



# Evidence First



ANNUAL REPORT 2011/2012

*Science Advice in the Public Interest*



Council of Canadian Academies  
Conseil des académies canadiennes

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## Message from the Chair



A year ago, the Council released its strategic plan, *Insight & Impact*. The plan, intended to guide the Council through to 2014, sets out six strategic goals for the organization. This year's annual report provides details of the Council's activities over the past year in achieving those goals, and efforts to deliver high quality evidence-based assessments.

I would like to highlight two areas of particular importance to the Board of Governors: relations with our three founding Member Academies and efforts to diversify the Council's client base.

With regard to the former, this year saw the development and release of a *Statement of Common Understanding*. This statement, which was arrived at cooperatively by the Council President, Elizabeth Dowdeswell, and her colleague presidents of the

Member Academies, sets out a guide to future collaboration among the four organizations. The goal of the statement is to bring together intellectual resources in synergistic ways to generate capacity for credible, evidence-based and independent scientific advice in support of the development of sound public policy in Canada. Achieving this goal will require a long-term commitment to strong mutual reliance among the four organizations; the *Statement of Common Understanding* is a first, important step toward our continued collaboration.

The other area of activity I wish to focus on is the diversification of the Council's client base. Now, more than ever, this diversification is essential to the Council's long-term sustainability. I am delighted, therefore, that the Council has made significant efforts to raise awareness of its work among universities, other levels of government, and the policy community more generally. This work is already paying off, with two assessments underway sponsored, respectively, by a consortium of Canadian universities with expertise and an interest in the ocean sciences and by the province of Ontario on socio-economic impacts of innovation investments. I know these are just the first of what will be a growing number of assessments that meet the needs of sponsors outside the federal government. These two new assessments also signal that the Council is becoming a trusted national voice for excellence and evidence. The Board of Governors of the Council is proud to provide strategic leadership to the Council as it works in these and many other areas.

While this remains constant, some things must change. In 2011/12, the Board of Governors bade farewell and thanks to its departing members, Preston Manning, John McLaughlin, Danial Wayner, Catharine Whiteside, and Roderick A. Macdonald. We were pleased to welcome new members, John Cairns, Marie D'Iorio, Jeremy McNeil and Axel Meisen. The Scientific Advisory Committee, which oversees assessments, also saw changes, with the departure of Louis Fortier, Donald Johnston, and William Pulleyblank and the arrival of Murray Campbell and Robert Watson. I am confident that the expertise these new members will bring will positively enhance the Council's success in the coming years.

Unlike in previous years, I will be watching that success from a distance. After serving as a member of the Board of Governors since the Council's inception and as its Chair since 2007, I will be leaving this position in September 2012. I have had the opportunity to work with some extremely talented and committed Board members over my years with the Council. I leave with a sense of great pride in the Council's development, some sadness at leaving an organization I have greatly enjoyed being a part of, but much confidence that the Council has built a foundation upon which it will thrive in the years to come and the knowledge that it will continue to put evidence first.

Sincerely,

**Elizabeth Parr-Johnston, C.M.**  
Chair, Board of Governors

## Message from the President



This year, 2011/12, has seen the Council operating at full capacity. Three completed assessments, seven underway and six in the pipeline, is an expression of the confidence that policy-makers have in the independent, expert assessments of the evidence offered by the Council and of its importance to the policy-making process. Over the past year, I have met with senior officials within the federal and provincial governments to bring to their attention the Council's ability to provide the evidence they need to facilitate decision making. It is particularly gratifying, therefore, to see the expanded range of questions and sponsors, including sponsors who have not previously worked with the Council.

Conducting this many assessments is a formidable challenge for any organization. Indeed, it is more than obvious that we could not begin to take on these challenges without the participation of large numbers of the finest minds, not just in Canada, but throughout the world. Their involvement, which is purely voluntary, is truly the energy and commitment that makes our assessments possible.

I am pleased that, in 2011/12, the Council undertook a volunteer recognition program to thank the people whose contribution is so very important to our work. We have always appreciated the participation of our volunteers – now we are telling them, and the rest of Canada, more often and more directly. I look forward, in the years to come, to recognizing their involvement and thanking them personally whenever the opportunity arises.

Many of our volunteers are fellows of our Member Academies, the Royal Society of Canada, the Canadian Academy of Engineering, and the Canadian Academy of Health Sciences. Since the very beginning, the Council has relied extensively on the participation of these Academies in our work. This year, we took our commitment to each other a step further, with the signing of a *Statement of Common Understanding*. Through this statement, we each committed to continue to collaborate in our mutual efforts to enrich the policy-making environment in Canada. I look forward to an ever-more fruitful relationship in the years to come.

I would like to acknowledge the strategic leadership provided to the Council by our Board of Governors and the scientific advice offered by our Scientific Advisory Committee. Their commitment to the Council's success plays a large role in our achievements. I would particularly like to recognize and thank Elizabeth Parr-Johnston, the Chair of the Board of Governors, who has been a member of the Board since the beginning and Chair since 2007. She has shepherded the Council through the different stages of its growth. Her presence will be sorely missed but we can take solace in the knowledge that she is leaving behind an organization with the strength and vision to build on her achievements.

I would also like to thank the Council's staff and its interns for their commitment and their willingness to ever go the extra mile. It is a truism to say that we could not exist without them, but it is one worth repeating.

Finally, I would like to thank the Council's myriad of assessment sponsors. Your confidence in the Council's work and your commitment to evidence-based policy is inspiring.

Sincerely,

**Elizabeth Dowdeswell**  
President and CEO



# Introduction



## Introduction

Canadians and their governments face questions of enormous importance to our future – and equally of enormous complexity. Whether it is the conundrum of how to stimulate economic growth while curbing spending, the challenges of climate change, or the need to ensure the health-care system is sustainable in the face of an aging population, policy and decision makers must grapple with decisions that will have long-term and significant impacts for our country.

The Council of Canadian Academies is an independent not-for-profit organization that supports the development of evidence-based public policy in Canada, through the provision of independent, authoritative assessments. Council reports provide decision-makers with the science and evidence they need to grapple effectively with the many challenges facing Canadian society. Their insights enrich Canadian policy development and advance

*The Council defines “science” broadly to encompass the natural, social and health sciences, engineering and the humanities.*

Canada’s standing in the world. Multidisciplinary, volunteer expert panels assemble and synthesize the available evidence to identify knowledge gaps, identify Canadian strengths and vulnerabilities, and examine international trends to describe the context within which policy-makers operate.

This annual report outlines the Council’s activities in 2011/12, in accordance with the objectives set out in its strategic plan, and provides details both of the assessments it has completed and those it is carrying out. The purpose of this report is to inform Canadians about the commitment and voluntary contribution of Canada’s experts in applying evidence to the questions that concern Canadians most.



## Assessments: Evidence for Sound Public Policy

Assessments are the raison d’être of the Council of Canadian Academies. They are the means by which the Council, with the participation of premier experts from Canada and abroad, provides in-depth consideration of the science and evidence on the issues that are most relevant to Canadians. Council assessments are used not only to inform sound public policy, their primary purpose, but also to spark public debate and to provide a basis for developing research programs and teaching tools in universities across Canada.

The Council has had an extremely busy year and is operating at full capacity in terms of the number of assessments in which it is engaged. During 2011/12, the Council released three assessment reports and continued work on seven others. In addition, at the end of 2011, the Council received six new assessment questions from the federal government and is, at present, strategically starting to roll out the research and project plans for each assessment.



## Completed Assessments

As noted above, the Council completed and launched three assessments in 2011/12:

- Healthy Animals, Healthy Canada (September 22, 2011)
- Canadians Making a Difference (November 14, 2011)
- Integrating Emerging Technologies into Chemical Safety Assessment (January 17, 2012)



*“This timely and comprehensive report (Healthy Animals, Healthy Canada) affirms Canada’s approach to animal health risk assessment and validates the investments we have been making in this area. We value the Council’s expertise and insight, and will review the report in detail in order to further inform our efforts to improve the transparency of our processes.”*

Dr. Brian Evans  
Chief Veterinary Officer of Canada



## Health Animals, Healthy Canada

The well-being of animals and humans is inextricably linked and, in this age of increased global trade and migration, higher population densities, and climate change, being able to assess animal health risks is, more than ever, important to protecting human health. Indeed, recent outbreaks of SARS, BSE and H1N1 influenza have underscored just how important this can be.

The Minister of Agriculture and Agri-Food, on behalf of the Canadian Food Inspection Agency, asked the Council to assess the state and comprehensiveness of risk assessment techniques in animal health sciences, focusing on risks which may have an impact on human health.

The Council issued the report of the expert panel, which was chaired by Dr. Alastair Cribb, Professor and Dean of the Faculty of Veterinary Medicine at the University of Calgary, in September 2011. The Panel found that, although animal health risk assessment in Canada is built on a solid foundation of knowledge and expertise, a more integrated approach is needed to enhance assessment practices. That foundation could be strengthened with a number of activities: building expertise and knowledge capacity; considering a broader range of consequences related to an animal health event; improving communication among risk assessors, managers and stakeholders; enhancing the transparency of the decision-making process; and setting aside resources for foresight assessments.

A video was developed for the Council’s website that provides context and key findings for the assessment report. Immediate response to the assessment was generally positive, with more than a dozen journalists participating in a web-based media briefing carried out in partnership with the Science Media Centre of Canada. Articles on the report could be found in national daily papers, specialized

## Launching Healthy Animals, Healthy Canada



The Council held a “kick-off” event for the animal health assessment at a farm belonging to the veterinary school at the University of Calgary. The event included local veterinarians, public health officials, and risk assessors. A similar event was held at the University of Guelph in November 2011, when the Council participated in the university’s third annual public health day.



*“Working with the Council of Canadian Academies ensured the rigour of the assessment process and enriched the experience for our diverse and distinguished panel members. The collaboration between the Council and CAHS was a success from which we can all build.”*

Dr. Peter Singer Chair,  
Expert Panel On Global Health



agricultural publications, such as the Western Producer, and academic websites (e.g., University of Guelph, and University of Maine). Numerous organizations also reprinted the news release on their respective websites. The statement by Canada’s Chief Veterinary Officer received significant press coverage. A number of organizations and individuals tweeted about either the launch or the statement.

In the months following the report release, the Public Health Agency of Canada, together with the Canadian Food Inspection Agency, hosted a workshop that brought together some 30 specialists in the area of risk assessment and management and related subjects. The objective of the workshop was to develop a multi-dimensional approach to risk management in light of the Council’s assessment. A key result was the development of new methods for increased collaboration between human health, animal health and ecosystem health agencies.

By the end of fiscal 2011/12 the assessment had been distributed to more than 1,500 individuals and organizations and had been downloaded nearly a thousand times. The Council will continue to disseminate the report and track its future impact.

## Canadians Making a Difference

This assessment, launched in November 2011, was a first for the Council – the first time it collaborated with another organization on an assessment, in this case, the Canadian Academy of Health Sciences (CAHS). The Council managed the assessment process on behalf of CAHS. The Panel was chaired by Dr. Peter A. Singer, Foreign Secretary of CAHS and Director of the McLaughlin-Rotman Centre for Global Health at the University of Toronto.

The report noted three key findings: that complex global health issues will continue to increase in both scope and complexity; that increasing inequity in global health is occurring in the context of ongoing international economic and financial instability, which is affecting current and future investments in global health; and that there is an exciting opportunity for partnerships between Canada and lower and middle-income countries. The report identified five key areas of opportunity for Canada to continue and extend its contribution to global health:

- indigenous and circumpolar health research;
- public health programs and research on social determinants of health;
- community-based primary health care;
- partnerships with developing countries in education and research; and
- global health innovation.

The report also highlights the need to focus on young people, channelling their enthusiasm for and interest in global health into productive and rewarding career paths.



*“I believe this report will be highly influential in shaping new paradigms in chemical safety evaluation, particularly as we know many of the Expert Panel members to be well respected leaders in their fields and whose recommendations come with a high degree of credibility.”*

Edward W. Carney, PhD,  
Predictive Toxicology  
Center, University of Michigan



The report has been distributed to more than 1,300 individuals and organizations. News of the launch was also posted to various scientific websites and received coverage on Twitter. In the two weeks following the launch, the report was downloaded from the Council’s website more than 300 times. Media coverage was generally from specialized, as opposed to mainstream, media. In 2012/13, the Journal of Toxicology and Environmental Health plans to reprint the report in full in a special issue.

The report was well received, with particular interest in a roadmap for implementing activities that can begin today. The panel chair has been meeting with government agencies and departments and industry groups, and has been attending conferences to promote the assessment’s findings. The Council anticipates this report will have a continuing impact.

Following the publication of the report, the Panel proposed a process to move forward and engage all members of the global health community. As part of that process, Panel Chair Dr. Peter Singer met with representatives of federal departments and agencies who have a role to play in global health research. The “listening phase” meetings will collect feedback on the assessment report and provide the Canadian Academy of Health Sciences with the input they need to move forward.

### Integrating Emerging Technologies into Chemical Safety Assessment

Regulating pesticide use is part of a concerted national commitment to protecting human health and the environment. With thousands of chemicals needing to be better understood and regulated, scientists and regulators need guidance on how to do this in a timely, efficient and effective manner.

The Minister of Health, on behalf of the Pest Management Regulatory Agency, asked the Council to convene an expert panel to examine the scientific status of the use of integrated testing strategies for the regulatory risk assessment of pesticides. The Expert Panel, chaired by Dr. Leonard Ritter, Professor Emeritus of Toxicology at the University of Guelph and Executive Director of the Canadian Network of Toxicology Centres, produced a report that was launched by the Council in January 2012. The report provides insight on current toxicity testing practices in Canada; examples of how the integration of different disciplines can contribute to the evolution of regulatory toxicity testing; a practical roadmap for integrated approaches for testing and assessing chemicals over one, five and 10 year periods; and insights on public perceptions and risk.





Members of the Expert Panel on the State of Science and Technology in Canada

## Assessments in Progress During 2011/12

As of March 31st, 2012 the Council is currently carrying out seven diverse assessments, five within its funding agreement with the Government of Canada and two for external sponsors. Each of these assessments will provide a base of scientific information required to further public policy development in Canada.

## Science Performance and Research Funding

The Government of Canada invests more than \$1 billion each year in research in the natural sciences and engineering, but there is

no straightforward approach for measuring the results of this investment. Policy-makers and researchers alike are interested in developing a better understanding of the different approaches used to assess science performance, looking beyond basic economic outcomes. The Minister of Industry, on behalf of the Natural Sciences and Engineering Research Council of Canada, has asked the Council to assess approaches used by other funding agencies throughout the world to measure research performance.

