



# Canadian Institutes of Health Research

2012-13

## **Departmental Performance Report**

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RONA AMBROSE  
MINISTER OF HEALTH



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## Minister's Message

As Minister of Health, I am pleased to present the *2012-2013 Canadian Institutes of Health Research's (CIHR) Departmental Performance Report*.

Our Government understands that a strong and vibrant research community plays a key role in improving the healthcare system and generating new economic opportunities. In the past 13 years, CIHR has steadily increased the impact of Canada's health research, demonstrating tangible benefits to Canadians, which has enhanced our country's reputation as an international leader in health science.



This year, CIHR released a design plan for a renewed Open Operating Grant Program and peer review process. Developed in close consultation with Canada's health research communities, these reforms are intended to ensure robust support for health research well into the future. Whether researchers are searching for the key to an HIV vaccine, or studying the fascinating world of the human microbiome, their work provides important information about the fundamentals of human health. We need to support researchers at all stages of their careers to pursue these questions.

CIHR drives innovation through investment in priority-driven research which mobilizes the research community and its partners. Health research and innovation make advances in healthcare possible and are very important to ensure the long-term sustainability of our healthcare system. That is why our Government has invested approximately \$1 billion in CIHR to support Canada's health researchers and innovations and is funding over 14,000 health researchers across Canada.

CIHR leverages the strengths of its multiple Institutes and private and not-for-profit partners to build on Canada's research strengths. Our Government launched CIHR's Strategy for Patient-Oriented Research (SPOR), which is designed to ensure that patients receive the right treatment, at the right time, by putting research in the hands of healthcare providers. SPOR will focus on health challenges identified as priorities in multiple provinces and territories and pursue research to help bridge the gap between research evidence and healthcare practice.

As CIHR continues to explore new approaches for identifying and supporting excellent health research, it strengthens Canada's healthcare system and improves the lives of all Canadians.

**The Honourable Rona Ambrose, PC, MP**

**Minister of Health**



## Section I: Organizational Overview

### Raison d'être

CIHR<sup>1</sup> is the Government of Canada's health research funding agency. It was created with a mandate<sup>2</sup> to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system.

### Responsibilities

CIHR was designed to respond to the evolving needs for health research and seeks to transform health research in Canada by:

- funding both investigator-initiated research as well as research on targeted priority areas;
- building research capacity in underdeveloped areas and training the next generation of health researchers; and
- focusing on knowledge translation that facilitates the application of the results of research and their transformation into new policies, practices, procedures, products and services.

CIHR integrates research through a unique interdisciplinary structure made up of 13 "virtual" institutes<sup>3</sup>. These institutes are not "bricks-and-mortar" buildings but communities of experts and stakeholders. Each Institute supports a broad spectrum of research in its topic area: biomedical; clinical; health systems and services; and the social, cultural and environmental factors that affect the health of populations. Institutes form national research networks linking researchers, funders and knowledge users across Canada to work on priority areas.

CIHR reports through the Minister of Health<sup>4</sup> and plays a key role in the Health Portfolio. As Canada's health research funding agency, CIHR makes an essential contribution to the Minister of Health's overall responsibilities by funding the research and knowledge translation needed to inform the evolution of Canadian health policy and regulation, and by taking an advisory role on research and innovation issues. This is achieved through an extensive and growing set of linkages with Health Canada<sup>5</sup> and the Public Health Agency of Canada<sup>6</sup>, providing decision makers with access to high-quality and timely health research.

CIHR works closely with the Natural Sciences and Engineering Research Council<sup>7</sup> (NSERC) and the Social Sciences and Humanities Research Council<sup>8</sup> (SSHRC), the two granting councils of the Industry Portfolio, to share information and coordinate efforts, harmonize practices, avoid duplication and foster multidisciplinary research. The three organizations (referred to as "tri-agency") provide a channel for the implementation of common policies, practices and approaches, whenever possible.

CIHR's Governing Council<sup>9</sup> (GC) sets the strategic direction of the agency and is responsible for evaluating its performance. Leadership on research, knowledge translation and funding for research is provided by the Science Council<sup>10</sup> (SC), while leadership on corporate policy and management is provided by the Executive Management Committee<sup>11</sup> (EMC).

## Strategic Outcome(s) and Program Alignment Architecture

CIHR's Program Alignment Architecture (PAA), approved by Treasury Board in May 2009, is shown in the figure below. The PAA consists of one strategic outcome and five Programs that support the strategic outcome. The performance information presented in Section II is organized according to this PAA structure, which also reflects recent nomenclature changes stemming from an update to the Policy on Management, Resources and Results Structures (MRRS).<sup>1</sup> This is the first year the DPR includes reporting at the Sub-Program level. In future years, the Sub-Sub-Program level will also be included.

Strategic Outcome 1.0 A world-class health research enterprise that creates, disseminates and applies new knowledge across all areas of health research				
Program 1.1: Health Knowledge	Program 1.2: Health Researchers	Program 1.3: Health Research Commercialization	Program 1.4: Health and Health Services Advances	Program 1.5: Internal Services
Sub-Program 1.1.1 Open Research Grant Program	Sub-Program 1.2.1 Salary Support Program	Sub-Program 1.3.1 Research Commercialization Program	Sub-Program 1.4.1 Institute Strategic Initiatives	
	Sub-Sub-Program 1.2.1.1 Open Salary Support Programs		Sub-Sub-Program 1.4.1.1 Strategic Initiatives Program	
	Sub-Sub-Program 1.2.1.2 Canada Research Chairs Program		Sub-Sub-Program 1.4.1.2 Institute Support Grants Program	
	Sub-Sub-Program 1.2.1.3 Canada Excellence Research Chairs Program		Sub-Sub-Program 1.4.1.3 HIV/AIDS Research Initiative	
			Sub-Sub-Program 1.4.1.4 Pandemic Preparedness Strategic Research Initiative	
			Sub-Sub-Program 1.4.1.5 National Anti-Drug Strategy Treatment Research Initiative	
			Sub-Sub-Program 1.4.1.6 Strategy for Patient-Oriented Research Initiative	
			Sub-Sub-Program 1.4.1.7 Drug Safety and Effectiveness Network Initiative	
Sub-Program 1.1.2 RCT* Program	Sub-Program 1.2.2 Training Support Program	Sub-Program 1.3.2 NCE** Program	Sub-Program 1.4.2 Knowledge Translation Programs	
	Sub-Sub-Program 1.2.2.1 Open Training Support Programs	Sub-Sub-Program 1.3.2.1 Networks of Centres of Excellence Program		
	Sub-Sub-Program 1.2.2.2 Sir Frederick Banting and Dr. Charles Best Canada Graduate Scholarships	Sub-Sub-Program 1.3.2.2 Business-Led Networks of Centres of Excellence Program		
	Sub-Sub-Program 1.2.2.3 Georges Philias Vanier Canada Graduate Scholarships Program	Sub-Sub-Program 1.3.2.3 Centres of Excellence for Commercialization and Research Program		

\*RCT: Randomized Controlled Trials

\*\*NCE: Networks of Centres of Excellence

<sup>1</sup> The Policy on MRRS recently underwent nomenclature changes that came into effect on April 1, 2012. Specifically: "Program Activity Architecture" becomes "Program Alignment Architecture" (PAA); "Program Activity" becomes "Program"; "Sub-Activity" becomes "Sub-Program"; and "Sub-Sub-Activity" becomes "Sub-Sub-Program."

## Organizational Priorities

In 2009, CIHR's GC approved CIHR's second strategic plan *Health Research Roadmap: Creating innovative research for better health and health care*<sup>12</sup> (2009-2014). This strategic plan is the product of widespread consultations with members of the health research community, careful assessment of Canada's strengths and weaknesses, and ongoing deliberation about what CIHR would like to achieve by 2014. *Roadmap* sets out a vision comprised of four strategic directions that are aligned with CIHR's corporate, business and operational priorities.

