths*, Dr. **Mariana Mazzucato** says that only in countries with active innovation policies, in which the public sector is willing to take on capital intensive and high-risk areas, does the private sector follow. While recent policies in Canada have been directed at producing a dynamic Silicon Valley type economy, the policies have ignored the simple fact that Silicon Valley emerged from massive state investments: all the technologies that today make the iPhone so smart were government funded.

Research Canada is dedicated to delivering this important message to Parliamentarians this fall in advance of the *Economic Update*. And, in preparation for the Federal Election in 2015, Research Canada has asked each of the federal political parties to include the following statement on Health Research and Health Innovation in Canada in their respective party's 2015 Election Platform:

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

Therefore, the ----- Party of Canada will provide consistent and sufficient support of discovery research, the bedrock of innovation, and implement a multi-year fiscal framework for research funding.

We encourage Research Canada's Members to contact their MPs and ask them to include this statement in their upcoming election platforms.

Research Canada's Submission to the House of Commons Standing Committee on Finance:

Research Canada submitted a brief to the House of Commons Standing Committee on Finance's Pre-Budget Consultations in 2014. In this brief, Research Canada recommended:

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.

Read more: <http://rc-rc.ca/policy/reports-and-submissions>

Research Canada's Upcoming Fall Health Research Caucus Events:

Medical Device Technologies Kiosk Event October 6, 2014:

Medical device technologies, which range from simple thermometers to sophisticated diagnostic imaging equipment, represent one of the world's fastest growing economic sectors. With over 1.5 million devices already on the market, and 3,000 new ones entering it every year, it's closing in on annual revenues of \$1 trillion. On October 6, 2014, Research Canada will host a Health Research Caucus kiosk event on Medical Device Technologies and Innovation in Canada focused on eight ground-breaking technological areas including:

1. Ward of the 21st Century

The W21C is an innovative initiative based at the University of Calgary that serves as a research and beta test-site for prototypical hospital design, novel approaches to health care delivery, human factors research, and innovative medical technologies.

2. Arctic Front Advance

Arctic Front Advance is the world's first cryo balloon indicated in the treatment of Paroxysmal Atrial Fibrillation (PAF), Arctic Front Advance provides an efficient anatomical approach to Pulmonary Vein Isolation.

3. Engage Biomechanics

Engage Biomechanics is developing a wireless sensor platform for pressure ulcer care tracking. A nurse knows when to turn a bed-ridden patient with this platform, which brings sensor networks and the power of the cloud to medical data. It provides wireless medical data, anytime, anywhere.

4. CT Perfusion for Diagnosis in Acute Stroke

CT perfusion for diagnosis in acute stroke: an example of Canada's leadership in medical imaging research. The ultimate beneficiaries are stroke victims whose doctors are better equipped with this technology to diagnose their condition rapidly and recommend appropriate treatment.

5. Techna Institute

Techna is a new institute at the University Health Network (UHN), in collaboration with the University of Toronto, devoted to the advancement of health technologies. Their mission is to shorten the time interval from technology discovery and development to application of such technologies for the benefit of patients and the health care system, and to facilitate the convergence of basic investigation, technology development and translational research.

6. Ultrasound Monitoring of Breast Cancer Chemotherapy (WaveCheck)

New Ultrasound technology - fast, painless, accurate: Herceptin therapy is very expensive. If a woman does not have the receptor for the drug, it will not be effective. This new Ultrasound tool can determine if the therapy is working or not within two weeks.

7. UBC Medtech Innovations

UBC is building a culture of moving medtech innovations into practice: The Sterilizable Drillcover lets surgeons in developing countries use regular hardware store drills instead of expensive and unavailable surgical drills (Engineers in Scrubs); The SmartDrill gives trauma surgeons x-ray vision without x-rays when they're fixing broken bones (Traumis Surgical Systems); Aspect Biosystems' 3D bioprinting platform will provide human tissues on demand, reducing the need for animals in drug discovery and ultimately addressing the shortage of donor organs (Aspect Biosystems).

8. ShoeBOX Audiometry

The audiometer has been reinvented for current practice - merging mobile device technology and traditional audiometry functions to meet modern hearing testing needs. The iPad based Shoebox audiometry solution allows doctors and clinicians to perform critically needed testing anywhere, with the same tone thresholds obtained by traditional audiometry systems.

Human Ingenuity and Our Microbial Environment Luncheon Event, November 5, 2014:

On any given day, about one in 12 adults in hospitals across Canada are colonized or infected with a superbug. Antibiotic resistance is a serious and growing phenomenon and has emerged as one of the greatest public health concerns of our time.

A recent World Health Organization report states, "this serious threat is no longer a prediction for the future, it is happening right now in every region of the world and has the potential to affect anyone, of any age, in any country. Antibiotic resistance - when bacteria change so antibiotics no longer work in people who need them to treat infections - is now a major threat to public health."