The Expert Panel's report provides an assessment of best practices in measuring the impact of research in the natural sciences and engineering carried out at universities, colleges and polytechnics around the globe, while addressing science performance from a uniquely Canadian perspective. The Panel, chaired by Dr. Rita Colwell, Distinguished University Professor at the University of Maryland and Johns Hopkins University Bloomberg School of Public Health, released its assessment at the beginning of July 2012.

## The State of Science and Technology in Canada

The Council's first assessment report, launched in 2006, examined the state of science and technology in Canada. That report provided the key evidence required for the Government of Canada's 2007 science and technology strategy, *Mobilizing Science and Technology to Canada's Advantage*. Now, the Minister of Industry has asked the Council to conduct an update of the 2006 assessment. In 2006, the Panel was asked to identify scientific disciplines and technology applications where Canada excels in a global context and where there was a potential for Canada to emerge as a research leader. For the current assessment, these questions have been repeated and expanded to identify geographic distribution of strengths, international trends, and the improvement or decline of research fields, particularly over the last five-year period.

The Expert Panel is chaired by Dr. Eliot A. Phillipson, Sir John and Lady Eaton Professor of Medicine Emeritus at the University of Toronto and former President and CEO of the Canada Foundation for Innovation. The Panel has employed a wide range of data and metrics to support their assessment. The robust methodology will provide Canadians with the rich scientific evidence required to strengthen Canada's science and technology capacity. The final report is expected to be released in September 2012.

## PROFILE:

**Lynne-Marie Postovit***Expert Panel, Member*

**Lynne-Marie Postovit** wasn't sure what to expect when she was named a member of the Expert Panel on Women in University Research. She was, rather, simply honoured to have been named to the Panel in the first place. After all, the cell biologist at the University of Western Ontario saw herself as just on the threshold of her academic career, having been named CIHR's Premier Young Investigator for 2009. She calls her time on the Panel an incredible learning experience, due to the diversity of panel members and the exposure to different perspectives and viewpoints. In fact, it is that diversity, Dr. Postovit says, that makes the Council such a unique resource. No matter the question being asked, the Council's approach ensures that a diverse set of individuals looks at it from many different angles. The different people and perspectives, she believes, take away any possibility of bias and create a civil way to look at important questions for society.

**The State of Industrial Research and Development in Canada**

Industrial research and development (R&D) is a means by which industries can grow by exploring and creating new products and services or improving existing ones. The state of industrial R&D in Canada has been the subject of numerous inquiries. Now, the Minister of Industry has asked the Council to assess the current state of industrial R&D in Canada, in particular, the strengths of industrial R&D and how those strengths are distributed by sector and geographically. The Expert Panel,



Members of the Expert Panel on Industrial Research and Development and Council Staff



chaired by Kathleen Sendall, Director of CGG Veritas and Vice Chair, Alberta Innovates – Energy and Environment Solutions, will also compare the Canadian situation with that of other industrialized countries and assess how Canadian strengths align with the needs of the Canadian economy. The assessment will provide important baseline information that will assist policy-makers as they consider future public policies designed to bolster Canadian research and development. It will also help identify key barriers and knowledge gaps that may hinder the translation of Canadian strengths in R&D into innovation and wealth creation. The final report will be released in the first half of 2013.

**Socio-economic Impacts of Innovation Investments**

Innovation policy has become central to the efforts of governments at all levels to maintain their competitiveness in a



global economy. The Government of Ontario has made extensive investments in innovation, with the explicit aim of making the province a leading innovation-based economy. However, policy-makers lack clarity regarding best practices for evaluating and measuring the impact of their investments in innovation in terms of socio-economic impacts, including such measures as output, employments, taxation, business creation, entrepreneurship and social impacts. The Government of Ontario has asked the Council to assess how the actual and potential outcomes and impacts of its spending on innovation can be measured, including, but not limited to, the effects on gross domestic product (GDP) in Ontario; generation and transfer of knowledge; creation of new ventures; and access to seed, development and growth capital. In addition, the government asked whether it is feasible to build a model to quantify the impacts of its investment in terms of socio-economic effects; how return on its investment can be defined and measured; and what are Ontario's areas of strength in innovation and innovation support.

The report of the Expert Panel, chaired by Mr. Esko Aho, Executive Vice President, Corporate Relations and Responsibility, Nokia, and former Prime Minister of Finland, will provide important guidance to the province of Ontario to better target and evaluate its investments in innovation. Many other provincial governments have also expressed interest in this report. The final report will be released in the first half of 2013.



Members of the Expert Panel on Women and University Research

### Women in University Research

After the notable absence of female representation in the Canada Excellence Research Chairs (CERC) program, an ad hoc panel found that the lack of women was not due to active choices made during the CERC selection process. In response, the Minister of Industry asked the Council to carry out a broader assessment of gender equity and the factors that influence university research careers, both in Canada and internationally. In particular, the Minister asked the Council to assess how the statistical profile of women in university research careers in Canada compares to that of women in key jurisdictions abroad, including the United States, United Kingdom, Germany, France, Australia and Sweden, as well as the issues women university researchers may face as they seek to advance their careers.

The Expert Panel, chaired by Dr. Lorna Marsden, President Emeritus and Professor, York University, is also assessing best practices in recruiting and retaining women researchers and appointing them to prominent positions. The report, expected to be released in the fall of 2012, will provide important guidance for universities and other research institutions seeking to promote gender equity and remove barriers to women researchers achieving their potential.

### Sustainable Management of Water in the Agricultural Landscapes of Canada

The belief that Canada possesses an endless supply of freshwater is quickly being replaced by the reality that limits exist. In some regions, those limits are already being reached. The agriculture sector in many regions of the country finds itself under pressure, either in terms of the availability of water or in the impact that agriculture is having on hydrological systems. Knowledge of the underlying hydrological cycles, the potential impacts of climate change, and the effects of human activities are all fundamental to the development of a policy framework

for sustainable water management. The Minister of Agriculture and Agri-Food has asked the Council to provide a comprehensive evaluation of what additional science is needed to better guide the sustainable management of water to address the needs of Canadian agriculture.

The Expert Panel, chaired by Dr. Howard Wheeler, an international expert in hydrological science and sustainable water resource management, is expected to report in late 2012 or early 2013. Its report will assist in the adoption of public policies that will support uptake of sustainable practices in the agricultural sector to enable it to adapt to changing water supplies and maintain its resiliency.



The Expert Panel on Water and Agriculture participating in a panel meeting.

## Canadian Ocean Science

The world's oceans are undergoing unprecedented changes and are subject to many stresses which will have implications for future development and can create societal challenges. In Canada, addressing ocean science challenges is complex and requires a high degree of coordination among scientific institutions and technology hubs.

The Canadian Consortium of Ocean Research Universities, asked the Council to undertake a project regarding ocean science research in Canada. The Council has undertaken this initiative in two distinct phases.

In Phase I, a core group of 22 Canadian ocean experts worked to determine a set of 40 priority research questions that, if answered, could have the greatest impact in addressing future opportunities and challenges relating to ocean science. A key step in determining the priority research questions was a survey of Canada's ocean science community which resulted in more than 600 key questions. These questions were winnowed down to 40 over the course of a two-day workshop, held in March 2012. A report, expected to be published in July 2012, will present these questions and identify key themes and conclusions that arose through the workshop process. The 40 questions are not considered a research agenda, but rather express a consensual view of a group of ocean science experts representing a broad range of disciplines as well as users of ocean science.

## Members of the Canadian Consortium of Ocean Research Universities

Dalhousie University  
 Université du Québec à Rimouski  
 Université Laval  
 University of British Columbia  
 University of Victoria  
 Memorial University  
 University of Prince Edward Island  
 University of New Brunswick  
 University of Manitoba

Phase II of this unique project will begin in the second half of 2012. An expert panel will be convened to provide an independent, evidence-based assessment of the needs of ocean science in Canada, based, in part, on the research priorities identified in the Phase I report.

## New Assessment Questions for 2012/13

In addition to the assessments currently in progress, the Council received, at the end of 2011, six new assessment questions. While these all come from the federal government, the Council is pleased to note the diverse range of sponsors and subjects. Together, these questions demonstrate a significant demand for the Council's work. The Board of Governors has approved these questions for assessment and the Council is in the process of developing the expert panels and carrying out other background work that is the necessary prelude to the actual assessment process.

## Harnessing Science and Technology to Understand the Environmental Impacts of Shale Gas Extraction

The North American natural gas supply portfolio increasingly features gas from unconventional sources, such as shale gas. Its extraction has become more cost-effective in recent years, but also more controversial, making shale gas an important public policy issue for Canadians. As a result, Environment Canada has asked the Council to assess the state of knowledge about the potential environmental impacts of the exploration, extraction, and development of Canada's shale gas resources and associated mitigation options. The Council's assessment will provide all Canadians with an evidence-based and balanced assessment regarding the science of exploration, extraction, and development of Canada's shale gas resources. The Expert Panel is chaired by Dr. John Cherry, Director of the University Consortium for Field-Focused Groundwater Contamination Research, Associate Director of G360 - Centre for Applied Groundwater Research, and Adjunct Professor in the School of Engineering at the University of Guelph.

## Food Security Research in Northern Canada

Food security has been defined by Health Canada as having "physical and economic access to sufficient, safe and nutritious food to meet one's dietary needs and food preferences for an active and healthy life." The direct and indirect influences of environmental contaminants, climate change and industrial development stand to have major impacts on food security in Northern Canada. Canadians and decision-makers need to better understand the interconnection between all of the factors

### PROFILE:

## *Hari Darmawan*

*Council Intern*



**Hari Darmawan** left Indonesia in search of new intellectual challenges and an opportunity to make an impact on society. He found both at the Council, where he was an intern in the second half of 2011. As an intern, Hari benefitted from what he calls the dual nature of the organization – young and dynamic, but with the wisdom and experience of the members of its Board and Scientific Advisory Council. The Council, he says, plays a crucial role as a national voice for Canadian science. At the end of Hari's internship he received his Canadian citizenship and Council staff were honoured to share this important occasion with him. Today, even as Hari continues his studies in Mandarin at Zhejiang University in Hangzhou, China, he is still providing the Council with research support for the Ontario innovation assessment. His experience at the Council has made him ever more resolute that his future career will involve promoting, consolidating and managing science and innovation for the benefit of society.



## PROFILE:

**John Smol**

*Scientific Advisory  
Committee, Member*



**John Smol** has an impressive set of credentials, beginning with winning the Steacie Prize as Canada's most outstanding young scientist or engineer (1993), being elected a fellow of the Royal Society of Canada (1996) and being awarded the Gerhard Hertzberg Gold Medal (2004) as Canada's top scientist or engineer. The Queen's University biology professor has a simpler way to describe himself though – as the “environmental guy” on the Council's Scientific Advisory Committee. He's been on the committee since the Council's inception, and has played various roles at key stages of the assessment process, from deciding whether questions are appropriate for assessment, to choosing panel chairs and suggesting panel membership, to ensuring the rigour of the peer review process. He does it, he says, because he feels strongly about the crucial importance of science and evidence-based data for policy, and the Council is making sure that this evidence is considered. The public, he says, pays for the science carried out in universities and government; the Council is helping to ensure they get a return on their investment!

influencing food security. Health Canada has asked the Council to assess the state of knowledge of the factors affecting food security in Canada's North, and of the health implications of food insecurity for Canada's northern Aboriginal populations.

The Council's expert panel report will examine areas such as the rapid biophysical, social, political, environmental and cultural changes in the North. Once complete, this assessment will provide an in-depth and balanced report of the current factors influencing food security in the Canadian North.

### The Potential for New and Innovative Uses of ICTs for Greening Canada

With the rising costs of energy production and use, and broadened awareness about the associated environmental impacts, finding efficiencies in all areas of society has taken on increased importance. The global economic situation has also become a motivator for reducing expenditures.

There is a significant untapped and undefined potential for energy savings using information and communications technologies (ICTs). Environment Canada has asked the Council to assess the state of knowledge of what existing or potential opportunities there are to use ICTs to create a greener Canada.

The Expert Panel report will provide an in-depth and balanced examination of the potential for new and innovative uses of ICTs that can help Canada reach this goal and ensure its economic and environmental sustainability.

### Energy Prices – Impacts and Adaptation: Assessing Canada's Preparedness

For decades, Canadian industries could rely on low and stable energy prices. Today's reality encompasses both higher prices and greater volatility. To date, there has not been any investigation of what these changes mean for industry, individuals and communities in Canada. Industry Canada has asked the Council to conduct such an assessment, focusing on the ability of Canadian businesses and communities to innovate and adapt to sustained higher energy prices.

The expert panel will assess the full range of potential impacts, examining adaptation and planning strategies relative to international benchmarks. The panel's report will be a valuable contribution to informing government policy and improving Canadian resiliency in the face of sustained higher energy costs.

## Therapeutic Products for Children

In the past, it was assumed that the pharmacological effects of drugs on children were similar to the effects on adults. Today we know that there are important differences in how children and adults respond to drugs. The Council has therefore been asked by the Minister of Health to provide an evidence-based assessment on the state of therapeutic products for children, both in Canada and abroad. This assessment will be relevant to the ethical development of safe and effective pharmaceuticals and biologics labeled as therapies for infants, children and youth.

The Council's expert panel report will provide an in-depth and authoritative look at the relationship between clinical pharmacology and the current understanding of the human developmental process, with the intent of informing paediatric drug investigations.

## Memory Institutions and the Digital Revolution

Increased computing power, inexpensive electronic storage, and the widespread adoption of broadband computer networks have thrust methods of communication far ahead of our ability to grasp the implications of these advances. With the development of new communications technologies, traditional memory institutions are working to keep track of the types of records being created and how decisions are being documented. This valuable information must be safeguarded and maintained for the long term. To better understand these challenges Library and Archives Canada (LAC) has asked the Council to conduct an in-depth assessment. Currently, the LAC is engaged in an extensive multi-themed roundtable discussion series across Canada on preserving Canada's memory which is set to continue through the fall of 2012, therefore a decision was taken to defer the Council's assessment until 2013.