In 2010, CIHR implemented a rolling, three-year planning and reporting process for the implementation of *Roadmap*. The CIHR Three-Year Implementation Plan and Progress Report<sup>13</sup> highlights the activities to be delivered on the strategic directions outlined in *Roadmap*. The report is updated annually in order to continuously assess progress made on achieving CIHR's strategic goals and priorities. The following table is a summary of CIHR's progress against the commitments made in the 2012-13 Report on Plans and Priorities (RPP), which are directly linked to *Roadmap*.

### Summary of Progress Against Priorities

Priority	Type	Programs
Invest in World-Class Research Excellence	Ongoing	1.1 Health Knowledge 1.2 Health Researchers
<ul style="list-style-type: none"> <li>CIHR continues to make progress in the design and implementation of its new Open Suite of Programs and Peer Review Process<sup>14</sup>. The open reform is intended to ensure the long-term sustainability of CIHR's contribution to the Canadian health research enterprise and to improve CIHR's ability to deliver on its mandate. In 2012-13, the organization implemented a rigorous engagement strategy which involved face-to-face meetings across the country, written correspondences and web-based questionnaires. Feedback received through this engagement process has been used to refine the design and implementation plan of the reforms. CIHR continues to demonstrate its commitment to organizational excellence by keeping its research community informed of, and engaged in, the reform of the Open Suite of Programs and Peer Review Process.</li> <li>In 2012-13, CIHR continued to invest in the best ideas and brightest minds and enabled students to gain research experience by achieving its target of funding a minimum of 800 new multi-year grants. A total of 803 new grants received funding in 2012-13 through the Open Operating Grant Program Competitions<sup>15</sup>.</li> <li>In October 2012, CIHR brought Orphanet<sup>16</sup> to Canada. Orphanet is an online reference portal for information on rare diseases, with a comprehensive database containing information on diagnosis, care and treatment. Through Orphanet, clinicians and the families of the estimated 2.8 million Canadians with rare disorders will be able to access peer-reviewed information on rare diseases and a specialized services directory. Canada is the first country in the Americas to participate in this initiative.</li> <li>In 2012-13, CIHR and the Japan Science and Technology Agency<sup>17</sup> (JST) signed a partnership agreement to fund joint research projects on the epigenetics of stem cells. This field is a novel research area where both Canada and Japan demonstrate research excellence. The agreement was established under CIHR's Canadian Epigenetics, Environment and Health Research Consortium Signature Initiative<sup>18</sup> and JST's Strategic International Collaborative Research Program. The Canadian-Japanese research teams will pave the way to the eventual development of new therapeutics to improve human health.</li> </ul>		

Priority	Type	Program
Address Health and Health System Research Priorities	Ongoing	1.4 Health and Health Services Advances
<ul style="list-style-type: none"> <li>In 2012-13, CIHR carefully selected investments to capitalize on its areas of strengths and address gaps in research areas and communities by strategically investing in the Strategy for Patient-Oriented Research (SPOR)<sup>19</sup> and launching the</li> </ul>		

Pathways to Health Equity for Aboriginal Peoples signature initiative.

- The Strategy for Patient-Oriented Research is a pan-Canadian partnership involving health researchers and professionals, policy makers and patients. The goal of SPOR is to provide the right clinical intervention to the right patient at the right time, ultimately leading to better health outcomes and a better health system in Canada. A SPOR Executive Advisory Committee on training was created in 2012-13 to assess the current training options available and develop an overarching training and career development strategy to attract, retain and sustain patient-oriented researchers. This strategy will be available in the fall 2013. A SPOR Ethics External Advisory Committee, which was established to examine streamlining approaches for the ethical review of multisite clinical studies, delivered its final report with recommendations to the SPOR Working Group in February 2013.
- In June 2012, CIHR officially launched the Pathways to Health Equity for Aboriginal Peoples Signature Initiative<sup>20</sup>. The goal of this initiative is to develop a better understanding of how to implement and scale up interventions and programs that will address Aboriginal health inequities.
- In 2012-13, CIHR research continued to be recognized by provincial governments as useful and was used to inform executives, consultations and strategies at various levels. For example, the research evidence from CIHR-funded Expedited Knowledge Synthesis<sup>21</sup> grantees was acknowledged by the Ministry of Health for British Columbia<sup>22</sup> and was used in the development of briefings to its executives, to inform consultations with partners and stakeholders, as well as to draft and implement thoughtful, evidence-based action and planning. The Northwest Territories Department of Health and Social Services<sup>23</sup> also acknowledged that Evidence-Informed Healthcare Renewal (EIHR) funded research findings disseminated through Best Brains Exchange<sup>24</sup> were key in the development of their territorial call and medevac triage system.

Priority	Type	Programs
Accelerate the Capture of Health and Economic Benefits of Health Research	Ongoing	1.3 Health Research Commercialization 1.4 Health and Health Services Advances
<ul style="list-style-type: none"> <li>● In June 2012, a Guide to Knowledge Translation Planning at CIHR: Integrated and End-of-Grant Approaches, was published outlining CIHR's two approaches to knowledge translation: integrated knowledge translation and end of grant knowledge translation. In contrast to the diffusion, dissemination or application of results at the end of a grant, integrated KT is an approach that applies the principles of knowledge translation to the entire research process. Each stage in the research process is an opportunity for significant collaboration with knowledge users, including the development or refinement of the research questions, selection of the methodology, data collection and tools development, selection of outcome measures, interpretation of the findings, crafting of the message and dissemination of the results. Both approaches for knowledge translation have been captured by the CIHR Research Reporting System (RRS) (CIHR's end of grant reporting tool). The RRS was developed in order to obtain stronger evidence on the effectiveness of CIHR programs. In 2012-13, CIHR received close to 1,100 end-of grant reports through RRS thus strengthening CIHR's ability to demonstrate knowledge translation component of our mandate and the impact of CIHR research funding.</li> <li>● Through a joint CIHR/NSERC Collaborative Health Research Projects<sup>25</sup> grant, a team of researchers at the Montreal Neurological Institute<sup>26</sup>, McGill<sup>27</sup> and Western University<sup>28</sup> have developed an image-guided neurosurgery system (IGNS) that may reduce the risk of complications for patients undergoing brain surgery. IGNS systems use neural imaging and cognitive tests to create a "map" of the patient's brain prior to surgery. Dr. Louis Collins<sup>29</sup> and his colleagues have developed a more flexible and responsive IGNS that uses ultrasound images to update the "map" during surgery, allowing surgeons to adapt to slight movements in the brain.</li> <li>● Medical imaging is a critical and widely used tool in the health care system. CIHR and the Canada Foundation for Innovation<sup>30</sup> (CFI) released a joint study on one particular technology used for diagnosis of acute stroke, computed tomography (CT) perfusion. This study demonstrated that CIHR and CFI support accelerated the introduction of CT perfusion into clinical use by at least five years and the socio-economic impact has a net economic benefit of an estimated \$42 million to \$86 million from 2000 through 2011 which is directly attributable to CIHR and CFI.</li> <li>● In April 2012, CIHR and the Rx&amp;D Health Research Foundation<sup>31</sup> (HRF) announced a joint initiative to support research that will foster innovation in health care delivery. The initiative focuses on improving health care delivery from the patient's perspective and positioning research as close to patient values as possible. Applications will be co-led by researchers and health care decision makers, and will be required to demonstrate active patient involvement. This funding initiative is part of the national Strategy for Patient-Oriented Research.</li> </ul>		