Since the discovery of antibiotics, research and development (R&D) efforts were providing new drugs in time to treat bacteria that became resistant to older antibiotics. Now there is a fear that development has slowed to the point that seriously ill patients may run out of treatment options. Another concern is that doctors may become reluctant to perform routine surgeries due to the increased risk of infection. Backup treatments can have serious side-effects.

This potential crisis is the result of a marked decrease in industry R&D, and paltry financial investment in antibiotic research.

The HRC Luncheon will help parliamentarians better understand the incidence of these superbugs and their causes. The presentation will cover what the research is already telling us about this threat and what must be done from a research, practice and policy perspective.

The role of governments and the private sector will be explored.

Lyme Disease

Most Canadians think of Lyme disease as a rare illness that afflicts hikers bitten by ticks in the deep woods. Infected individuals develop a bull's-eye rash and go on antibiotics for a few weeks to clear it up.

The trouble with this picture - promoted for years by Canadian health authorities - is that it does not begin to capture the true threat of Lyme disease, which in its chronic form can turn into a life sentence of debilitating joint pain and neurological problems. Drs. **Tara Moriarty, Assistant Professor, Faculty of Dentistry University of Toronto** and **Nick Ogden, Environmental Issues Division, Centre for Foodborne, Environmental and Zoonotic Infectious Diseases, Public Health Agency of Canada**, will paint an accurate picture of this disease in Canada and present their research to a selected group of Parliamentarians, who have expressed a strong interest in learning more about this emerging disease which is affecting many of their constituents.

Research Canada's Leadership Award to be Presented November 19, 2014

Canadian health researchers are contributing in magnificent and different ways to the health and well-being of Canadians. Recognition of Canadian health research-the kind that attracts the necessary public and political support-often comes from the dedicated and tireless efforts of health research advocates who educate policymakers, the media and the public about the social and economic benefits of health research and its promise of future cures and a better quality of life for all Canadians. It is through the work of these leaders in health research advocacy that health research becomes a high priority for all governments and for all Canadians.

The new Research Canada Leadership Award has been created to honour these champions in health research advocacy. On an annual basis, Research Canada will recognize individuals and/or organizations who/which have made outstanding efforts in advocating for Canadian health

research at the local, provincial and/or national level. Awards will be announced at the **Prix Galien** and **HRF Medal of Honour Award** Ceremony in November of each year. This year's Award will be presented in Toronto on November 19, 2014.

Research Canada's AGM, November 5, 2014

Canadians tells us in Research Canada's national public opinion polls that health research holds the promise of future cures and a healthier and more productive population. How do they know this? Could the impact of research have something to do with their views?.

- Since 1952, the cardiovascular death rate in Canada has declined by more than 75 per cent - and nearly 40 per cent in the last decade - largely due to research advances in surgical procedures, drug therapies and prevention efforts
- Childhood cancer is now a treatable disease, not a death sentence
- A person diagnosed with HIV today can expect to see their 70th birthday
- Between 1995 and 2005, the stroke death rate fell 30 percent
- New imaging technologies allow for earlier Alzheimer's diagnosis and treatment
- Vaccines prevent hospitalizations from the flu and dangerous flu-related infections
- New technology allows real-time tracking of food-borne and contagious illness
- Between 1992-1994 and 2006-2008, survival rates increased from 56% to 63% for all cancers combined.

At its upcoming 2014 AGM, Research Canada will take on two of the most daunting health challenges our nation will face in the years ahead-Cognitive Impairment in Aging and Superbugs-antibiotic resistant bacteria that pester hospitals and fly in on planes-and demonstrate the vital role research will play in mitigating the risks associated with these conditions as well as developing new diagnostics, therapeutics and treatments that will save lives and improve the quality of life for millions of Canadians.

To learn more visit: <http://rc-rc.ca/agm/agm-2014>

To register for this important event please visit <http://rc-rc.ca/agm/agm-registration>

2015 National Public Opinion Poll

Early in 2015, Research Canada, in partnership with national and provincial partners, will undertake a national public opinion poll-CanadaSpeaks! 2015 to track data from previous RC polls on Canadians' views of health research and health innovation in Canada. This data will be provided to Research Canada's Members to assist you in your local lobbying efforts with candidates in Federal Election 2015. Research Canada will also use this data to advocate for health research and health innovation on our national lobbying efforts. Stay tuned for more information later in the year.

Social media

Research Canada has re-launched our facebook page. Please join us to converse, share your news, and engage with the Research community. You can find us at

<https://www.facebook.com/ResearchCanada>

We have also launched a Youtube channel where we have uploaded a video from the recent Health Research Caucus. You can find our first video at:

<https://www.youtube.com/watch?v=WeD6QTSF0PM>

We are active on Twitter. Please find us at [@ResearchCda](#)

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