## Completed Assessments, Continuing Impact

Many of the assessments completed by the Council in previous years continue to have impact. Over the course of 2011/12 the Council learned how a number of its assessments are being used, for example:

- The 2009 Business Innovation report continues to be the Council's most popular assessment. In 2011/12 it was downloaded from the Council's website more than one thousand times, more than any other assessment report. The evidence and insights from the assessment are informing policy discussions and debate on Canadian innovation and productivity. In this past year, the assessment has been an important tool in the review of federal research and development programs, has been referenced by policy and decision makers such as Kevin Lynch, Preston Manning and Minister of State (Science and Technology) Gary Goodyear. It has also been referenced in respected journals such as *Policy Options* and been used by organizations such as the Public Policy Forum. The Council is humbled to see that the report is considered by many to be the gold standard for assessing business innovation in Canada.
- The 2009 Groundwater report was used by the B.C. Auditor General for its audit of groundwater in B.C. Today, the report is informing another Council assessment on water and agriculture and also used as a teaching aid at the graduate level.

*“The information from the report has directly influenced and informed our policy analysis and development of draft policy ideas .... We foresee the assessment being useful in the years to come.”*

Business Innovation report sponsor



## RESEARCH INTEGRITY

*It's in Your Hands.*


HONESTY  
OPENNESS  
ACCOUNTABILITY  
FAIRNESS  
TRUST

## FUNDAMENTAL PRINCIPLES OF RESEARCH INTEGRITY

1. Conduct research in an honest search for knowledge.
2. Foster an environment of research integrity, accountability and public trust.
3. Know your level of competence and your limitations; act accordingly.
4. Avoid conflicts of interest, or if they cannot be avoided, address them in an ethical manner.
5. Use research funds responsibly.
6. Review the work of others with integrity.
7. Report on research in a responsible and timely fashion.
8. Treat data with scholarly rigour.
9. Treat everyone involved with research fairly and with respect.
10. Acknowledge all contributors and contributions in research.
11. Engage in the responsible training of researchers.

*The principles were developed by the Expert Panel on Research Integrity in their report, *Honesty, Accountability and Trust: Fostering Research Integrity in Canada*.*

To learn more please visit [www.scienceadvice.ca](http://www.scienceadvice.ca)



Council of Canadian Academies  
Conseil des académies canadiennes

To mark the one-year anniversary of the 2010 report, *Honesty, Accountability and Trust: Fostering Research Integrity in Canada*, the Council developed and disseminated a poster that now hangs in university offices and labs across Canada and internationally, and was published in *University Affairs Magazine*. In total, the poster has reached the desks of some 20,000 readers.

- The 2010 Biodiversity report started a conversation within the research community regarding the future of taxonomy, biodiversity collections and data sharing. The report was the foundation for a national strategy for the development of natural history collections launched by the Alliance of Natural History Museums of Canada. In addition, members of the Global Taxonomy Initiative, according to the President and CEO of the Canadian Museum of Nature, have read, and were impressed by, the report. Dr. Michel Houle also noted that the assessment is a “critical guide and reminder” of the role and importance of this scientific expertise to Canada as the museum is dealing with significant succession in its scientific staff over the coming decade.
- The 2010 Research Integrity report has been used by universities across Canada as a reference tool for developing institutional policies. In December 2011, Canada’s three research-granting councils released the new *Tri-Agency Framework: Responsible Conduct of Research*. This document builds on the evidence and insight provided within the Council’s report, *Honesty, Accountability and Trust: Fostering Research Integrity in Canada*. Of particular note is the framework’s attention to the disclosure of names of those engaged in a serious breach of policy, an issue identified in the Council’s report.

*“The assessment is the single best source of information, a valuable reference and well done... [it] will be a useful reference for some time.”*

In addition to monitoring the impact of its individual assessments, the Council, also in 2011/12, commissioned a citation analysis, to gain a better understanding of the impact of its first 10 assessments, published between 2006 and 2010. The analysis found that:

Biodiversity report sponsor



- Council assessments have a strong presence on the internet, with at least one of the 10 assessments mentioned on approximately 2,600 distinct web pages in more than 700 different domains. The business innovation report was the most-cited Council report on the web, with almost 700 web pages from 210 domains referring to the report. This was followed by the Council’s first report, on the state of science & technology in Canada (600 web pages from 134 domains) and the groundwater report (330 web pages from 127 domains).
- Through the analysis of scientific literature it was determined that half of the Council’s completed assessments have been referenced in academic papers. Overall, 20 scientific articles made reference to one of the Council assessments, with the gas hydrates assessment having the largest share of citations, followed by the Council’s assessments on influenza and nanotechnology.
- Interestingly, there appears to be an inverse relationship between citations in the scientific literature and citations on the web, with assessments least cited in the scientific literature (or not cited at all) being at the top of the list for web presence.

As of March 31st, 2012, the Council has completed or undertaken a combined total of 25 assessments, an impressive number given the Council’s relative youth. The growing interest in the Council’s ability to provide evidence-based assessments of the state of knowledge in a multitude of areas speaks to the demand for public policy built on a solid foundation that will respond to the challenges and opportunities facing Canadian society.



# About the Council



## About the Council

The Council of Canadian Academies is the voice for independent, authoritative, expert assessments on the science and evidence underlying matters of significant public interest. Its work addresses a broad spectrum of knowledge, encompassing the natural, social and health sciences, engineering and the humanities, and supports evidence-based public policy development in Canada. To carry out its assessments, the Council draws upon the intellectual capital that lies within its three Member Academies: The Royal Society of Canada; the Canadian Academy of Engineering; and the Canadian Academy of Health Sciences.

The Council assesses questions posed by the federal government, as part of its funding agreement, as well as by foundations, non-governmental organizations, the private sector and other levels of government. All assessment questions, regardless of source, and the resulting reports must be approved by the Council's Board of Governors.

### Vision

To be Canada's trusted voice for science  
in the public interest.

### Mission

To provide Canadians with:

The best available scientific knowledge with the  
objective of informing debate and decision-making;

Independent, authoritative and evidence-based assessments  
on the science underlying current and future issues of  
public interest; and

A science voice nationally and internationally.

### Value Proposition

The Council of Canadian Academies offers insight and evidence  
to enrich Canadian policy development and decision-making.

This is achieved by harnessing the collective wisdom of the  
finest minds to develop independent, authoritative  
and evidence-based expert assessments on the issues  
that matter most to Canadians.





## Member Academies

*The founding members of the Council of Canadian Academies are:*

### **THE ROYAL SOCIETY OF CANADA (RSC):**

The RSC is the senior national body of distinguished Canadian scholars, artists, and scientists. The primary objective of the RSC is to promote learning and research in the arts and sciences. The RSC consists of nearly 2,000 Fellows – men and women who are selected by their peers for outstanding contributions to the natural and social sciences, the arts, and the humanities. The RSC exists to recognize academic excellence, to advise governments and organizations, and to promote Canadian culture.

### **THE CANADIAN ACADEMY OF ENGINEERING (CAE):**

The CAE is the national institution through which Canada's most distinguished and experienced engineers provide strategic advice on matters of critical importance to Canada. The Academy is an independent, self-governing and non-profit organization established in 1987. Members of the Academy are nominated and elected by their peers to honorary fellowships, in recognition of their distinguished achievements and career-long service to the engineering profession. Fellows of the academy are committed to ensuring that Canada's engineering expertise is applied to the benefit of all Canadians.

### **THE CANADIAN ACADEMY OF HEALTH SCIENCES (CAHS):**

CAHS recognizes individuals of great achievement in the academic health sciences in Canada. Founded in 2004, CAHS has approximately 400 Fellows and appoints new Fellows on an annual basis. The organization is managed by a voluntary Board of Directors and a Board Executive. The main function of CAHS is to provide timely, informed, and unbiased assessments of urgent issues affecting the health of Canadians. The Academy also monitors global health-related events to enhance Canada's state of readiness for the future, and provides a Canadian voice for health sciences internationally. CAHS provides a collective, authoritative, multi-disciplinary voice on behalf of the health sciences community.



## Implementing the Council's Strategic Plan

The Council's Strategic Plan, *Insight & Impact* established six key inter-related and strategic goals to guide its activities through 2014:

1. **Maintain responsiveness:** Continue to develop and provide, on a timely basis, a line of services that responds to the needs of sponsors.
2. **Achieve potential:** Attract questions of the highest importance and relevance to Canadian well-being.
3. **Maintain excellence:** Maintain and enhance standards for scientific excellence and high-quality services.
4. **Become sustainable:** Establish a long-term, sustainable, and dependable funding stream.
5. **Foster collaboration:** Strengthen collaborative alliances among Member Academies and the Council to achieve the Council's strategic goals.
6. **Expand visibility:** Increase visibility and awareness of the Council's work to further the organization's impact.

### Values

The following values underpin all of the Council's activities:

Excellence

Independence

Integrity

Collaboration

Innovation

### Goals 1 & 2 - Maintain Responsiveness & Achieve Potential

During 2011/12, the Council released three assessment reports and was engaged in studying seven new questions. In the fall of 2011, the Minister of Industry submitted an additional six new assessment questions to the Council. Interest in commissioning the Council's evidence-based expert assessments is growing, as witnessed by the marked increase in submissions to Industry Canada as a result of its yearly Call for Proposals. Importantly, some of these submissions are coming from federal government departments that are new to the Council, a direct result of the organization's strategic outreach efforts. The Council has also been attracting potential questions from outside the federal government. In these cases, the Council has been able to modify its processes to help potential sponsors better define the questions they would like to ask and to identify the evidence needed to inform assessments. The increased demand for the Council's services, combined with the feedback received by sponsors upon receiving a completed assessment indicates that the Council is successfully meeting its mission—to provide Canadians with the best available scientific knowledge with the objective of informing debate and decision-making.

### Goal 3 - Maintain Excellence

As part of its commitment to maintaining excellence, the Council has put in place a monitoring framework to assess the impact of its assessments. The Council surveys its assessment sponsors 12 to 18 months after a report's release. A survey of the sponsors of the three reports released in 2009 found that all three reports had significant impacts on discussion and dialogues related to each assessment topic and some impact on policy and program development. Importantly, two of the three reports had exceeded the sponsor's expectations.

*"The Council of Canadian Academies is an important source for reliable scientific information that is useful to policy-makers."*

Scott Vaughan  
Commissioner of the Environment



In order to ensure that future assessments continue to meet the standards of excellence set by their earlier counterparts, the Council conducted a general review of the Council's Assessment Lifecycle Methodology (CALM), an analysis of report review practices and implemented a lessons learned system. The Council also consulted with the United States' National Research Council regarding their best practices as they pertain to expert panels and developing evidence-based assessments. The Council also met with other international science policy organizations, such as the United Kingdom's Royal Society, to gain a better understanding of how comparable organizations inform science policy in their countries.

In June 2011 Dr. Jim Reisa of the U.S. National Research Council came to Ottawa to meet with Council staff. In an intensive, two-day workshop, he provided an overview of the National Academies and their processes and policies on evidence-gathering, building expert panels, conducting peer review and managing the development of a final report. The session gave staff members the opportunity to ask questions and consider what methods could be integrated into the Council's own assessment work, enabling the Council to build on its reputation for and commitment to excellence.

#### Goal 4 - Become Sustainable

One of the central activities of the Council over 2011/12 was to focus on ensuring its long-term sustainability following the expiration in 2015 of its 10-year funding agreement with the federal government. The Board of Governors has committed to providing leadership on this matter and has decided to focus on four key areas:

- continuing to demonstrate the value of the Council's work in the public policy environment;
- developing a plan for funding for the future that will, in part, inform discussions with the federal government on the value the Council has provided to Canadians in its first 10 years;
- seeking potential sponsors outside the federal government to expand its client base; and
- continuing to enhance the Council's profile and fostering champions for its work.

Over the course of the past year, Council President, Elizabeth Dowdeswell has undertaken strategic business development

#### PROFILE:

### **Roderick A. Macdonald**

*Board of Governors,  
Member*



**Roderick A. Macdonald** is a skeptical man. He comes by it honestly, though – a lawyer by training (and the F.R. Scott Professor of Constitutional and Public Law at McGill University), he does not trust hearsay. He wants to see the evidence. As President of the Royal Society of Canada, Professor Macdonald sat on the Council's Board of Governors for two years, where he had a front-row seat to assess the value of the Council's work. And, with the evidence in front of him, he's come to a favourable verdict. Assessments such as those done by both the Council and the Royal Society, he says, provide governments with the evidence-based information needed to make informed policy decisions. You would never build a bridge without good engineering studies, he says – so why would you make a policy decision without solid evidence?

and outreach activities that generated greater awareness of, and interest in, the work of the Council. These efforts are already bearing fruit, with new sponsors outside the federal government, including the Province of Ontario and the Oceans University Consortium. The Council expects this initial response to these efforts to be magnified in coming years, with yet more assessment questions being posed by sponsors outside the federal government.

### Goal 5 - Foster Collaboration

The Council is committed to building synergy with its Member Academies, as well as other science-based organizations, to better achieve its goals and forge a strong relationship with Canadian experts.

In September 2011 the Council's Board of Governors held a facilitated meeting to discuss the evolving relationship among the Member Academies and the Council. This meeting was designed to give Board members and the presidents of the Member Academies the opportunity to share perspectives and ideas on how to further develop the relationship among all four organizations.

This one-day discussion resulted in the development of a *Statement of Common Understanding*, which was released in December 2011. This statement is the foundation for the development of a collaborative partnership among the organizations in support of building a robust and cohesive platform for evidence-based science advice in the public interest.

As well, over the course of 2011/12, the presidents of the four organizations have engaged in both formal and informal communications activities to share issues of concern and information regarding the work of each organization.

During 2011/12 the Council established an agreement with the Canadian Academy of Health Sciences to manage its office operations. This agreement aligns with the *Statement of Common Understanding* as it supports the sustainability of CAHS. Some of the highlights of the Council's administrative support for CAHS include the streamlining of membership collections and reducing administrative and operating costs. These initial efforts have led to more functional office operations for this Member Academy.



Canada's Research Tree, as displayed by the Council at the AAAS 2012 in Vancouver, B.C.



### Goal 6 - Expand Visibility

The Council is committed to increasing its visibility and awareness of its work among key corporate stakeholders and scientific communities with a specific interest in an assessment topic. In the past year a number of activities were undertaken to meet these objectives. For example:

## PROFILE:

**Kori St. Cyr***Research Associate*

When **Kori St. Cyr** came to Canada from the Bahamas for university, he chose Trent University because he thought the smaller size would provide a more intimate learning environment. Today, the former biochemistry and molecular biology student has traded in his lab coat for a policy hat and he feels like he's playing in the big leagues. Indeed, recently he was one of just 40 young professionals from around the world chosen to attend a UNESCO forum on the challenges facing small island states, an experience that is enriching his abilities as a Research Associate at the Council. Kori says it is wonderful that we, as a society, value having the best possible information to understand the issues and humbling to be working at an organization that provides that information. It's also personally exciting, he says, that he gets to engage with expert panellists such as Rod McInnes, Canada Research Chair in Neurogenetics.