Priority	Type	Program
Achieve Organizational Excellence, Foster Ethics and Demonstrate Impact	Ongoing	1.5 Internal Services
<ul style="list-style-type: none"> <li>• In 2012-13, a reorganization occurred at CIHR in which operations were streamlined and improved efficiencies were identified thus reducing CIHR's salary and employee benefit expenditures.</li> <li>• In the Summer of 2012, the presidents of the three granting agencies (CIHR, Social Sciences and Humanities Research Council of Canada<sup>32</sup>, and Natural Sciences and Engineering Research Council<sup>33</sup> committed to the further harmonization of awards at the tri-agency level. A tri-agency harmonization team was formed with the mandate of redesigning these master's and doctoral award programs in order to harmonize the allocation methodology, the application and electronic platform, the review process, the integration of performance measurement requirements as well as the post-award policies.</li> <li>• The 2011 CIHR International Review Report<sup>34</sup> identified a need to improve support from across the organization to the Institutes. To address this recommendation, CIHR developed a seven-month Institute Collaborative Teams Pilot Project in 2012-13 to reconfigure existing resources into three Institute clusters supported by three branches: Communications and Public Outreach, Partnerships &amp; Citizen Engagement, and Knowledge Translation. The evaluation of the pilot project, which was completed in November 2012, highlighted an improvement in the quality and efficiency of the three Institute clusters and helped reduce the complexity for stakeholders through improved communications.</li> <li>• CIHR's Investment Plan, as approved by the Treasury Board Secretariat, provides strategic information relating to the planning and management of its assets, acquired services and projects, and provides a high-level summary of our planned investments to support CIHR's mandate, within CIHR's reference levels for the five-year period 2012-13 to 2016-17.</li> </ul>		

## Risk Analysis

CIHR proactively identified, assessed and mitigated its corporate risks under the terms of the approved Corporate Risk Management Framework (Framework). The risk management governance structure contained in the Framework clearly defines the roles and responsibilities of risk owners, CIHR management, the Chief Risk Officer (CRO), Governing Council, and Audit Committee. The Framework also includes CIHR's Risk Management Policy, and describes the process and reporting requirements that have been established to develop and refresh CIHR's Corporate Risk Profile (CRP).

On a continuous basis, CIHR monitors and assesses both identified and potential risks. Throughout the year all risk owners are required to provide CIHR's CRO with updates to their risk mitigation strategies in order to ensure their overall strategy and implementation target dates are reasonable and meet the needs of the organization. In order to satisfy the governance and accountability requirements of the Framework, both Governing Council and the Audit Committee receive regular reports on the issues relating to risk management, as well as information on any material changes to the Corporate Risk Profile from the CRO.

In 2012-13 CIHR identified 16 risks, of which five were considered high risks requiring mitigation and monitoring. These five risks are outlined below.

### 2012-13 Risk Table:

Risk 1 - Health Research Roadmap Implementation	Link to Program Alignment Architecture	Link to Organizational Priorities
<p>In 2012-13 a risk was identified that CIHR may be unable to fully deliver on the reforms being made to the Open Suite of Programs, including changes to the peer review process. These changes are pivotal for the <i>Health Research Roadmap</i> Implementation. This includes the risk that external stakeholders do not understand or support the proposed changes to either the programs and/or peer review processes.</p>	<p>Strategic Outcome - A world-class health research enterprise that creates, disseminates and applies new knowledge across all areas of health research</p>	<p>Invest in World-Class Research Excellence</p>
<p><b>Risk Response Strategy:</b>                      The <i>Health Research Roadmap</i> implementation risk was identified in the 2012-13 RPP and 2012-13 CRP, and CIHR responded to this risk by:</p> <ul style="list-style-type: none"> <li>• Establishing a governance structure for the implementation of the reforms that includes an executive task force, an implementation team and a network composed of senior staff members and subject matter experts;</li> <li>• Completing an external stakeholder analysis and using the results to develop and implement an external stakeholder engagement and communication plan;</li> <li>• Developing and releasing a design discussion document<sup>35</sup> for CIHR's open programs and peer review reforms to support external engagement activities;</li> <li>• Publishing a report<sup>36</sup> outlining the feedback received on the proposed changes; and</li> <li>• Engaging with the broader research community to discuss the design and transition plans required to implement the reforms.</li> </ul> <p>While progress has been made on the approved mitigation strategies, the impact, if the risk is not properly addressed, could result in loss of credibility from both key external and internal stakeholders and the public at large. As a result, the <i>Health Research Roadmap</i> implementation continues to be a high risk and is actively managed by CIHR on an ongoing basis.</p>		

Risk 2 - Knowledge Translation	Link to Program Alignment Architecture	Link to Organizational Priorities
Given CIHR's lack of direct control over factors influencing the uptake and use of the research it funds, in 2012-13 a risk was identified that CIHR may not be able to fully achieve the knowledge translation (KT) component of its mandate and improve the health of Canadians through health research.	Program 1.3 - Health Research Commercialization Program 1.4 - Health and Health Services Advances	Accelerate the Capture of Health and Economic Benefits of Health Research
<p><b>Risk Response Strategy:</b>                      The Knowledge Translation risk was identified in the 2012-13 RPP and 2012-13 CRP. CIHR responded to the risk by:</p> <ul style="list-style-type: none"> <li>• Implementing a Policy on Access to Research Outputs<sup>37</sup> which promotes open access to research results, aimed at increasing the ability of researchers in Canada and abroad to access, use and build on the knowledge needed to address significant health challenges;</li> <li>• KT has been integrated into a new organizational structure at CIHR with the goal to better promote cross-function and integration;</li> <li>• Many of the CIHR institutes and initiatives have incorporated KT into their strategic plans and/or have developed specific KT strategies. KT staff actively engage with institutes to provide support as needed;</li> <li>• There is currently a core suite of KT and commercialization funding tools with dedicated budget; and</li> <li>• KT strategies are explicitly being considered within the design and implementation of the reforms of the open suite of programs and peer review.</li> </ul> <p>Knowledge Translation remains a high risk for CIHR and a renewed risk mitigation strategy has been developed.</p>		

Risk 3 - Results Management and Monitoring	Link to Program Alignment Architecture	Link to Organizational Priorities
Performance reporting and evaluation are time-consuming, costly and at times burdensome to target audiences. In 2012-13, a risk was identified that CIHR may be unable to optimally and efficiently evaluate and report on its performance as well as the results of funded research, which will compromise our ability to be accountable to Canadians.	Program 1.5 Internal Services	Achieve Organizational Excellence, Foster Ethics and Demonstrate Impact
<p><b>Risk Response Strategy:</b>                      The Results Management and Monitoring risk was identified in the 2012-13 RPP and 2012-13 CRP. CIHR responded to the risk by:</p> <ul style="list-style-type: none"> <li>• Refreshing and approving a new five-year Evaluation Plan that will assess all of CIHR's programming;</li> <li>• Developing improved performance measurement strategies for CIHR programs and a renewal and updating of CIHR's Strategic Outcome and Program Alignment Architecture which began in 2012-13;</li> <li>• Ongoing completion of planned evaluations including the timely implementation of recommendations by management; and</li> <li>• Implementing of the Research Reporting System<sup>38</sup>.</li> </ul> <p>Results Management and Monitoring remains a high risk for CIHR. An updated mitigation strategy has been developed for 2013-14 and it is anticipated that once this strategy is implemented the risk will be reduced to medium.</p>		