- comprehensive distribution lists were developed for report launches in consultation with expert panel members;
- university communication offices and administrators were systematically informed about report releases and the role of their faculty on an expert panel;
- small workshops were organized to allow those involved in policy and research to come together to discuss a Council assessment;
- assessments were also promoted at relevant science or policy-based conferences;
- specialized websites and list serves were identified and notified about Council assessments; and
- the Council leveraged its online presence through social media, video, and its website to broaden its dissemination activities.

The Council's website now attracts more than 200 visitors each day, reaching closer to 700 on the day an assessment is launched. Each newly launched assessment is disseminated to upwards of 1,500 people and organizations. The quarterly electronic newsletter is an important communications tool for the Council and is sent out to more than 1,400 recipients. The newsletter allows the Council to keep those interested in science policy up-to-date on its work. As the Council considers itself to be a 'thinking organization' the newsletter also includes at least one in-depth thought piece on a science-based topic. The metrics used to monitor the newsletter have shown a steady increase in readership for all articles within the newsletter.

Finally, during the fiscal year the Council developed a volunteer recognition program to formally acknowledge the more than 500 volunteers who have contributed to the Council's success since 2005. The program is intended to foster a positive relationship with the Council's volunteers and strengthen the prestige attached to participating in the Council's work among potential expert volunteers. For instance, at the AAAS meeting, the Council exhibit featured "Canada's Research Tree," with the names of all of the Council's expert volunteers on it, a unique and visible way to showcase Council volunteers.



✓ EXCELLENCE  
✓ INSIGHT  
✓ EXPERTISE  
✓ DEDICATION

What our Expert Volunteers bring to the  
Council's evidence-based assessments.

THANK YOU FOR YOUR COMMITMENT.



Council of Canadian Academies  
Conseil des académies canadiennes

To learn more please visit [www.scienceadvice.ca](http://www.scienceadvice.ca)

As part of national volunteer week the Council recognized its expert volunteers  
through a thank you ad in University Affairs Magazine.



## The Council of Canadian Academies: By the Numbers

The Council is able to fulfill its mission because of the expert volunteers who give graciously of their time, experience and insights.

Since 2005 the Council has leveraged more than **\$10 million** in expert volunteer time, a significant contribution in support of evidence-based public policy.

**502**

Expert volunteers working with the Council since 2005

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**102**

New volunteers in 2011/12

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**25**

Panel and governance meetings in 2011/12

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**16**

Unique assessment sponsors since 2005

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**13**

Active assessments in 2011/12

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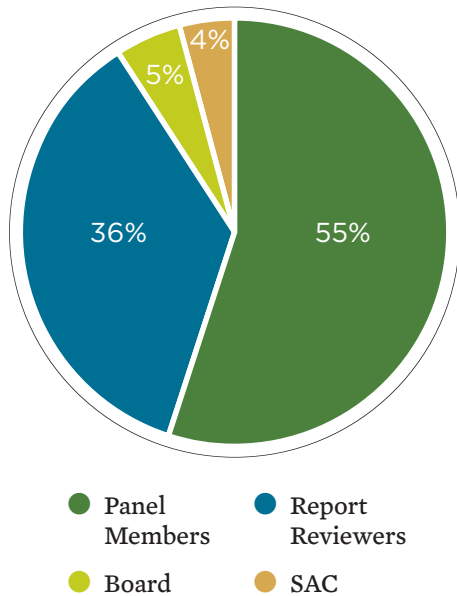
**3**

Assessments publicly released in 2011/12

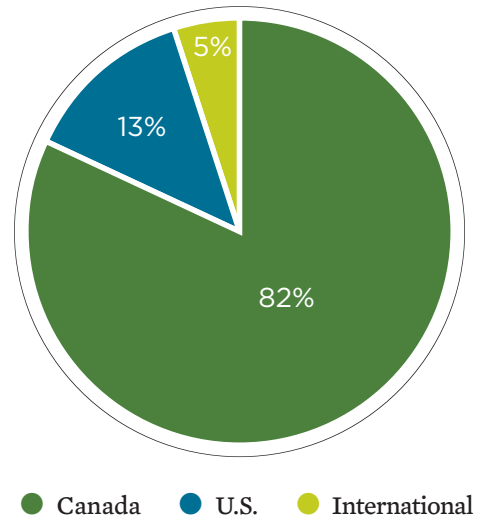
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A breakdown of the Council's 502 volunteers



Geographic composition of expert volunteers for 2011/12



## Conclusion

The past fiscal year, 2011/12, has been a year of intense activity for the Council. It operated at full capacity in terms of assessments at the same time as it focused on achieving the objectives of its Strategic Plan. The dedication and commitment of the Council's volunteers and of its staff and interns was absolutely crucial to enable the Council's achievements in both of these areas.

In the coming year, the Council will continue its commitment to carrying out its current assessments with an absolute dedication to excellence. The Council will also focus on its objective of achieving sustainability beyond 2015. As part of that effort, the Council looks forward to involving new and varied sponsors in its work and to ensuring that policy-makers at all levels of government become aware the Council's mission to provide the insight and evidence required to enrich Canadian policy development and decision-making. Above all, the Council will continue to put *Evidence First*.



## Expert Volunteers Active in 2011/12

### The Expert Panel on Women in University Research<sup>1</sup>

- **Lorna Marsden** (Chair), C.M., O.Ont, President Emerita and Professor, York University (Toronto, ON)
- **Janice G. Dodd**, Professor and Department Head, Physiology; Professor, Women's and Gender Studies, University of Manitoba (Winnipeg, MB)
- **Nadia Ghazzali**, Full Professor, Department of Mathematics and Statistics; NSERC-Industrial Alliance Chair for Women in Science and Engineering in Québec, Université Laval (Québec, QC)
- **Alison M. Konrad**, Professor, Organizational Behavior, University of Western Ontario; Corus Entertainment Chair in Women in Management, Richard Ivey School of Business (London, ON)
- **Yvonne A. Lefebvre**, FCAHS, Vice-President (Research and Academic Affairs), Providence Health Care (PHC); President, PHC Research Institute; Associate Dean of Research, Faculty of Medicine, University of British Columbia (Vancouver, BC)
- **Geoffrey Oldham**, CBE, Honorary Professor and Former Director, Science Policy Research Unit (SPRU), University of Sussex; Former U.K. Delegate, UN Commission on Science and Technology for Development (Seaford, United Kingdom)
- **Lynne-Marie Postovit**, Assistant Professor, Anatomy and Cell Biology, University of Western Ontario; Canada's Young Researcher Award Winner (London, ON)
- **Luisa Prista**, Head, Environmental Technologies Unit, European Commission's Research and Innovation Directorate-General (Brussels, Belgium)
- **Wendy J. Robbins**, Full Professor, Department of English, and Coordinator of Women's Studies, University of New Brunswick; Former Vice-President, Women's Issues, Canadian Federation of the Humanities and Social Sciences (Fredericton, NB)
- **Pamela Robinson**, Associate Professor, School of Urban and Regional Planning, Ryerson University (Toronto, ON)
- **Rima Rozen**, FRSC, FCAHS, Associate Vice-Principal (Research and International Relations); James McGill Professor, McGill University (Montréal, QC)
- **Karen Sobel**, Senior Vice-President, Business Sustainability, Hydrocarbons & Chemicals, SNC-Lavalin (Calgary, AB)
- **Veronica Strong-Boag**, FRSC, Professor, Women's and Gender Studies and Educational Studies; Founding Director, Centre for Women's and Gender Studies, University of British Columbia (Vancouver, BC)

<sup>1</sup> Names of the report reviewers for the Expert Panel on Women in University Research assessment could not be listed in the 2011/12 Annual Report as the assessment had not yet been publicly released.

- **Lorna Williams**, Associate Professor, Faculty of Education and Department of Linguistics, University of Victoria; Canada Research Chair in Indigenous Knowledge and Learning (Victoria, BC)
- **Michael C. Wolfson**, FCAHS, Canada Research Chair in Population Health Modeling/Populomics, University of Ottawa (Ottawa, ON)

### The Expert Panel on Water and Agriculture<sup>2</sup>

- **Howard Wheeler** (Chair), Canada Excellence Research Chair in Water Security, Professor, School of Environment and Sustainability and Department of Civil and Geological Engineering, College of Engineering, University of Saskatchewan (Saskatoon, SK)
- **Elena Bennett**, Assistant Professor, Department of Natural Resource Sciences and McGill School of Environment, McGill University (Montréal, QC)
- **Rob de Loë**, University Research Chair, Water Policy and Governance, University of Waterloo (Waterloo, ON)
- **Bob Friesen**, CEO, Farmers of North America Strategic Agriculture Institute (Ottawa, ON)
- **Kirk E. Hamilton**, Lead Economist, Development Research Group, The World Bank (Washington, DC)
- **Lorne Hepworth**, President, CropLife Canada (Ottawa, ON)
- **Dave McGee**, Senior Policy and Implementation Manager, Alberta Environment (Lethbridge, AB)
- **Diane Parent**, Professor, Department of Animal Science, Faculty of Agriculture and Food Science, Université Laval (Québec, QC)
- **John Pomeroy**, Canada Research Chair in Water Resources and Climate Change, University of Saskatchewan (Saskatoon, SK)
- **David Rudolph**, Professor, Department of Earth and Environmental Sciences, University of Waterloo (Waterloo, ON)
- **Stephen R. Smith**, Professor of Bioresource Systems, Department of Civil and Environmental Engineering, Imperial College London (London, United Kingdom)
- **Ronald Stewart**, FRSC, Professor and Department Head, Department of Environment and Geography, University of Manitoba (Winnipeg, MB)
- **P. Kim Sturgess**, FCAE, CEO and founder, Alberta WaterSMART (Calgary, AB)
- **Barry Thompson**, Manager and Agriculture Resource Development Co-ordinator, Agriculture Resource, Government of Prince Edward Island (Charlottetown, PE)
- **Rene Van Acker**, Professor, Department of Plant Agriculture and Associate Dean External Relations, Ontario Agricultural College, University of Guelph (Guelph, ON)

<sup>2</sup> Names of the report reviewers for the Expert Panel on Water and Agriculture assessment could not be listed in the 2011/12 Annual Report as the assessment had not yet been publicly released.

## The Expert Panel on Approaches to Animal Health Risk Assessment

\*Affiliations as of September 2011

- **Alastair Cribb** (Chair), FCAHS, Professor and Dean, Faculty of Veterinary Medicine, University of Calgary (Calgary, AB)
- **Ian R. Dohoo**, FCAHS, Professor and Director, Centre for Veterinary Epidemiological Research, Atlantic Veterinary College, University of Prince Edward Island (Charlottetown, PE)
- **Darrell Donahue**, Professor, College of Engineering, University of Maine (Orono, ME)
- **John M. Fairbrother**, FCAHS, Professor, Faculté de médecine vétérinaire, Université de Montréal; Lead of the OIE Reference Laboratory for *Escherichia coli* (Montréal, QC)
- **Diane Frank**, Associate Professor, Faculté de médecine vétérinaire, Université de Montréal (Montréal, QC)
- **David C. Hall**, Associate Professor, Faculty of Veterinary Medicine, University of Calgary (Calgary, AB)
- **H. Scott Hurd**, Associate Professor, College of Veterinary Medicine, Iowa State University; Director of the WHO Collaborating Centre for Risk Assessment and Hazard Identification in Foods of Animal Origin (Iowa City, IA)
- **Dennis Laycraft**, Executive Vice-President, Canadian Cattlemen's Association (Calgary, AB)
- **Frederick A. Leighton**, Professor, Western College of Veterinary Medicine, University of Saskatchewan; Executive Director, Canadian Cooperative Wildlife Health Centre (Saskatoon, SK)
- **Thérèse Leroux**, Professor, Public Policy Research Centre, Université de Montréal (Montréal, QC)
- **Dirk Pfeiffer**, Professor of Veterinary Epidemiology, and Head of the Veterinary Epidemiology and Public Health Group, Department of Veterinary Clinical Sciences, Royal Veterinary College; Honorary Professorship, London School of Hygiene and Tropical Medicine (North Mymms, United Kingdom)
- **Jan Sargeant**, Professor, Ontario Veterinary College; Director, Centre for Public Health and Zoonoses, University of Guelph (Guelph, ON)

## Report Reviewers for the Expert Panel on Approaches to Animal Health Risk Assessment

\*Affiliations as of September 2011

- **John ApSimon**, Dean, Faculty of Public Affairs, Carleton University (Ottawa, ON)
- **Sam Beckett**, Associate Director, Broadleaf Capital International Pty Ltd. (Broadleaf) (Gundaroo, Australia)
- **Neil R. Cashman**, FCAHS, Professor and Canada Research Chair in Neurodegeneration and Protein Misfolding Diseases, University of British Columbia (Vancouver, BC)

- **Stuart DeVries**, Chair, Ontario Pork Industry Council and General Manager, Total Swine Genetics Inc. (Stratford, ON)
- **Greg B. Douglas**, Chief Veterinary Officer, Government of Saskatchewan (Regina, SK)
- **Emma Hartnett**, Lead, Microbial and Animal Health Risk Assessment, Risk Sciences International (Ottawa, ON)
- **Roger Morris**, Emeritus Professor, Massey University; Managing Director, MorVet Ltd. (Masterton, New Zealand)
- **Howard Pharo**, Manager, Animals, Risk Analysis Group; Ministry of Agriculture and Forestry, Biosecurity New Zealand (Wellington, New Zealand)
- **Crawford Revie**, Canada Research Chair and Professor in Population Health, Atlantic Veterinary College, University of Prince Edward Island (Charlottetown, PE)
- **Bernard E. Rollin**, University Distinguished Professor, Professor of Philosophy, Biomedical Sciences, and Animal Sciences, and University Bioethicist, Colorado State University (Fort Collins, CO)
- **Mo Salman**, Professor of Veterinary Epidemiology and Director, Animal Population Health Institute, College of Veterinary Medicine and Biomedical Sciences, Colorado State University (Fort Collins, CO)
- **Daniel T. Scholl**, Professor and Scientific Director, Canadian Bovine Mastitis Research Network, Faculté de médecine vétérinaire, Université de Montréal (Saint-Hyacinthe, QC)
- **Bhagirath Singh**, FRSC, FCAHS, Director, Centre for Human Immunology; and Professor, Department of Microbiology and Immunology, University of Western Ontario (London, ON)
- **Craig Stephen**, Professor, Faculty of Veterinary Medicine and Faculty of Medicine, University of Calgary (Calgary, AB)
- **Barry Stemshorn**, Senior Fellow, Graduate School of Public and International Affairs, University of Ottawa (Ottawa, ON)
- **Deborah Whale**, Past Chair, Poultry Industry Council (Guelph, ON)
- **Gary A. Wobeser**, Professor Emeritus, Department of Veterinary Pathology, University of Saskatchewan (Saskatoon, SK)
- Report Review Monitor: **Dr. Michel G. Bergeron**, FCAHS, Director, Division of Microbiology and the Centre de recherche en infectiologie, Université Laval

## The Expert Panel on the Integrated Testing of Pesticides

\*Affiliations as of January 2012

- **Leonard Ritter** (Chair), Professor Emeritus of Toxicology, School of Environmental Sciences, University of Guelph; Executive Director, Canadian Network of Toxicology Centres (Guelph, ON)
- **Christopher P. Austin**, Director, National Institutes of Health, Chemical Genomics Center (Bethesda, MD)
- **John R. (Jack) Bend**, Distinguished University Professor, Departments of Pediatrics, Pathology, Physiology and Pharmacology, Schulich School of Medicine and Dentistry, University of Western Ontario (London, ON)
- **Conrad G. Brunk**, Professor of Philosophy, University of Victoria (Victoria, BC)
- **Timothy Caulfield**, FRSC, FCAHS, Professor, Faculty of Law and School of Public Health and Research Director, Health Law Institute and Canada Research Chair in Health Law and Policy, University of Alberta (Edmonton, AB)
- **Vicki L. Dellarco**, Science Advisor, Office of Pesticide Programs, United States Environmental Protection Agency (Washington, DC)
- **Paul Demers**, Director, School of Environmental Health, College for Interdisciplinary Studies and Professor, School of Population and Public Health, Faculty of Medicine, University of British Columbia (Vancouver, BC)
- **Warren Foster**, Professor, Department of Obstetrics and Gynecology and Director, Centre for Reproductive Care, McMaster University Health Sciences Centre (Hamilton, ON)
- **Claire Infante-Rivard**, Professor, Department of Epidemiology, Biostatistics and Occupational Health, Faculty of Medicine, McGill University (Montréal, QC)
- **Catherine Jumarie**, Professor, Department of Biological Sciences, Université du Québec à Montréal (Montréal, QC)
- **Sam Kacew**, Associate Director of Toxicology, R. Samuel McLaughlin Centre for Population Health Risk Assessment, University of Ottawa (Ottawa, ON)
- **Robert J. Kavlock**, Director, National Center for Computational Toxicology, United States Environmental Protection Agency (Durham, NC)
- **Daniel Krewski**, Director, R. Samuel McLaughlin Centre for Population Health Risk Assessment, University of Ottawa Institute of Population Health (Ottawa, ON)
- **Paul G. Mezey**, Canada Research Chair in Scientific Modelling and Simulation, Memorial University of Newfoundland (St. John's, NL)
- **Terry Schultz**, Emeritus Professor, Department of Comparative Medicine, College of Veterinary Medicine, University of Tennessee (Knoxville, TN)

## Report Reviewers for the Expert Panel on the Integrated Testing of Pesticides

\*Affiliations as of January 2012

- **Pierre Ayotte**, Associate Professor, Department of Social and Preventive Medicine; Member of the Public Health Research Unit, CHUQ-Laval University Medical Research Centre, Laval University (Ste-Foy, QC)
- **Alan R. Boobis**, Professor, Department of Medicine, Imperial College London (London, United Kingdom)
- **Gail Charnley**, Principal, HealthRisk Strategies (Washington, DC)
- **Mark Cronin**, Professor, School of Pharmacy and Chemistry, Liverpool John Moores University (Liverpool, United Kingdom)
- **Julia Fentem**, Senior Manager, Safety & Environment Assurance Centre, Unilever (Bedfordshire, United Kingdom)
- **Claire A. Franklin**, Director, The LifeLine Group (Annandale, VA)
- **Thomas Hartung**, Director, Center for Alternatives to Animal Testing, Johns Hopkins Bloomberg School of Public Health (Baltimore, MD)
- **Michael P. Holsapple**, Executive Director, International Life Sciences Institute's Health and Environmental Science Institute (Washington, DC)
- **Kannan Krishnan**, Professor, Occupational and Environmental Health, Faculty of Medicine, Université de Montréal (Montréal, QC)
- **Martin Stephens**, Senior Research Associate at the Johns Hopkins University Center for Alternatives to Animal Testing (Baltimore, MD)
- **Andrew Worth**, Leader, Computational Toxicology Project, Institute for Health & Consumer Protection, European Commission (Ispra, Italy)
- Report Review Monitor: **Dr. Judith Hall**, O.C., FRSC, FCAHS, Professor of Pediatrics and Medical Genetics, University of British Columbia (Vancouver, BC)

## The Expert Panel on Science Performance and Research Funding

- **Rita Colwell** (Chair), Distinguished University Professor, University of Maryland, College Park and Johns Hopkins University Bloomberg School of Public Health; Senior Advisor and Chairman Emeritus, Canon U.S. Life Sciences, Inc.; and President and CEO, CosmosID, Inc. (College Park, MD)
- **Max Blouw**, President and Vice-Chancellor, Wilfrid Laurier University (Waterloo, ON)
- **Linda Butler**, Visiting Fellow, Australian National University; Conjoint Professor, University of Newcastle (Soldiers Point, Australia)
- **Susan E. Cozzens**, Professor of Public Policy, Director of the Technology Policy and Assessment Center, and Associate Dean for Research, Ivan Allen College, Georgia Tech (Atlanta, GA)
- **Irwin Feller**, Senior Visiting Scientist, American Association for the Advancement of Science (State College, PA)
- **Yves Gingras**, Professor and Canada Research Chair in History and Sociology of Science, Université du Québec à Montréal (Montréal, QC)
- **Jacques Hurtubise**, FRSC, Chair, Department of Mathematics and Statistics, McGill University (Montréal, QC)
- **Gretchen Jordan**, Principal Member of Technical Staff, Sandia National Laboratories (Albuquerque, NM)
- **John S. MacDonald**, O.C., FCAE, Chairman, Day4 Energy Inc. (Burnaby, BC)
- **Marja Makarow**, Chief Executive, European Science Foundation (Strasbourg, France); and Professor of Applied Biochemistry and Molecular Biology, University of Helsinki (Helsinki, Finland)
- **James (Jim) C. McGroddy**, Retired, International Business Machines (IBM) (Briarcliff Manor, NY)
- **Tim McTiernan**, President and Vice Chancellor, University of Ontario Institute of Technology (Oshawa, ON)
- **Sir Keith O’Nions**, Rector, Imperial College London (London, United Kingdom)
- **René Simard**, O.C., FRSC, FCAE, Professor Emeritus, Université de Montréal (Montréal, QC)
- **Alan E. Winter**, FCAE, President and Chief Executive Officer, Genome British Columbia (Vancouver, BC)
- **Ronald Woodward**, President, Clockbuilder Consulting Ltd.; President Emeritus, Red Deer College (Red Deer, AB)



### Report Reviewers for the Expert Panel on Science Performance and Research Funding

- **Claire Donovan**, Reader, HERG at Brunel University (London, United Kingdom)
- **Stevan Harnad**, Canada Research Chair, Cognitive Science, Université du Québec à Montréal (Montréal, QC)
- **Diana Hicks**, Professor and Chair, Georgia Institute of Technology (Atlanta, GA)
- **Kari Kveseth**, Science Counsellor, Royal Norwegian Embassy (Beijing, China)
- **Cheryl Oros**, Founder and CEO, Oros Consulting (Washington, DC)
- **Pekka Sinervo**, FRSC, Professor, University of Toronto (Toronto, ON)
- **David Strangway**, O.C., FRSC, President and Chancellor, Quest University (Squamish, BC)
- **Robert Tijssen**, Professor, Science and Innovation Studies, Leiden University (Leiden, Netherlands)
- **Don Wright**, President, British Columbia Institute of Technology (Burnaby, BC)
- Report Review Monitor: **Dr. Judith Hall**, O.C., FRSC, FCAHS, Professor of Pediatrics and Medical Genetics, University of British Columbia (Vancouver, BC)

### The Expert Panel on the State of Industrial Research and Development<sup>3</sup>

- **Kathleen E. Sendall** (Chair), C.M., FCAE, Director, CGG Veritas (Paris, France); Director of Enmax Corporation (Calgary, AB); Vice Chair, Alberta Innovates – Energy and Environment Solutions (Calgary, AB); Co-Chair, Canada West/Asia Pacific Foundation Task Force (Calgary, AB)
- **Marcel Boyer**, Professor, Centre for Interuniversity Research and Analysis on Organizations (Montréal, QC)
- **Kelly Cantwell**, Senior Director, Corporate Strategy and Planning, Emera Inc. (Halifax, NS)
- **Eric L. Cook**, Executive Director & CEO, New Brunswick Research and Productivity Council (RPC) (Fredericton, NB)
- **Lisa Crossley**, CEO, VitalHub Corporation (Toronto, ON)
- **Sean Donnelly**, Vice President, Technology and Continuous Improvement, ArcelorMittal Dofasco (Hamilton, ON)
- **R.J. (Bob) Fessenden**, Fellow of the Institute for Public Economics, University of Alberta (Edmonton, AB)

<sup>3</sup> Names of the report reviewers for the Expert Panel on the State of Industrial Research and Development assessment could not be listed in the 2011/12 Annual Report as the assessment had not yet been publicly released.

- **Camille Gagnon**, President, Innovitech Inc. (Montréal, QC)
- **Claude Lajeunesse**, Former President and Chief Executive Officer, Aerospace Industries Association of Canada (Ottawa, ON)
- **Hadi Mahabadi**, FCAE, President, CanWin Consulting Inc.; Retired, Former Vice President and Director, Xerox Research Centre of Canada (Mississauga, ON)
- **Pierre Mohnen**, Professor, Maastricht University (The Netherlands)
- **Ian de la Roche**, Adjunct Professor, University of British Columbia (Vancouver, BC)
- **Harvey P. Weingarten**, President & CEO, Higher Education Quality Council of Ontario (Toronto, ON)
- **Rosemary Zigrossi**, Director, Promontory Financial Group (Toronto, ON)

#### The Expert Panel on the State of Science and Technology in Canada<sup>4</sup>

- **Eliot A. Phillipson** (Chair), FCAHS, Sir John and Lady Eaton Professor of Medicine Emeritus, University of Toronto (Toronto, ON)
- **Neil Branda**, Professor and Canada Research Chair in Materials Science and Executive Director, 4D LABS, Simon Fraser University (Burnaby, BC)
- **Eric L. Cook**, Executive Director and CEO, New Brunswick Research and Productivity Council (Fredericton, NB)
- **Pierre Côté**, President, CÔTÉ Membrane Separation Ltd. (Hamilton, ON)
- **Sara Diamond**, O.Ont., President, Ontario College of Art and Design University (OCAD U) (Toronto, ON)
- **Rosa M. Fernández**, Economic Adviser, U.K. Department for Business, Innovation and Skills (London, United Kingdom)
- **R.J. (Bob) Fessenden**, Fellow of the Institute for Public Economics, University of Alberta (Edmonton, AB)
- **Fred Gault**, Professorial Fellow, UNU-MERIT (Maastricht, The Netherlands) and Professor Extraordinaire, Tshwane University of Technology (Pretoria, South Africa)
- **Gregory S. Kealey**, FRSC, Provost and Vice-President (Research), University of New Brunswick (Fredericton, NB)
- **Robert Luke**, Assistant Vice-President, Research and Innovation, George Brown College (Toronto, ON)

<sup>4</sup> Names of the report reviewers for the Expert Panel on the State of Science and Technology in Canada assessment could not be listed in the 2011/12 Annual Report as the assessment had not yet been publicly released.

- **Roderick R. McInnes**, C.M., O.Ont., FRSC, FCAHS, Director, Lady Davis Institute for Medical Research, Jewish General Hospital; Canada Research Chair in Neurogenetics and Alva Chair in Human Genetics, McGill University (Montréal, QC)
- **Janet L. Ronsky**, FCAE, Professor, Schulich School of Engineering and Faculty of Kinesiology, University of Calgary; Executive Director, Biovantage Inc., Alberta Ingenuity Centre (Calgary, AB)
- **Noralou Roos**, C.M., FRSC, Professor, Department of Community Health Sciences, Faculty of Medicine, University of Manitoba (Winnipeg, MB)
- **Jacquelyn Thayer Scott**, O.C., Professor, Organizational Management & Strategy, Shannon School of Business, and Past President, Cape Breton University (Sydney, NS)
- **Adel Sedra**, FRSC, FCAE, Dean, Faculty of Engineering, University of Waterloo (Waterloo, ON)
- **Luc Vinet**, Professor of Physics and Past Rector, Université de Montréal (Montréal, QC)
- **Lorraine M.A. Whale**, Manager of Unconventional Research, Shell Global Solutions (Canada) (Calgary, AB)
- **Jeffrey L.C. Wright**, C.M., Carl B. Brown Distinguished Professor of Marine Science and Professor of Chemistry and Biochemistry, University of North Carolina Wilmington (Wilmington, NC)

#### The Expert Panel on Socio-economic Impacts of Innovation Investments<sup>5</sup>

- **Esko Aho** (Chair), Executive Vice President, Corporate Relations and Responsibility, Nokia; Former Prime Minister of Finland (Helsinki, Finland)
- **William A.S. Buxton**, Principal Researcher, Microsoft Research (Toronto, ON)
- **Martin Buxton**, Professor, Health Economics, Brunel University (London, United Kingdom)
- **Margaret Dalziel**, Associate Professor, Telfer School of Management, University of Ottawa; Co-Founder and Vice-President Research, The Evidence Network (Ottawa, ON)
- **A.E. (Ted) Dixon**, Vice President, Science & Technology, Founder and Director, Huron Technologies International Inc.; Professor Emeritus, Department of Physics, University of Waterloo (Waterloo, ON)
- **David Dolphin**, O.C., FRSC, Professor Emeritus, Department of Chemistry, University of British Columbia; Former Vice President, Technology Development, Quadra Logic Technologies (Vancouver, BC)
- **Fred Gault**, Professorial Fellow, UNU-MERIT (Maastricht, the Netherlands); Professor Extraordinaire, Tshwane University of Technology (Pretoria, South Africa)
- **Chaviva M. Hošek**, O.C., President Emeritus, Canadian Institute for Advanced Research (CIFAR) (Toronto, ON)

<sup>5</sup> Names of the report reviewers for the Expert Panel on Socio-economic Impacts of Innovation Investments assessment could not be listed in the 2011/12 Annual Report as the assessment had not yet been publicly released.