Risk 4 - Institute Organizational Model	Link to Program Alignment Architecture	Link to Organizational Priorities
<p>Due to the Institute virtual organizational model, in 2012-13 CIHR identified a risk of disruptions and corporate memory loss during the transition period from the outgoing Scientific Director (SD) to the incoming. This may compromise the Institutes' abilities to achieve planned outcomes or their mandate in support of CIHR's strategic objectives.</p>	<p>Program 1.4 Health and Health Services Advances Program 1.5 Internal Services</p>	<p>Address Health and Health System Research Priorities Achieve Organizational Excellence, Foster Ethics and Demonstrate Impact</p>
<p><b>Risk Response Strategy:</b> The Institute Organizational Model risk was identified in the 2012-13 RPP and 2012-13 CRP. CIHR responded to this risk by:</p> <ul style="list-style-type: none"> <li>• Implementing an institute transition plan and renewal schedule, with the Institute Advisory Board and the Ottawa-Based Institute Staff who remain in place during transitions, and a three month overlap of SDs and host institute staff. This institute transition plan includes an SD renewal process and SD training program.</li> </ul> <p>The Institute Organizational Model risk could result in disruption to an Institute's business during the transition period (approximately 2 years); and not achieving the planned outcomes that each of the Institutes SDs commit to in their annual plan which could be critical for CIHR's business operations and strategic objectives.</p>		
Risk 5 - Budgeting	Link to Program Alignment Architecture	Link to Organizational Priorities
<p>Given the diversity of expectations of the research community and CIHR's current budget, there is the possibility that CIHR will not have the flexibility to fully address the needs of the health research community as well as Canadians.</p>	<p>Strategic Outcome - A world-class health research enterprise that creates, disseminates and applies new knowledge across all areas of health research</p>	<p>Address Health and Health System Research Priorities Achieve Organizational Excellence, Foster Ethics and Demonstrate Impact</p>
<p><b>Risk Response Strategy:</b> The Budgeting risk was identified in 2012-13 RPP and 2012-13 CRP and CIHR responded to this risk by:</p> <ul style="list-style-type: none"> <li>• Establishing a strategic investment planning and approval processes to ensure all investment proposals demonstrate alignment, impact and sustainability.</li> <li>• Establishing an integrated operational planning process and a vacancy management process;</li> <li>• Tracking and monitoring performance outcomes related to research and operational support activities; and</li> <li>• Putting controls in place to ensure discretionary spending is held within the limits set by Government.</li> </ul>		

## Summary of Performance

### 2012-13 Total CIHR Financial Resources (\$ millions)

Total Budgetary Expenditures (Main Estimates) 2012-13	Planned Spending 2012-13	Total Authorities (available for use) 2012-13	Actual Spending (authorities used) 2012-13	Difference* (Planned vs. Actual Spending)
977.9	977.9	1,008.1	997.1	19.2

\* For explanations on spending variances please see the Spending and FTE Variance Explanations section that follows.

### 2012-13 Total CIHR Human Resources (full-time equivalents [FTEs])

Planned 2012-13	Actual 2012-13	Difference* (Planned vs. Actual FTEs) 2012-13
418	404	14

\* For explanations on FTE variances please see the Spending and FTE Variance Explanations section that follows.

## Summary of Performance Tables

### Performance Summary Table for Strategic Outcome and Programs (\$ millions)

Strategic Outcome: A world-class health research enterprise that creates, disseminates and applies new knowledge across all areas of health research

Program	Total Budgetary Expenditures (Main Estimates 2012-13)	Planned Spending			Total Authorities (available for use 2012-13)	Actual Spending (authorities used)			Alignment of Programs to Government of Canada Outcomes <sup>39</sup>
		2012-13	2013-14	2014-15		2012-13	2011-12	2010-11	
1.1 Health Knowledge	451.6	451.0	473.3	473.2	452.4	483.0	470.5	468.5	Healthy Canadians <sup>40</sup>
1.2 Health Researchers	194.1	195.0	172.9	171.2	185.3	173.1	182.8	195.7	
1.3 Health Research Commercialization	43.3	42.0	53.6	45.4	64.7	52.3	56.0	53.1	
1.4 Health and Health Services Advances	261.1	260.9	253.8	252.6	276.0	260.9	268.0	275.4	
Strategic Outcome Sub-Total	950.1	948.9	953.6	942.4	978.4	969.3	977.3	992.7	

## Performance Summary Table for Internal Services (\$ millions)

Internal Services	Total Budgetary Expenditures (Main Estimates 2012-13)	Planned Spending			Total Authorities (available for use 2012-13)	Actual Spending (authorities used)		
		2012-13	2013-14	2014-15		2012-13	2011-12	2010-11
	27.8	29.0	27.8	26.4	29.7	27.8	31.8	34.2
<b>Internal Services Sub-Total</b>	27.8	29.0	27.8	26.4	29.7	27.8	31.8	34.2

## Total Performance Summary Table (\$ millions)

Strategic Outcome and Internal Services	Total Budgetary Expenditures (Main Estimates 2012-13)	Planned Spending			Total Authorities (available for use 2012-13)	Actual Spending (authorities used)		
		2012-13	2013-14	2014-15		2012-13	2011-12	2010-11
	977.9	977.9	981.4	968.8	1,008.1	997.1	1,009.1	1,026.9
<b>Total</b>	977.9	977.9	981.4	968.8	1,008.1	997.1	1,009.1	1,026.9

## Spending and FTE Variance Explanations

CIHR's Total Authorities of \$1,008.1M in 2012-13, have seen an increase of \$30.2M compared to its planned spending. The increase in Total Authorities is primarily the result of funding received through Budget 2012. This includes \$15.0M for CIHR's Strategy for Patient-Oriented Research. CIHR also received additional funding for the fourth round of grants of the Centres of Excellence for Commercialization and Research (\$14.3M), and the Business-Led Networks of Centres of Excellence grants received \$7.8M.

There was a net increase of approximately \$3.0M in transfers from or to other government departments for key initiatives such as Aboriginal health, influenza research and population health interventions. The remaining \$4.5M increase was the result of a \$2.1M operating budget carry forward from the previous year and \$2.4M in technical adjustments to cover employee severance, salaries and other related benefits and entitlements.