- **Hadi Mahabadi**, FCAE, President, CanWin Consulting Inc.; Retired, Former Vice-President and Director, Xerox Research Centre of Canada (Mississauga, ON)
- **Vicki Saunders**, Senior Advisor, Social Innovation Generation Program, MaRS Discovery District (Toronto, ON)
- **Pierre Therrien**, Director, Market Structure and Framework Policy Analysis, Economic Research and Policy Analysis Branch, Industry Canada (Ottawa, ON)
- **David B. Watters**, President, Global Advantage Consulting Group (Ottawa, ON)
- **Stian Westlake**, Executive Director, Policy and Research, National Endowment for Science Technology and the Arts (London, United Kingdom)
- **David A. Wolfe**, Royal Bank Chair in Public and Economic Policy, Munk School of Global Affairs, University of Toronto (Toronto, ON)

### ***Panels that fall outside of the federal funding agreement***

#### **The Expert Panel on Canada's Strategic Role in Global Health**

\*Affiliations as of November 2011

- **Peter A. Singer** (Chair), O.C., FRSC, FCAHS, CEO Grand Challenges Canada; Director, McLaughlin-Rotman Centre for Global Health, University Health Network, and University of Toronto (Toronto, ON)
- **Lorne A. Babiuk**, O.C., FRSC, FCAHS, Vice-President (Research), University of Alberta (Edmonton, AB)
- **Jenn Brenner**, Associate Clinical Professor, University of Calgary (Calgary, AB)
- **Lorna Jean Edmonds**, Executive Director, International Relations, University of Western Ontario (London, ON)
- **Timothy Grant Evans**, Dean, James P. Grant School of Public Health, Bangladesh Rural Advancement Committee (BRAC University) (Dhaka, Bangladesh)
- **Michael R. Hayden**, C.M., FRSC, FCAHS, Director and Senior Scientist, Centre for Molecular Medicine and Therapeutics, University of British Columbia (Vancouver, BC)
- **Jody Heymann**, Founding Director, Institute for Health and Social Policy, McGill University; Canada Research Chair, Global Health and Social Policy (Montréal, QC)
- **Prabhat Jha**, FCAHS, Founding Director, Centre for Global Health Research, St. Michael's Hospital (Toronto, ON)
- **Aleksandra Leligdowicz**, Internal Medicine Resident, University of British Columbia (Vancouver, BC)
- **Anita M. McGahan**, Associate Dean of Research, PhD Director, Professor and Rotman Chair in Management, Rotman School of Management, University of Toronto (Toronto, ON)

- **James J. Orbinski**, O.C., Professor of Medicine and Political Science, University of Toronto (Toronto, ON)
- **Jeff Reading**, FCAHS, Professor and Director, Centre for Aboriginal Health Research, University of Victoria (Victoria, BC)
- **Allan Ronald**, O.C., FRSC, FCAHS, Professor Emeritus, University of Manitoba (Winnipeg, MB)
- **Nelson K. Sewankambo**, Professor of Internal Medicine and Principal, College of Health Sciences, Makerere University (Kampala, Uganda)
- **Peter Tugwell**, FCAHS, Director, Centre for Global Health, Institute of Population Health, University of Ottawa (Ottawa, ON)

### Report Reviewers for the Expert Panel on Canada's Strategic Role in Global Health

\*Affiliations as of November 2011

- **Zulfiqar Ahmed Bhutta**, Founding Chair and Professor, Division of Women and Child Health, Aga Khan University (Karachi, Pakistan)
- **Arun Chockalingam**, Director, Office of Global Health, National Heart, Lung, and Blood Institute (Bethesda, MD)
- **Michel Chrétien**, O.C., FRSC, FCAHS, Emeritus Senior Scientist, Chronic Disease, Ottawa Hospital Research Institute (Ottawa, ON)
- **Haile T. Debas**, Director, Global Health Institute, University of California, San Francisco (San Francisco, CA)
- **Nick Drager**, Honorary Professor, Global Health Policy, London School of Hygiene and Tropical Medicine (London, UK); Professor of Practice of Public Policy and Global Health Diplomacy, McGill University (Montréal, QC)
- **John W. Frank**, FCAHS, Director, Scottish Collaboration for Public Health Research and Policy (Edinburgh, United Kingdom)
- **Paul Grand'Maison**, FCAHS, Vice Dean for Undergraduate Medical Education, Faculty of Medicine and Health Sciences, University of Sherbrooke (Sherbrooke, QC)
- **Dianne Jean-François**, Haiti Country Director, Catholic Medical Missions Board (Port-au-Prince, Haiti)
- **Bartha Maria Knoppers**, O.C., FCAHS, Director, Centre of Genomics and Policy, Faculty of Medicine, Department of Human Genetics, McGill University (Montréal, QC)
- **Elmer Alejandro Llanos Cuentas**, Full Professor, Universidad Peruana Cayetano Heredia (Lima, Peru)
- **Stuart M. MacLeod**, FCAHS, Professor, Department of Paediatrics, University of British Columbia (Vancouver, BC)

- **Kathleen McLaughlin**, Director (Senior Partner), McKinsey & Company (Toronto, ON)
- **Clare Pain**, FRSC, Director of the Psychological Trauma Program, Mount Sinai Hospital (Toronto, ON)
- **Jeffrey L. Sturchio**, President and CEO, Global Health Council (Washington, DC)
- **Kue Young**, C.M., FCAHS, Professor and TransCanada Pipelines Chair, Dalla Lana School of Public Health, University of Toronto (Toronto, ON)
- Report Review Monitors: **Dr. John Cairns**, Professor of Medicine, University of British Columbia (Vancouver, BC) and **Professor Susan McDaniel**, Professor of Sociology and Prentice Research Chair in Global Population & Economy, University of Lethbridge, and Canada Research Chair (Tier 1) in Global Population & Life Course (Lethbridge, AB).

#### Expert Core Group – Canadian Ocean Science<sup>6</sup>

- **David B. Fissel** (Chair), Chair and Senior Scientist, ASL Environmental Sciences Inc. (Victoria, BC)
- **Marcel Babin**, Canada Excellence Research Chair in Remote Sensing of Canada's New Arctic Frontier and Director of the Takuvik Joint International ULaVal-CNRS Laboratory Department of Biology, Université Laval (Québec, QC)
- **Ralf Bachmayer**, Associate Professor, Faculty of Engineering and Applied Science and Canada Research Chair in Ocean Technology, Memorial University (St. John's, NL)
- **Kenneth Denman**, FRSC, Professor, School of Earth and Ocean Sciences; Chief Scientist VENUS Coastal Network, University of Victoria (Victoria, BC)
- **Eric Dewailly**, Professor, Centre de Recherche du Centre hospitalier universitaire de Québec, Université Laval (Québec, QC)
- **Kathryn M. Gillis**, Professor, School of Earth and Ocean Sciences and Associate Dean, Faculty of Science, University of Victoria (Victoria, BC)
- **Louis Fortier**, O.C., Full Professor, Department of Biology, Université Laval (Québec, QC)
- **Roy Hyndman**, FRSC, Senior Research Scientist at the Pacific Geoscience Centre, Geological Survey of Canada; Professor, School of Earth and Ocean Sciences, University of Victoria (Victoria, BC)
- **Daniel Lane**, Professor, Telfer School of Management, University of Ottawa (Ottawa, ON)
- **Marlon Lewis**, Professor, Oceanography, Dalhousie University (Halifax, NS)
- **Robie Macdonald**, FRSC, Senior Research Scientist, Institute of Ocean Sciences, Department of Fisheries and Oceans Canada (Sidney, BC)

<sup>6</sup> Names of the report reviewers for the Priority Research Questions for Canadian Oceans Science could not be listed in the 2011/12 Annual Report as the assessment had not yet been publicly released.



- **Kate Moran**, Director, NEPTUNE Canada; Emeritus Professor of Oceanography, University of Victoria (Victoria, BC)
- **Barbara Neis**, Professor, Department of Sociology, Memorial University; Co-Director, SafetyNet (St. John's, NL)
- **Mark Nuttall**, FRSC, Professor and Henry Marshall Tory Chair, Department of Anthropology, University of Alberta (Edmonton, AB)
- **Émilien Pelletier**, Professor, Chemical Oceanography and Canada Research Chair in Marine Ecotoxicology, Institut des sciences de la mer de Rimouski (Rimouski, QC)
- **Lori Ridgeway**, Senior Advisor to the Associate Deputy Minister, Fisheries and Oceans Canada (Ottawa, ON)
- **Stéphane Roussel**, Professor, Department of Political Science, École nationale d'administration publique (Montréal, QC)
- **Paul Snelgrove**, Professor and Canada Research Chair in Boreal and Cold Ocean Systems, Memorial University (St. John's, NL)
- **William J. Sutherland**, Professor, Miriam Rothschild Chair in Conservation Biology, Department of Zoology, University of Cambridge (Cambridge, United Kingdom)
- **Curtis Suttle**, FRSC, Professor, Earth and Ocean Sciences, Microbiology and Immunology, and Botany and Associate Dean of Science, University of British Columbia (Vancouver, BC)
- **Douglas Wallace**, Canada Excellence Research Chair in Ocean Science and Technology, Dalhousie University (Halifax, NS)
- **Melanie G. Wiber**, Professor, Department of Anthropology, University of New Brunswick (Fredericton, NB)



# Annexes



## Annex I – Council of Canadian Academies – Corporate Profile

The Council of Canadian Academies is a not-for-profit organization registered under the Canada Corporations Act. It began operation in 2005.

### Assessments:

Proposed assessment topics requested by the Government of Canada are selected through a cross-government competitive process and submitted to the Council for consideration. The criteria applied to evaluate proposed assessments are as follows:

### Government Criteria:

- The proposal is relevant to the agenda of the department/agency and to Canada's policy agenda.
- The assessment topic is timely and the timeframe for assessment is consistent with the needs of the department/agency and of Canada.
- The value provided by the Council is unique.
- The assessment topic is a science-based question that has been coordinated with relevant departments/agencies and external stakeholders.

### Council Criteria:

- The topic is of importance to Canada and its citizens.
- The appropriate expertise can be assembled and the required timeline can be met.
- The existing state of knowledge merits the assessment.
- Science underpins the question and its response.

### Asset Criteria:

- The report is likely to be widely consulted within and outside government (e.g., other levels of government or organizations have a demonstrated interest in the outcome of the assessment).
- The topic is uniquely relevant to Canada.
- The topic is an international issue for which a Canadian assessment is important at this time.

The Council's Board of Governors, assisted by a Scientific Advisory Committee, oversees the integrity of the assessment process. The Board formally approves assessment questions, expert panel membership, assessment budgets and timelines, and report review processes.

To protect the independence of the assessment process, the sponsor of an assessment does not participate in the conduct of the assessment, review drafts of the report or propose any changes to the report before its release. Assessment reports undergo a formal expert ("peer") review process to assure quality and objectivity. The Board is responsible for authorizing the public release of final assessment reports and is advised in this regard by a report review monitor who ensures that expert panels give full and fair consideration to the comments of the external reviewers of every Council report. All final assessment reports are posted on the Council's website, [www.scienceadvice.ca](http://www.scienceadvice.ca), in both official languages and may be downloaded free of charge to ensure their availability to the public.

## Funding

The Council operates with 10-year funding of \$30 million provided by the Government of Canada. This founding grant is intended to support core operations of the Council through to March 31, 2015. Conditions on the use of the funds provided by the government are set out in a formal funding agreement between the Council and the Government of Canada as represented by the Minister of Industry. The Council also receives direct revenue in relation to any assessments conducted outside the scope of the Council's Funding Agreement.

## Structure and Governance

The Council is governed by a 12-member Board of Governors. The Board is responsible for setting the strategic direction of the organization, ensuring the fulfillment of the Council's mandate, and providing oversight to the Council's operations.

Each founding Member Academy appoints two governors. These six governors appoint two additional governors from the general public. The remaining four governors are proposed to the Board by the Minister of Industry and are formally appointed through a resolution of the Board. Importantly, to maintain its independence from government, the majority of governors must not have status as Agents of Canada (employees of the Crown).

Governance of the Council is supported by five committees of the Board of Governors:

- Executive Committee
- Finance and Audit Committee
- Investment Committee
- Nominations, Selection, and Governance Committee
- Human Resources and Compensation Committee

The work of the Council is also supported by a Board-appointed Scientific Advisory Committee that provides advice on the substance and procedures of expert assessments, and particularly on the following aspects:

- the generation of potential subjects for future assessments;
- the suitability of subjects proposed to the Council for expert assessment;
- the terms of reference for the independent expert panels that carry out the assessments;
- potential membership of expert panels;
- the process of peer review of draft assessment reports; and
- communication of final assessment reports with the objective of enhancing impact.

Day-to-day operations of the Council are carried out by a small staff, under the direction of a full-time president. Council staff provides support to expert panels with research, writing, and overall management of logistics in the production of assessments. The staff also supports the work of the Scientific Advisory Committee, particularly with respect to analysis of proposed assessment topics, identification of panel membership, and report review processes.

Members of the Board of Governors, Scientific Advisory Committee and staff are listed in Annex II.

## Statement of Investment Policy

The Council's founding grant is overseen, on behalf of the Board, by the Investment Committee. The committee appointed Towers-Perrin Inc. as the Council's investment consultant to advise on the development of a Statement of Investment Policy. The policy was formally approved by the Board of Governors and is appended as Annex IV. Subsequently, Phillips, Hager & North were selected as the Council's investment manager and Desjardins Trust as custodians.

## Financial Statements: Fiscal Year ended March 31, 2011

The Council retained the Ottawa-based accounting firm, Parker Prins Lebano, to audit the financial results for the fiscal year 2011/12. Their report, including the Council's financial statements for 2011/12 is provided in Annex III.

## Revenue from Other Sources

In 2011/12 the Council enhanced their assessment services by undertaking two projects outside of the funding agreement with the Government of Canada. In November 2011, the Canadian Consortium of Ocean Research Universities (CCORU) asked the Council to undertake an expert assessment of ocean science, focusing on the environmental, economic and social opportunities, and societal challenges, in relation to Canada's oceans. Additionally, the Ontario Ministry of Economic Development and Innovation asked the Council, in July 2011, to assess best practices in measuring socio-economic outcomes and impacts of government spending on research and innovation activities that could be applied in the Ontario context.

## Human Resources

In 2011/12, the Council continued to demonstrate success in recruiting high-quality professional staff, with the recruitment of nine employees. The Council focuses their human resource activity based on the values outlined in the strategic plan. Those values are: excellence, independence, integrity, collaboration, and innovation.