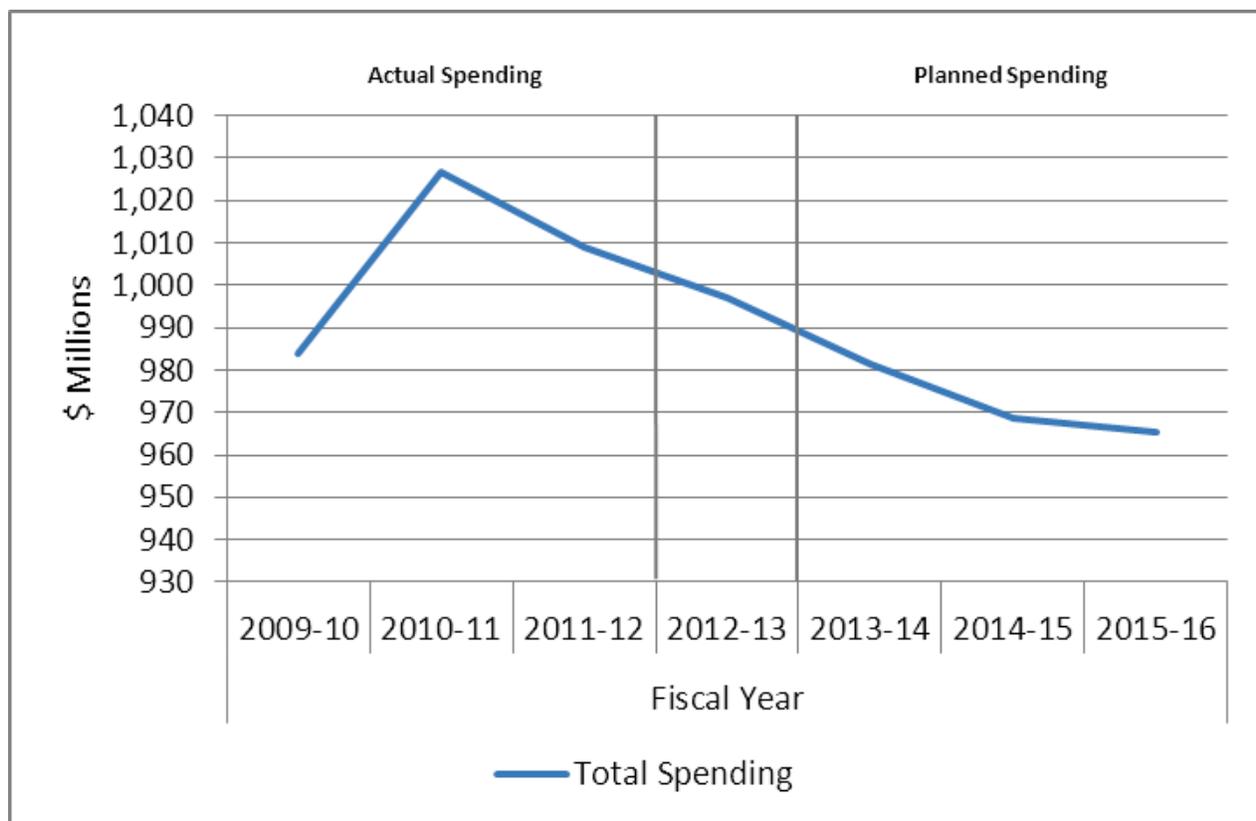
These increases in Total Authorities are offset by a \$14.4M decrease as a result of the streamlining of operations and the implementation of improved efficiencies. The savings measures implemented included reductions to CIHR's tri-agency programs (\$9.1M), the wind-up of the Regenerative Medicine and Nanomedicine initiatives (\$3.1M), and the streamlining of CIHR's operations (\$2.2M).

In 2012-13, CIHR's actual expenditures totalled \$997.1M, which was \$11.0M less than its Total Authorities. CIHR has requested Treasury Board approval to reprofile \$7.7M of these unspent funds to future fiscal years for the Centres of Excellence for Commercialization and Research and the Business-Led Networks of Centres of Excellence grants. CIHR is also carrying forward \$2.4M in unspent authorities from its operating expenditure vote to the 2013-14 fiscal year.

Planned FTEs were higher than actual FTEs due to the streamlining of operations and the implementation of efficiency measures.

## Expenditure Profile

### Departmental Spending Trend



CIHR's actual spending increased from \$983.8M in 2009-10 to reach \$1,026.9M in 2010-11, and then decreased to \$1,009.1M in 2011-12. Actual spending for 2012-13 was \$997.1M. In the absence of new funding, total planned spending will decrease annually in 2013-14, 2014-15, and 2015-16 as indicated in the graph above.

The variations in departmental spending from \$983.8M in 2009-10 to \$1,009.1M in 2011-12 are mainly due to several permanent increases to CIHR's budget announced in Federal Budgets over this period, coupled with incremental funding for targeted programs such as the Canada Excellence Research Chairs (\$7.7M), the Drug Safety and Effectiveness Network (DSEN) (\$5.1M), the Vanier Canada Graduate Scholarships (\$5.1M) and the Banting Postdoctoral Fellowships (\$1.6M).

Other reasons for the variance include variations in annual funding for two of CIHR's tri-agency programs, the Centres of Excellence for Commercialization and Research (CECR) (\$14.3M) and the Business-Led Networks of Centres of Excellence (BL-NCE) (\$7.8M). CIHR's share of these tri-agency programs' funding is not fixed but rather determined by the results of program competitions. Therefore, the decrease in planned spending in future fiscal years could be offset by additional authorities granted for upcoming CECR and BL-NCE competitions.

## Estimates by Vote

For information on CIHR's organizational Votes and/or statutory expenditures, please see Public Accounts of Canada 2013 (Volume II).<sup>41</sup> An electronic version of the Public Accounts 2013 is available on the Public Works and Government Services Canada website.<sup>42</sup>

## Strategic Environmental Assessment

During 2012-13, CIHR considered the environmental effects of initiatives subject to the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals<sup>43</sup> and did not produce any public statements.

## Section II: Analysis of Programs and Sub-Programs by Strategic Outcome

### Strategic Outcome

A world-class health research enterprise that creates, disseminates and applies new knowledge across all areas of health research.

CIHR supports health research in order to improve the health of Canadians and to deliver more effective health care services to Canadians.

CIHR uses peer review processes to identify exemplary projects and individuals that merit funding. In 2012-13, approximately 3000 peer reviewers provided their time, without remuneration, and served on 238 peer review committee meetings to help review over 12,919 applications. Without the voluntary support from this community of experts, CIHR would not have the necessary financial and human resources needed to review the applications with the intellectual rigor needed to ensure relevancy and scientific excellence.

#### Investing in Optogenetics Research

Funded by CIHR, the University of Alberta's Dr. Gregory Funk\* is using an exciting new technology called optogenetics, a fusion of genetics and optics technology, to explore the brain activity behind the most basic human function: breathing in and out. Optogenetics involves inserting light-sensitive opsin genes into cells and then using a laser to literally switch cells on or off to see what functions they perform. Dr. Funk is using the technology to advance the understanding of brain cells called glia.

Until recently, researchers believed glial cells played a minor, supportive role to neurons. Now scientists think a subset of glial cells called astrocytes play important roles in the processing of information and are vital for brain functions such as regulating breathing. The clinical implications of Dr. Funk's investigations are significant. For example, premature babies, with their underdeveloped nervous systems, often have bouts of apnea, periods when they momentarily stop breathing. This can cause hypoxia, a deficiency in the flow of oxygen to organs and the brain that is potentially fatal. By using optogenetics to activate or deactivate astrocytes, Dr. Funk hopes to eventually come up with a better way to prevent these life-threatening apneas.

\* <http://www.physiology.ualberta.ca/People/FacultyMembers/GregFunk.aspx>

## Program 1.1: Health Knowledge

### Program Description:

This program aims to support the creation of new knowledge across all areas of health research to improve health and the health system. This is achieved by managing CIHR's open competition and related peer review processes based on internationally accepted standards of scientific excellence.

### 2012-13 Financial Resources and Human Resources (FTEs)

Financial Resources (\$ millions)					Human Resources (FTEs)		
Total Budgetary Expenditures (Main Estimates) 2012-13	Planned Spending 2012-13	Total Authorities (available for use) 2012-13	Actual Spending (authorities used) 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
451.6	451.0	452.4	483.0	32.0	81	109	28

### 2012-13 Performance Results

Program Expected Results	Performance Indicators	Targets	Actual Results
Health research advances knowledge.	Outputs and impacts of CIHR-funded research.	Maintain or increase	CIHR met the 2012-13 target by increasing expenditures to \$468.7M, which is an increase over the 2011-12 result of \$459.7M. For details concerning the impacts of this result, please see the Investing in Optogenetics Research box as well as the Performance Analysis and Lessons Learned Section for Sub-Program 1.1.1 Open Research Grant Program.

### Performance Analysis and Lessons Learned

The variance between planned spending and actual spending of \$32.0M is largely due to the high number of quality applications received via the Open Operating Grant Program (OOGP), as well as an in-year reallocation from Program 1.2 to the OOGP. The variance between planned and actual FTEs is related to an internal reorganization at CIHR during 2012-13, a number of FTE's were re-assigned to better align with the organization's shifting priorities and the correlating decrease of staff can be seen in Program 1.2 for example.

CIHR provided funding to support research in all areas of health and achieved its target of providing 800 new multi-year grants through two open competitions in March and September. In 2012-13, CIHR funded a total of 803 new multi-year grants for a total committed value of \$ 479.8M. CIHR received and reviewed a total of 4,617 applications through these two grant competitions.

CIHR invested \$468.7M in the Open Operating Grant Program<sup>44</sup> in 2012-13, as compared to \$459.7M in 2011-12, an increase of 1.9%. In 2012-13, CIHR supported a total of 3,967 multi-year grants through the OOGP as compared

to 3,946 in 2011-12. The average annual grant payment increased from \$116,507 in 2011-12 to \$118,148 in 2012-13.

In an effort to optimize the peer review system within the OOGP, CIHR developed a triage and streamlining approach which was piloted during the spring 2012 OOGP competition. By triaging a set proportion of the applications based on their initial scores, committee reviewers were able to spend less time on applications found to have little chance of being funded and more time discussing grants that required full discussion (normally those applications that fell within the grey zone, which are a cohort of applications that typically fall between the funding cut-off and the ceiling). By spending more time on these applications, committee reviewers were able to improve the efficiency with which the final rankings within the committee are determined. This new approach is now employed throughout CIHR's open programs.

### Sub-Program 1.1.1 Open Research Grant Program

#### Program Description:

The Open Research Grant Program provides operating funds to support research proposals in all areas of health research. The Open Operating Grant Program is the largest component of this program. Competitions are typically held each March and September with an open call for research proposals, with no restrictions on areas of research or maximum level of requested funds.

#### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
420.6	470.4	49.8	76	106	30

#### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Health research is conducted and translated.	Number of publications from CIHR-supported research	Maintain or increase	In 2012-13 CIHR-supported research publications totalled 5,751 which is an unexpectedly large increase over the 2011-12 result of 2,858. CIHR believes the main reason for this apparent increase in publications is an improvement to the tracking methodology resulting from the implementation of our Research Reporting System.
	Knowledge Translation activities of funded researchers	Maintain or increase	In 2012-13 there were 22,069* KT activities. This is a significant increase over the 2011-12 results of 6,444. CIHR believes the main reason for this apparent increase in KT

			activities is an improvement to the tracking methodology resulting from the implementation of our Research Reporting System.
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\* KT activities could include number of published journal articles, number of presentations, number of interviews in mass media (includes print, broadcast, and internet), and the sample size is 629 research reports that span grant expiry dates between April 1, 2009, and March 31, 2013.

## Performance Analysis and Lessons Learned

For variance explanations regarding spending and FTEs please see Program 1.1 Health Knowledge.

All open and strategic programs at CIHR require end of grant reporting. In 2012-13, the Research Reporting System, which is an end-of-grant reporting module collecting information from CIHR-funded researchers on the results of their grant(s), received close to 1,100 reports which were mainly from grants in CIHR's Open Operating Grant Program. Data from RRS<sup>45</sup> for grants with expiry dates between April 1st, 2009 and March 31, 2013 received in 2012-13 stated that these grants produced 5,751 journal publications. The data from RRS for the same period also indicated that 22,069 KT activities by researchers occurred, including 10,756 presentations and 5,562 interviews.

Researchers supported by CIHR thought the OOGP have made significant contributions to the advancement of knowledge. For example, in an annual report, ScienceWatch<sup>46</sup>, a web resource for science analysis run by Thomson Reuters<sup>47</sup>, monitors researchers according to citations during 2012. This report has declared Dr. Salim Yusuf's, who has worked on 19 CIHR grants, to be one of the hottest researchers<sup>48</sup> based on the number of highly cited papers (Dr. Yusuf has 11 highly cited papers). Another example, captured by CIHR's RRS in 2012-13, is Dr. R.A. Hegele, a researcher who has been active for almost three decades, recently acknowledged the contribution CIHR has made towards supporting his research. Dr. Hegele has an H-index<sup>49</sup> of 52 (meaning that 52 of his publications have at least 52 citations each, as per Scopus 16-07-2013<sup>50</sup>). He has been receiving continuous CIHR funding since 1998 and believes that his publication and citation record provides the strongest validation of the lab's research. He reported that the research results of his CIHR-supported project have resulted in several national and international research awards, produced 58 original articles and 27 review articles since 2004. He also reported in his 2012-13 RRS report that as of December 31, 2011, these articles have been cited 1,163 times demonstrating knowledge translation resulting from CIHR funding.

Evaluations were completed for two components of the Sub-Program Open Research Grant Program. This included a summative evaluation of the Interagency Advisory Panel and Secretariat on Research Ethics<sup>51</sup> which was completed in 2009 and an evaluation of the Open Operating Grant Program<sup>52</sup> completed in 2012.

## Sub-Program 1.1.2 Randomized Controlled Trials Program

### Program Description:

The Randomized Controlled Trials Program supports experiments to evaluate the efficiency and effectiveness of interventions in health or health services by randomly assigning individuals to receive or not receive one or more interventions that are being compared. The results are analyzed by comparing outcomes in the different groups.

### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
30.4	12.6	17.8	5	3	2

### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
High-quality evidence on the efficacy and effectiveness of interventions in health and health services	Evidence produced by funded trials	All completed trials have demonstrated whether or not interventions under study are effective or not	Not available. As of June 2009, CIHR's Randomized Controlled Trials Program has been integrated into the Open Research Grant Program and therefore, cannot be reported separately.

### Performance Analysis and Lessons Learned

The variances for actual spending and FTEs related to Sub-Program 1.1.2 Randomized Controlled Trials (RCT) are due to the winding down of the remaining grant commitments from previous years as the program integrates with the Open Research Grant Program. The correlating increase in spending and FTEs can be found in Sub-Program 1.1.1 Open Research Grant Program and Program 1.1 Health Knowledge.

An example of the impact of CIHR funding is the establishment of the Ontario Best Practices Research Initiative<sup>53</sup> (OBRI). The OBRI is a collaboration of rheumatology stakeholders representing rheumatologists, patients, researchers and others. The mission of the OBRI is to provide the optimal use of treatments for the management of Ontarians living with Rheumatoid Arthritis (RA). CIHR funded the initial protocol which was designed as a prospective controlled study comparing the real world effectiveness of biologics to traditional disease-modifying antirheumatic drugs in adults with RA residing in Ontario. Today OBRI has 58 rheumatologists recruiting patients and 2289 patients have been referred. Those who consent to participate in OBRI are now followed for a minimum of five years. The overall goal of the OBRI was originally limited to a pharmacology platform to assess the long-term effectiveness, sustainability and safety of pharmacologic treatments for RA in actual practice (with expansion to other types of inflammatory arthritis (IA)). The evolution of the OBRI research platform has now been extended to inform policy and clinical decision making through clinical practice monitoring and other interventions targeted to health system efficiencies.

## Program 1.2: Health Researchers

### Program Description:

This program aims to build health research capacity to improve health and the health system by supporting the training and careers of excellent health researchers through a competitive peer review process based on internationally accepted standards of scientific excellence.

### 2012-13 Financial Resources and Human Resources (FTEs)

Financial Resources (\$ millions)					Human Resources (FTEs)		
Total Budgetary Expenditures (Main Estimates) 2012-13	Planned Spending 2012-13	Total Authorities (available for use) 2012-13	Actual Spending (authorities used) 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
194.1	195.0	185.3	173.1	21.9	33	15	18

### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
A strong and talented health research community with the capacity to undertake health research.	Number of graduate trainees in Canada compared to international levels*.	Maintain or increase international ranking.	CIHR met the 2012-13 target by increasing the number of PhD graduates in Canada per 100,000 aged 25-29 increased from 191 graduates per 100,000 in 2005 to 226 in 2010. Canada is ranked 6th out of the G7 for PhD graduates in per 100,000 population aged 25-29.
	Number and fields of investigators and trainees funded.	Maintain number and diversity (by theme and Institute domain) of trainees funded.	CIHR closely met the 2012-13 target by funding 2,538 investigators and trainees in all areas of research in all themes** (as opposed to 2,797 in 2011-12).