In light of the organization's modest size relative to the breadth of its mandate, it is clear that, in addition to the foundation of a permanent, professional Council staff, there will be an ongoing need to bring in specialized experts on a temporary basis. One way this is achieved is through the Graduate Internship Program.

The Council initiated the internship program in late 2009. To date the Council has engaged a total of seven interns through this program. The internship program was designed to provide participants with relevant experience in the area of science and policy. The program exposes successful applicants to the interface of the scientific enterprise and society, helping interns to determine whether they have the passion for the work involved.



**2012 Council Interns**

From left to right  
Jonathan Solomon, Rebecca Chapman,  
Jonathan Whiteley, James Capotosto



## Annex II - Board of Governors, Scientific Advisory Committee, and Staff of the Council of Canadian Academies

### Board of Governors

(As of March 31<sup>st</sup>, 2012)

**Elizabeth Parr-Johnston**, C.M., Chair  
Former President, University of New Brunswick  
and Mount Saint Vincent University  
Chester Basin, NS

**Henry Friesen**, C.C., FRSC, FCAHS, Vice-Chair  
Distinguished Professor Emeritus  
and Senior Fellow,  
Centre for the Advancement of Medicine,  
Faculty of Medicine, University of Manitoba  
Winnipeg, MB

**John Cairns**, FCAHS<sup>1</sup>  
Professor of Medicine  
University of British Columbia  
Vancouver, BC

**Edna Einsiedel**<sup>2</sup>  
University Professor and Professor of  
Communication Studies  
University of Calgary  
Calgary, AB

**Marie D'Iorio**, FRSC<sup>1</sup>  
Executive Director  
National Institute of Nanotechnology  
Edmonton, AB

**Richard Drouin**, C.C.  
Counsel, McCarthy Tétrault  
Québec City, QC

**Claude Jean**  
Executive Vice President and General Manager  
Foundry Operation  
Teledyne DALSA  
Bromont, QC

**John Leggat**, FCAE  
Associate Consultant  
CFN Consultants  
Ottawa, ON

**Roderick A. Macdonald**, FRSC<sup>2</sup>  
F.R. Scott Professor of Constitutional and  
Public Law  
McGill University  
Montréal, QC

**Preston Manning**, C.C.<sup>2</sup>  
Fellow of the Fraser Institute  
and President and CEO  
Manning Centre for Building Democracy  
Calgary, AB

**John McLaughlin**, FCAE<sup>2</sup>  
Professor of Engineering and President  
and Vice-Chancellor  
University of New Brunswick  
Fredericton, NB

**Thomas Marrie**, FCAHS  
Dean of Medicine  
Dalhousie University  
Halifax, NS

**Jeremy McNeil**, FRSC<sup>1</sup>  
Department of Biology  
University of Western Ontario  
London, ON

**Axel Meisen**, FCAE<sup>1</sup>  
Chair of Foresight  
Alberta Innovates – Technology Futures  
Edmonton, AB

**Danial D.M. Wayner**, FRSC<sup>2</sup>  
Director General, Steacie Institute for  
Molecular Sciences  
National Research Council of Canada  
Ottawa, ON

**Catharine Whiteside**, FCAHS<sup>2</sup>  
Dean, Faculty of Medicine and Vice Provost  
Relations, Health Care Institutions  
University of Toronto  
Toronto, ON

<sup>1</sup> Joined the Board in FY 2011/12

<sup>2</sup> Left the Board in FY 2011/12



## Scientific Advisory Committee

(As of March 31<sup>st</sup>, 2012)

**Tom Brzustowski**, O.C., FRSC, FCAE, Chair  
RBC Financial Group Professor in the  
Commercialization of Innovation  
Telfer School of Business, University of Ottawa  
Ottawa, ON

**Susan A. McDaniel**, FRSC, Vice-Chair  
Professor of Sociology and Prentice Research  
Chair in Global Population and Economy  
University of Lethbridge  
Lethbridge, AB

**Michel G. Bergeron**, C.M., O.Q., FCAHS  
Director, Division of Microbiology and le Centre  
de recherche en infectologie  
Université Laval  
Québec City, QC

**Murray S. Campbell**<sup>1</sup>  
Senior Manager, Business Analytics  
IBM T.J. Watson Research Center  
Yorktown Heights, New York

**Margaret Conrad**, O.C., FRSC  
Professor Emerita, Honorary Research Professor  
University of New Brunswick  
Fredericton, NB

**Marcel Côté**  
Founding Partner  
SECOR Inc.  
Montréal, QC

**Louis Fortier**, O.C.<sup>2</sup>  
Full Professor  
Department of Biology, Université Laval  
Québec City, QC

**Jean Gray**, C.M., FCAHS  
Professor of Medicine (Emeritus)  
Dalhousie University  
Halifax, NS

**Judith Hall**, O.C., FRSC, FCAHS  
Professor of Pediatrics and Medical Genetics  
University of British Columbia  
Vancouver, BC

**John Hepburn**, FRSC  
Vice-President of Research and International  
University of British Columbia  
Vancouver, BC

**The Honourable Donald J. Johnston**<sup>2</sup>  
Former Secretary-General of the OECD  
Montréal, QC

**Daniel Krewski**  
Professor of Epidemiology and Community  
Medicine and Scientific Director  
McLaughlin Centre for Population Health Risk  
Assessment  
University of Ottawa  
Ottawa, ON

**Norbert R. Morgenstern**, C.M., FRSC, FCAE  
Professor (Emeritus), Civil Engineering  
University of Alberta  
Edmonton, AB

**William Pulleyblank**<sup>2</sup>  
Professor of Operations Research  
US Military Academy, West Point  
New York, NY

**John P. Smol**, FRSC  
Co-Director of the Paleoecological  
Environmental Assessment and Research  
Laboratory  
Queen's University  
Kingston, ON

**Robert Watson**<sup>1</sup>  
Chief Scientific Advisory, Department for  
Environment, Food and Rural Affairs  
London, United Kingdom

**Joseph D. Wright**, FCAE  
Retired President and CEO, Pulp and Paper  
Research Institute (PAPRICAN)  
Gibsons, BC

<sup>1</sup> Joined SAC in FY 2011/12

<sup>2</sup> Left SAC in FY 2011/12

## Staff of the Council of Canadian Academies

*(As of March 31<sup>st</sup>, 2012)*

### Elizabeth Dowdeswell

President and CEO

### Tom Bursey

Vice-President, Corporate Services and CFO

### Michelle Auger<sup>1</sup>

Program Coordinator

### Janet Bax

Program Director

### Laura Bennett<sup>1</sup>

Researcher

### Dane Berry

Research Associate

### Anna Buczek<sup>1</sup>

Communications Specialist

### Kristen Cuccan

Program Coordinator

### Marc Dufresne

Research Associate and Translation  
Quality Control Officer

### Eleanor Fast

Program Director

### Erin Hearty<sup>1</sup>

Coordinator, Corporate Affairs

### Andrea Hopkins<sup>1</sup>

Program Coordinator

### Stefan Jungcurt<sup>1</sup>

Research Associate

### Tim Krywulak

Program Director

### Kelly Loverock

Coordinator, Communications and Website

### Fiona McArthur<sup>2</sup>

Research Associate

### Tracey McKinlay

Executive Assistant to the President

### Christina McMahon<sup>2</sup>

Program Coordinator

### Cate Meechan

Director, Communications

### Emmanuel Mongin

Research Associate

### Nancy Neil

Manager, Office Operations

### Renata Osika<sup>2</sup>

Program Director

### Samantha Rae

Manager, Communications

### Joe Rowsell<sup>1</sup>

Research Associate

### Jacquelyne Schoemaker Holmes<sup>1</sup>

Research Associate

### Wendy Shen

Program Coordinator

### Christina Stachulak

Senior Program Director

### Kori St. Cyr<sup>1</sup>

Research Associate

### Maria Trainer<sup>2</sup>

Program Director

### Weronika Zych<sup>1</sup>

Program Coordinator

<sup>1</sup> Joined the Council in 2011/2012

<sup>2</sup> Left the Council in 2011/2012

## Council Interns 2011-2012

**James Capotosto** (January 2012 – July 2012)

**Rebecca Chapman** (January 2012 – July 2012)

**Hariyanto Darmawan** (July 2011 – December 2011)

**Olena Luskotova** (July 2011 – December 2011)

**Jonathan Solomon** (January 2012 – July 2012)

**Jonathan Whiteley** (January 2012 – July 2012)

*\* Ranges of remuneration: for the fiscal year ending March 31, 2012, compensation was within the following salary ranges: Council Management (senior officers): President (\$180,000 – \$230,000), Vice-President, Corporate Services and CFO (\$110,000 – \$170,000), Director, Communications (\$100,000 – \$160,000). Employees whose remuneration exceeds \$100,000, including any fee, allowance or other benefits paid in year: Senior Program Director (\$100,000 – \$130,000).*

## Annex III – Financial Statements for 2011/12

**COUNCIL OF CANADIAN ACADEMIES STATEMENT OF FINANCIAL POSITION**  
**AS AT MARCH 31, 2012**

	<b>2012</b>	<b>2011</b>
<b>ASSETS</b>		
CURRENT		
Cash	\$ 818,961	\$ 668,433
Investments	16,590,922	20,489,536
Accounts receivable (note 7)	487,387	344,760
Prepaid expenses (note 10)	34,316	33,418
	17,931,586	21,536,147
CAPITAL (note 4)	198,363	253,748
	\$ 18,129,949	\$ 21,789,895
<b>LIABILITIES</b>		
CURRENT		
Accounts Payable	\$ 207,765	\$ 88,971
DEFERRED REVENUE (note 5)	260,000	
DEFERRED CONTRIBUTIONS (note 6)	17,662,184	21,700,924
NET ASSESTS (note 8)		
	\$ <b>18,129,949</b>	\$ <b>21,789,895</b>

**COUNCIL OF CANADIAN ACADEMIES STATEMENT OF OPERATIONS**  
**FOR THE YEAR ENDED MARCH 31, 2012**

	<b>2012</b>	<b>2011</b>
<b>REVENUE</b>		
Investment income	\$ 769,008	\$ 1,039,810
Add: grant revenue	3,921,220	2,928,991
Revenue from other sources	545,000	25,531
	<b>5,235,228</b>	<b>3,994,332</b>
<b>EXPENDITURE</b>		
Amortization	91,335	101,828
Assessment consultants	311,847	230,930
Central operations	323,642	298,820
Governance	151,856	106,181
Investment consultants	78,077	94,739
Panel meetings	945,979	577,373
Publications	385,076	224,610
Rent	394,708	378,384
Salaries and benefits	2,452,051	1,923,035
Other activities	100,657	58,432
	<b>\$ 5,235,228</b>	<b>3,994,332</b>
<b>EXCESS OF REVENUE OVER EXPENDITURES FOR THE YEAR</b>		

**COUNCIL OF CANADIAN ACADEMIES STATEMENT OF CASH FLOWS**  
**FOR THE YEAR ENDED MARCH 31, 2012**

	<b>2012</b>	<b>2011</b>
<b>CASH FLOWS FROM (USED FOR) OPERATING ACTIVITIES</b>		
Excess of revenue over expenditure for the year	\$	\$
Items not requiring an outlay of cash:		
Amortization	91,335	101,828
Unrealized loss (gain) on investments	117,518	306,839
Net change to non-cash items related to operations:		
Accounts receivable	(142,627)	(90,211)
Prepaid expenses	(898)	8,381
Accounts payable	118,794	(24,139)
Deferred revenue	260,000	
Deferred contributions	(4,038,740)	(3,235,830)
	(3,594,618)	(2,933,132)
<b>CASH FLOWS FROM (USED FOR) INVESTING ACTIVITIES</b>		
Purchase of capital assets	(35,950)	(78,254)
Redemption of investments	3,781,096	3,555,807
	3,745,146	3,477,553
<b>NET INCREASE IN CASH</b>	<b>150,528</b>	<b>544,421</b>
<b>CASH, BEGINNING OF YEAR</b>	<b>668,433</b>	<b>124,012</b>
<b>CASH, END OF YEAR</b>	<b>\$ 818,961</b>	<b>\$ 668,433</b>



## COUNCIL OF CANADIAN ACADEMIES NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2012

### 1. Organization's Purpose

The Council of Canadian Academies is a not-for-profit organization incorporated in April 2002 under the Canada Corporations Act and began operations in 2005.

The Council's main purpose is to provide a source of credible, independent, expert assessments and evidence based advice on the science that is relevant to matters of public interest, and to provide a voice for Canadians on behalf of the sciences on the national and international scene.

### 2. Significant Accounting Policies

#### CAPITAL ASSETS

Capital assets consisting of furniture and fixtures, computer equipment and software, and leasehold improvements are stated at cost. Amortization has been provided on the diminishing balance or straight line basis as follows with half of amortization taken in the year of acquisition:

Furniture and fixtures	30% per annum
Computer and software	45% per annum
Leasehold improvements	10 years

#### REVENUE RECOGNITION

The organization follows the deferral method of accounting for contributions. Restricted contributions are recognized as revenue in the year in which the related expenses are incurred. Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

#### INVESTMENTS

Investments are recorded at market value.

#### INVESTMENT INCOME

Investment income is recorded as earned.

Unrealized gains on investments are recognized as an increase in deferred contributions while unrealized losses on investments are recognized as a decrease in deferred contributions.

Investment income on investments is recorded as income on the statement of operations.

### 3. Financial Instruments

Financial instruments reflected in the statement of financial position consist of cash, investments, accounts receivable and accounts payable. The Council does not hold or issue financial instruments for trading purposes and does not hold or issue derivative financial instruments.

#### INTEREST RATE RISK

The Council is subject to cash flow risk with respect to its holdings of investments.

Bonds and term deposits, with market values of \$16,777,244 include Government of Canada, Provincial Government and Corporate Bonds with a carrying value of \$16,878,269. The bonds and term deposits mature at varying dates between June 1, 2012 and November 1, 2017.

Cash funds on deposit at an investment brokerage account receive interest at rates that fluctuate with bank prime.