\* Source: Organization for economic co-operation and development (OECD) Statistic; 2013.

\*\* Calculated using a distinct count of the number of active personal identification number of researchers and trainees with a role as nominated principal investigator, principal investigator, or co-investigator on a grant or award that received a payment from CIHR in 2011-12 as per Program 1.2.

### Performance Analysis and Lessons Learned

The variance between planned spending and actual spending of \$21.9M is related to the Canada Research Chairs (CRC) program and the streamlining of operations and the implementation of improved efficiencies, as well as an in-year reallocation of unspent authorities from the CRC program to the Open Operating Grant Program (under Program 1.1). The variance between planned and actual FTEs is related to an internal reorganization at CIHR during 2012-13, a number of FTEs were reassigned to other programs to better align with the organization's shifting priorities.

CIHR provides funding to support health researchers throughout their graduate training and beyond.

Through various competitions in 2012-13, CIHR provided funding for 762 new awards (training and salary combined). These awards represent a total commitment of \$138.4M which includes expenditures of \$31.2M by CIHR in 2012-13 to support trainees and health researchers.

Additionally, over 1,300 trainees are currently being supported through the CIHR Strategic Training Initiative in Health Research (STIHR)<sup>54</sup>, which was launched in 2008. An evaluation of STIHR<sup>55</sup> was completed in 2008.

In 2012-13, CIHR continued to support diversity by funding excellence in all areas of its mandate (by theme and Institute-specific research area). The total number of investigators supported by CIHR decreased from 2,797 in 2011-12 to 2,538 in 2012-13. The relative drop of researchers and trainees supported by CIHR in 2012-13 can be attributed to the winding down of temporary funding resulting from Canada's Economic Action Plan (EAP)<sup>56</sup>, which provided an additional 400 Canada Graduate Scholarship (CGS)<sup>57</sup> master's scholarships in 2009 and 2010 competitions. EAP also provided an additional 200 doctoral scholarships each year from 2009 to 2012.

## Sub-Program 1.2.1 Salary Support Program

### Program Description:

The Salary Support Program provides salary support to help new health researchers develop their careers and devote more time to initiating and conducting health research.

### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
125.6	111.5	14.1	21	10	11

### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Excellent health researchers available to undertake health research	Types and number of health researchers funded	Maintain or increase	CIHR met the 2012-13 target by supporting the following number of new health researchers: <ul style="list-style-type: none"> <li>• 38 new investigators (less than 5 years into their career)</li> <li>• 60 new investigators (less than 10 years into their career)</li> <li>• 32 new senior investigators (more than 10 years into their career)</li> </ul>
	Number of fundable applicants who are funded	Maintain or increase	CIHR nearly met the 2012-13 target by funding 921 health researchers which is a decrease compared to the 969 health researchers supported in 2011-12. The relative decrease of researchers and trainees supported by CIHR in

			2012-13 is attributable to the temporary funding from Canada's Economic Action Plan (EAP) coming to an end.
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### Performance Analysis and Lessons Learned

For explanations on spending and FTEs please see Program 1.2 Health Researchers.

In 2012-13, CIHR invested through the Salary Support Program \$109.2M by funding 921 health researchers, in an effort to build research capacity to improve health and the health system. A total of 130 new awards were provided, representing a total commitment of \$85.3M over the next 8 years which includes expenditures of \$10.8M in 2012-13 to support health researchers.

CIHR through the Open Salary Support Programs, in 2012-13 funded a total of 38 new investigators which provided these outstanding new investigators with the opportunity to develop and demonstrate their independence in initiating and conducting health research through provision of a contribution to their salary. These new awards represent a total commitment of \$11.8M over the next 6 years, which includes expenditures of \$1.5M in 2012-13.

Furthermore, CIHR funded 92 new awards through the Canada Research Chairs Program (CRC)<sup>58</sup>; this represents a total commitment of \$73.5M over the next 8 years, including expenditures of \$9.4M in 2012-13 to attract and retain some of the world's most accomplished and promising researchers. CIHR provides two levels of Awards: Tier 1 Chairs are for outstanding researchers acknowledged by their peers as world leaders in their fields, and Tier 2 Chairs are for exceptional emerging researchers, acknowledged by their peers as having the potential to lead in their field. CIHR awarded a total of 32 new Tier 1 Chairs (for \$5.1M) and 60 new Tier 2 Chairs (for \$4.3M) in 2012-13.

Evaluations completed for this Sub-Program include: the Salary/Career Award Programs<sup>59</sup> in 2012 and the Canada Research Chairs program<sup>60</sup> in 2010.

### Sub-Program 1.2.2 Training Support Program

**Program Description:**

The Training Support Program provides support and special recognition to PhD, post-PhD or post health professional degree students who are training in health research areas in Canada or abroad.

#### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
69.4	61.6	7.8	12	5	7

## 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Highly trained individuals available for health research	Numbers of trainees completing degrees or fellowship programs	Maintain or increase	CIHR mostly met the target of developing capacity of highly trained researchers in health research by supporting 1,467 trainees. Access to data on degree completion is limited. CIHR implemented an end-of-grant reporting system which will allow for future reporting on this indicator.

## Performance Analysis and Lessons Learned

For explanations on spending and FTEs please see Program 1.2 Health Researchers.

In 2012-13, CIHR through the Training Support Program invested \$60.7M by funding 1,467 trainees including master's, doctoral, postdoctoral or (post) health professional degrees in Canada and abroad. Through these competitions, 632 new awards were offered which represent a total commitment of \$53.0M over the next 6 years and includes expenditures of \$20.3M in 2012-13 to support highly trained individuals.

The Vanier Canada Graduate Scholarships program was launched in fiscal year 2008-09 and was created as a tri-agency program, in partnership with SSHRC and NSERC. The purpose of this program is to strengthen Canada's ability to attract and retain the world's top-tier doctoral students. In the 2012-13 competition, CIHR funded 53 new Vanier Canada Graduate Scholarship<sup>61</sup> awards, 13 of these awards were given to foreign citizens. These recipients are world-class doctoral students who demonstrate a high standard of scholarly achievement in graduate studies as well as leadership skills.

In 2012-13, CIHR also funded 23 new Banting Postdoctoral fellowships<sup>62</sup> awards 5 of which were awarded to foreign citizens. These recipients are all top-tier national and international postdoctoral fellows. The Banting fellowships will enable them to develop their leadership potential, will position them for success as research leaders of tomorrow, and will contribute to Canada's economic, social and research-based growth through support of research-intensive careers.

In 2011-12, the presidents of Canada's three federal granting agencies approved the creation of a joint Vanier Banting Secretariat. Since its inception, the Vanier Banting Secretariat has greatly improved communication channels and increased program delivery efficiencies through the harmonization of processes, guidelines and policies which came to effect in 2012-13.

Finally, CIHR invested \$9.3M through the Canada Graduate Scholarships (CGS)<sup>63</sup> program in order to support the learning and development of its health research trainees by awarding 174 new doctoral awards and 180 new master's awards.

An evaluation of the Canada Graduate Scholarships<sup>64</sup> program was completed in 2009.

## Program 1.3: Health Research Commercialization

### Program Description:

This program aims to support and facilitate the commercialization of health research to improve health and the health system. This is achieved by managing funding competitions to provide grants, in partnership with the private sector where relevant, using peer review processes based on internationally accepted standards of scientific excellence, and by building and strengthening the capacity of Canadian health researchers to engage in the commercialization process.