### 4. Capital Assets

	<b>Cost</b>	<b>Accumulated Amortization</b>	<b>2012 Net Book Value</b>	<b>2011 Net Book Value</b>
Furniture and fixtures	\$ 363,115	\$ 293,875	\$ 69,240	\$ 94,879
Computer and software	295,184	213,851	81,333	101,903
Leasehold improvements	91,752	43,962	47,790	56,966
	<b>\$ 750,051</b>	<b>\$ 551,688</b>	<b>\$ 198,363</b>	<b>\$ 253,748</b>

### 5. Deferred Revenue

The Council entered into an agreement with the Ontario Ministry of Research and Innovation (ROI, Government of Ontario) to conduct an expert panel assessment on Ontario's Performance Innovation Driven Economy. During FY2011 2012 the Council received an initial amount \$450,000 to carry out that assessment. Of this revenue amount, \$260,000 was deferred to FY2012 2013.

### 6. Deferred Contributions

Grant revenue and interest revenue received that is in excess of expenses is deferred to offset expenses in future years. Included in deferred contributions is an unrealized cumulative loss on investments of \$101,024 (2011 unrealized cumulative gain \$16,494).

## 7. Accounts Receivable

Accounts receivable consists of trade receivables of \$95,000, GST receivable of \$192,376, and accrued interest of \$200,011 for a total of \$452,387.

## 8. Net Assets

The net assets of the organization are recorded at zero since all funding received is recorded as deferred contributions until expenses are incurred

## 9. Commitments

The organization entered into a 10-year lease commencing February 1, 2006, as well as office equipment contracts. As of January 1, 2010, the organization entered into a second lease agreement for additional continuous space for a three year period with an option for two additional years. The annual payments over the next four years are as follows:

2013	\$ 459,385
2014	314,853
2015	314,853
2016	253,895

## 10. Prepaid Expenses

Prepaid expenses consist of prepaid rent of \$20,492, a hotel deposit of \$4,000, D&O liability insurance of \$2,778, an Art Bank rental deposit of \$1,860, copier lease of \$2,171, prepaid postage of \$61, a three year software support contract of \$2,450 and commercial insurance policy of \$504 for a total of \$34,316.

## Annex 4 - Statement of Investment Policy

### Section I - Introduction

- 1.1 This document constitutes the Statement of Investment Policy (the “Policy”) applicable to the assets of the fund (the “Fund”) created by The Council of Canadian Academies (the “Council”) from proceeds of the Council’s \$30 million founding grant from the Government of Canada.
- 1.2 The purpose of this Policy is to formulate those investment principles, guidelines and monitoring procedures which are appropriate to the needs and objectives of the Fund, in a manner conforming to the funding agreement (the “Funding Agreement”) with the Minister of Industry on behalf of the Government of Canada.
- 1.3 Any investment manager or other party providing services in connection with the investment of the Fund shall accept and adhere to this Policy.

### Section II - Administration

- 2.1 The Board of Governors (the “Board”) of the Council has the ultimate responsibility to ensure that the Fund is invested and managed in accordance with the prudent person principle.
- 2.2 The Board is responsible for all aspects of the operations of the Fund including this Policy. The Investment Committee (the “Committee”) assists the Board in fulfilling its responsibilities.
- 2.3 The Committee is composed of at least three Governors who are not officers or employees of the Council. Members of the Committee shall be financially literate and have broad knowledge or experience in investment matters.
- 2.4 The custodian of the Fund (the “Custodian”) shall be a trust company duly registered in Canada or a financial institution in Canada. Assets of the Fund shall be segregated from all other assets of the Council and held by the Custodian in a separate account or accounts in accordance with an agreement that clearly indicates that the assets are held for the Council.
- 2.5 Where the Committee desires to invest in pooled funds or mutual funds (“Pooled Fund”) eligible for investment of the Fund, the Committee must satisfy itself that the investment policy of such Pooled Fund is consistent with this Policy.
- 2.6 Neither the Committee nor any employee of the Council shall select securities on behalf of the Fund except for the selection of Pooled Funds or short-term deposits with banks or trust companies.
- 2.7 The Committee and the Board may rely on independent experts for certain aspects of the Fund’s operations.

### Section III - Roles and Responsibilities

#### The Committee

- 3.1 The Committee shall:
  - (a) recommend a written Statement of Investment Policy to the Board;

- (b) recommend to the Board the appointment of one or more independent external advisors to provide investment advice (the “Investment Consultant(s)”<sup>1</sup>);
- (c) approve an Investment Strategy and review it at least annually;
- (d) recommend to the Board the appointment of one or more independent professional investment managers (the “Manager(s)”) to invest the Fund;
- (e) recommend to the Board the appointment of the Custodian;
- (f) regularly advise the Board on any significant financial risks or potential significant losses of investments;
- (g) monitor the activities and performance of the Fund; and
- (h) make other decisions that may be required to fulfill the terms of this Policy.

## The Board

### 3.2 The Board shall:

- (a) approve the Statement of Investment Policy;
- (b) approve the appointment of an Investment Consultant;
- (c) ensure that proper external custodial arrangements are established for the Fund; and
- (d) review the Policy at least annually.

## The Manager

### 3.2 The Manager shall:

- (a) invest the assets allocated to it in accordance with the Policy and the Investment Strategy;
- (b) comply with the terms of an Investment Manager Agreement (“Agreement”);
- (c) report to the Committee in writing on a quarterly basis in respect of its performance for the quarter, the investment holdings and transactions, the intended strategy for the following quarter, deviation from the intended strategy for the preceding quarter and compliance with the Policy, the Investment Strategy and the Agreement;
- (d) provide to the Committee upon appointment, and whenever changes occur thereafter, its policies and procedures relating to professional standards, conflicts of interest, internal controls and trading policies;
- (e) advise the Committee on an ongoing basis of any relevant changes in its organization, personnel or investment process; and

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<sup>1</sup> Defined as Investment Advisor in the Funding Agreement.

- (f) be available for meetings or discussions with the Committee on a reasonable basis.

### The Custodian

#### 3.4 The Custodian shall:

- (a) act under the terms of a custodial agreement;
- (b) hold custody of the assets of the Fund and execute transactions;
- (c) maintain records that are sufficient to allow the ownership of any investment to be traced to the Fund at any time; and
- (d) provide financial statements detailing all changes in the value of the Fund.

### The Investment Consultant

#### 3.5 The Investment Consultant shall:

- (a) prepare and deliver a report on the Fund and the Manager's performance to the Committee at least twice a year using investment returns calculated independently of the Manager;
- (b) advise the Committee of issues relating to the Fund and the Manager as they arise;
- (c) advise the Committee as requested, on other matters arising in the context of this Policy ; and

## Section IV - Fund Overview

- 4.1 The assets of the Fund were provided through a founding grant from the Government of Canada for the purpose of financing the core activities of the Council for a period of 10 years. It is the Council's responsibility to ensure that sufficient financial resources exist to deliver independent, expert assessments of the science that is relevant to important public issues.
- 4.2 It is expected that disbursements to cover eligible expenditures will exceed interest or other earnings from the Fund on an annual basis and that all assets will be fully disbursed at the end of the 10-year period. Therefore, sufficient liquidity to meet disbursements is an important consideration in the development of the Policy.

## Section V - Permitted Categories of Investment

- 5.1 From time to time, and subject to this Policy, the Fund may invest in any or all of the following asset categories and subcategories of investment either directly or through Pooled Funds which hold these investments:
  - (a) **“Fixed Income:”**
    - bonds and notes issued by the federal government, provincial governments, municipal governments and corporations
    - asset-backed securities
    - mortgage-backed securities



(b) **“Cash or Cash Equivalents”**

- bank certificates of deposit
- banker’s acceptances
- treasury bills, commercial paper and other short-term securities

5.2 The Fund may not invest or engage in the following categories of assets or instruments:

- (a) equities or shares issued by any corporation;
- (b) hedge funds or funds of hedge funds;
- (c) fixed-income instruments rated below A- by Standard & Poors or Fitch Ratings; A3 by Moody’s or A- by DBRS; Unrated securities will be assumed to fail such credit ratings;
- (d) derivatives or any instruments that have derivative holdings or features;
- (e) non-marketable securities;
- (f) commodities;
- (g) repurchase agreements against securities which are not permitted to be held in the portfolio; and
- (h) margin transactions or any form of leveraging.

5.3 The assets of the Fund shall not, directly or indirectly, be invested in securities of a listed person as defined by the United Nations Suppression of Terrorism Regulations, or loaned to or used for the benefit of such a person.

5.4 No part of the Fund shall be invested in securities that are not denominated in Canadian dollars

## Section VI - Asset Allocation

6.1 The primary objective is to reduce the uncertainty in the Fund’s ability to meet a schedule of disbursement to cover eligible expenditures. Maximizing return is a secondary objective. The objectives in the design of the Policy are:

- (a) maintaining the safety of capital;
- (b) ensuring adequate protection against inflation; and
- (c) maximizing the return on investment while staying within the constraints of the Funding Agreement.

6.2 The maturities and terms of investments shall reasonably match the profile of the Fund’s forecasted disbursements. To the extent that the timing of disbursements is unknown, investments shall be held in securities with term to maturity of one year or less.

6.3 The Policy mix between Cash or Cash Equivalents and Fixed Income will vary over time to reflect the anticipated disbursements and the remaining investment horizon.

- 6.4 The Fund performance will be assessed based on a customized benchmark using Scotia Capital indices weighted to approximate the modified duration of the disbursements.
- 6.5 The risks faced by the Council include:
- (a) the risk that long-term market returns will not be in line with expectations;
  - (b) the risk of annual volatility in returns, meaning that in any one year the actual return may be very different from the expected return (such return may also be negative); and
  - (c) to the degree that active management is employed, the risk that the added return expected of active management over passive management will not be realized, or will be negative.

## Section VII - Portfolio Diversification and Constraints

- 7.1 The Fund will maintain a prudent level of diversification, subject to the exclusions in 5.2, 5.3 and 5.4 and the limits listed below based on the market value of the Fund.
- 7.2 In respect of the Fixed Income portfolio of the Fund:
- (a) All securities must be readily marketable.
  - (b) Investments in the securities of any one issuer, or two or more affiliated entities, shall be limited to no more than 10% of the Fund except those issued or guaranteed by the Government of Canada or a province of Canada having at least an “A” rating.
  - (c) Investments in the securities with a credit rating of “A” (including all sub-classifications of this rating category) by at least one of the recognized credit rating agencies shall be limited to no more than 20% of the Fund.
  - (d) Investments in the securities with a credit rating of “AA” (including all sub-classifications of this rating category) by at least one of the recognized credit rating agencies shall be limited to no more than 70% of the Fund.
  - (e) Investment in securities that are not issued by, or carry the full faith and credit of either the Government of Canada or the government of a province shall be limited to no more than 80% of the Fund.
  - (f) Asset-backed securities shall be rated by a U.S. rating agency to ensure liquidity.
  - (g) Mortgage-backed securities shall be fully guaranteed by the Government of Canada or a province of Canada having at least an “A” rating.
- 7.3 All investments of the Fund in Cash Equivalents shall have a minimum credit rating of “R-1 (low)” or equivalent and be readily marketable or redeemable.
- 7.4 All debt ratings refer to the ratings of Dominion Bond Rating Service (DBRS) or comparable ratings of other major credit rating agencies. In the case of split-rated securities, the lowest rating by a major credit rating agency shall be used.
- 7.5 If a security’s credit rating falls below the required level after purchase, the Manager shall remove it from the Fund as soon as practicable, but taking care not to unduly impair performance. The Manager shall notify the Committee promptly in writing when such a rating change results in non-compliance.

## Section VIII - Loans and Borrowing

- 8.1 No part of the Fund shall be loaned to any party, other than by purchasing securities which otherwise meet the requirements of this Policy for Fixed Income or Cash Equivalents.
- 8.2 The Manager shall not borrow money, pledge or otherwise encumber any of the Fund's assets, except to the extent that temporary overdrafts occur in the normal course of day-to-day portfolio management.

## Section IX - Valuation of Investments

- 9.1 Investments in marketable securities shall be valued by the Custodian no less frequently than monthly at their market value at that time.
- 9.2 Investment in a Pooled Fund shall be valued according to the unit values calculated at least monthly by the custodian of that Pooled Fund. The Custodian shall be responsible for requesting and recording the unit values on a monthly basis.

## Section X - Conflicts of Interest

- 10.1 If a member of the Committee, or any agent of or advisor to the Committee, or any person employed in the investment or administration of the Fund has, or acquires, any material interest, direct or indirect, in any matter in which the Fund is concerned or may benefit materially from knowledge of, participation in, or by virtue of an investment decision or holding of the Fund, the person involved shall as soon as practicable, disclose in writing this potential conflict of interest to the Chair of the Committee. The Chair shall immediately advise all members of the Committee, and the Committee shall decide upon a course of action. Any such person will thereafter abstain from any decision making with respect to the area of conflict, unless otherwise determined by unanimous decision of the remaining members of the Committee.
- 10.2 A Manager shall provide the Committee with its internal guidelines on purchasing securities of members of the Manager's organization, affiliates, or entities in which the Manager or its affiliates have a substantial interest or in which any employee of the Manager or that employee's spouse or children have a substantial investment.
- 10.3 Every disclosure of interest under this Section shall be recorded in the minutes of the relevant Committee meeting.
- 10.4 The failure of a person to comply with the procedures, described in this Section, shall not of itself invalidate any decision, contract or other matter.
- 10.5 The Committee shall satisfy itself that an appropriate policy regarding conflicts of interest exists and is followed by any Manager. As a minimum, the Code of Ethics and Standards of Professional Conduct adopted by the CFA Institute shall be expected to apply to such Manager.

## SECTION XI - Monitoring

- 11.1 The Committee, in conjunction with its Investment Consultant, shall review on a regular basis, as needed, and at least once a year:
  - (a) the assets and net cash flow of the Fund;

- (b) the investment performance and management of the Fund and the Manager relative to the objectives of the Policy and of the Investment Strategy;
- (c) portfolio holdings;
- (d) the fees and expenses incurred in managing the Fund; and
- (e) compliance with this Policy and Investment Strategy.

Following such review, the Committee shall take such action as it deems prudent and appropriate.

- 11.2 The Committee, in conjunction with its Investment Consultant, shall meet at least once a year with the Manager to discuss investment performance, investment strategies, expected future performance and any changes in that Manager's organization, investment processes and professional staff.
- 11.3 The Committee shall evaluate whether any information discovered through the foregoing monitoring activities require specific communication to the Board.

## Section XII - Policy Review

- 12.1 This Policy shall be reviewed at least annually in order to determine whether any modifications are necessary or desirable. Such review shall include but not be limited to:
  - (a) changes in the expected projected expenditures of the Fund;
  - (b) revisions to the expected long-term trade-off between risk and reward;
  - (c) shifts in the financial objectives and risk tolerance of the Council;
  - (d) shortcomings of the Policy that emerge in its practical operation; and
  - (e) recommendations by a Manager.