### 2012-13 Financial Resources and Human Resources (FTEs)

Financial Resources (\$ millions)					Human Resources (FTEs)		
Total Budgetary Expenditures (Main Estimates) 2012-13	Planned Spending 2012-13	Total Authorities (available for use) 2012-13	Actual Spending (authorities used) 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
43.3	42.0	64.7	52.3	10.3	7	7	0

### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Commercial activity – products (patents and intellectual property), companies and employment generated.	Outputs and impacts of funded research.	Evidence that some work of CIHR funded researchers resulted in some of these long-term impacts	CIHR mostly met the 2012-13 target with expenditures totalling \$52.3 million. This is a slight decrease from the 2011-12 spending of \$55.3M. For details concerning the impacts of this result, please see the Performance Analysis and Lessons Learned below.

### Performance Analysis and Lessons Learned

Planned spending was \$10.3M less than actual spending, primarily due to the fact that throughout the year CIHR received additional funding of \$22.1M to fund the fourth round of grants for the Centres of Excellence for Commercialization and Research (CECR) and for the Business-Led Networks of Centres of Excellence (BL-NCE) grants. This \$22.1M increase in funding received was offset by a request to reprofile \$7.7M in funds to 2013-14. The impact on funding was minimized by a further decrease of \$1.6M related to the BL-NCE program.

In 2012-13, CIHR spent a total of \$52.3M which represents 181 grants in Health Research Commercialization programs, including 100 new grants funded totalling \$68.4M in new commitments and expenditures of \$26.4M. In 2011-12 CIHR spent a total of \$55.3M in Health Research Commercialization. Therefore expenditures decreased by 5.8% for 2012-13.

CIHR also took over the administration of the joint CIHR/NSERC program, the Collaborative Health Research Projects (CHRP). The NSERC-partnered CHRP program supports innovative interdisciplinary collaborative research projects with a strong KT component and requiring participation from the natural sciences or engineering community together with the health sciences community. In 2012-13, CIHR funded 37 CHRP new grants for a total commitment of \$10.9M.

CIHR launched Phase 1 and Phase 2 of the Proof of Principle (POP) competition in fall 2012 which resulted in 31 new grants and a total commitment of \$5.1M in funding.

CIHR-funded research has had a positive impact on the commercialization of new health products. For example a new pharmaceutical developed by CIHR-funded researcher Dr. Daniel Drucker of Mount Sinai Hospital's Lunenfeld-Tanenbaum Research Institute<sup>65</sup> has been approved by the U.S. Food and Drug Administration to treat patients with short bowel syndrome. The drug, called teduglutide or Gattex®, is marketed by NPS Pharmaceuticals and represents the first advance in a long-term treatment option for the debilitating condition in almost 40 years. Short bowel syndrome occurs in patients who have had half or more of their small intestine removed – usually due to Crohn's disease, trauma, ischemic bowel injury or bowel cancer. As a result, patients cannot absorb enough water, vitamins and nutrients and must rely on intravenous feeding for provision of nutrients and to maintain hydration. The new drug promotes repair and normal growth of the intestinal lining, decreases energy loss and increases nutrient absorption. In follow-up long-term clinical studies, one in seven patients treated with teduglutide were able to discontinue intravenous nutrition. Dr. Drucker is internationally renowned for his work in the field of gut hormones and their role in diabetes, obesity and inflammatory bowel disorders.

### Sub-Program 1.3.1 Research Commercialization Program

#### Program Description:

The Research Commercialization Program is comprised of a suite of funding initiatives that aim to support the creation of new knowledge, practices, products and services and to facilitate the commercialization of this knowledge.

#### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
17.0	13.9	3.1	3	3	0

#### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Health research is commercialized more effectively	Outputs and impacts of funded research	Maintain or increase	CIHR achieved over 80% of its target in 2012-13, with expenditures totalling \$13.9 million. This is a decrease from the 2011-12 spending of \$16.8 million. For details concerning the impacts of this sub-program, please see the Performance Analysis and Lessons Learned section below.

#### Performance Analysis and Lessons Learned

For explanations on spending variances please see Program 1.3 Health Research Commercialization.

In 2012-13, CIHR spent a total of \$13.9M in Research Commercialization programs, which represents 164 grants. CIHR's Proof of Principle Program aims to facilitate and improve the commercial transfer of knowledge and technology resulting from academic health research for the benefit of Canadians.

Other reports from program managers and other sources show that CIHR-funded research has had a positive impact on the commercialization of new health products. An example is a potential cancer treatment using a virus to kill cancer cells. Dr. Patrick Lee is using a naturally occurring, benign virus that does not cause any major illnesses in humans and is proving effective against cancer cells. Since 1998, when he identified the reovirus as a cancer killer in mice, Dalhousie University<sup>66</sup> virologist Dr. Patrick Lee has steadily expanded the understanding of how the virus infects a cancer cell. The reovirus replicates within a cancer cell to produce thousands of particles that eventually rupture it. The released virus particles then seek out neighboring cancer cells to repeat the process, leaving normal cells untouched. Dr. Lee's current work adds further evidence that the virus also works to stimulate the body's immune system to attack tumours. Oncolytics Biotech Inc. of Calgary, whose Chief Operating Officer, Dr. Matt Coffey, co-authored the original 1998 paper with Dr. Lee, is working to bring the reovirus to the clinic with a therapy called Reolysin®. The company is conducting a 14-country Phase III clinical trial – the last step before securing approval to take a new treatment to market – using intravenously administered Reolysin in combination with chemotherapy to kill head and neck tumours.

An evaluation of the College and Community Innovation Program<sup>67</sup> under this Sub-Program was completed in 2013.

### Sub-Program 1.3.2 Networks of Centres of Excellence (NCE) Program

**Program Description:**

The Networks of Centres of Excellence Program supports the networking of centres of research excellence with industrial know-how and strategic investment to turn Canadian research and entrepreneurial talent into economic and social benefits for Canada. The Networks of Centres of Excellence Program is national in scope, multidisciplinary and involve multisectoral partnerships.

#### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
25.0	38.4	13.4	4	4	0

#### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
World-class networks and centres connect leading-edge research with industrial know-how and strategic investment	Significant demonstration of impacts	100% of networks demonstrate impacts by year 4	CIHR met this target given the fact that all networks demonstrated significant impact. For details concerning the impacts of this sub-program, please see the Performance Analysis and Lessons Learned section below.

	Ratio of partner contributions to NCE funding by networks at year 4	Greater than or equal to 1	CIHR exceeded this target with a ratio of partner contribution greater than 1.
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### Performance Analysis and Lessons Learned

For explanations on spending variances please see Program 1.3 Health Research Commercialization.

CIHR's NCE Sub-Program includes the Networks of Centres of Excellence (NCE); Centres of Excellence for Commercialization and Research (CECR)<sup>68</sup> and the Business-Led Networks of Centres of Excellence program<sup>69</sup> (BL-NCE). CIHR administered \$38.4M in grants and awards during 2012-13 which is equivalent with 2011-12. For NCE specifically, CIHR funded 17 grants and awards in 2012-13.

Reports from program managers and other sources show that partnerships fostered by the tri-agency Networks of Centres of Excellence (NCE) program meets its objectives. The 2011-12 NCE report<sup>70</sup> (which is the most recently published report) demonstrated that the NCE had a significant impact with 267 patent applications filed; 145 new products and 87 licences granted or under negotiation. Overall, tri-agency investment in the NCE demonstrated an increased capacity to develop, to test and to accelerate promising technologies to new products and innovations.

The 2011-12 NCE report demonstrates that the NCE, CECR and BL-NCE are very effective tools for stimulating private sector investment in research innovation. Overall, the ratio of partner contributions to NCE funding is \$1.59 for every NCE dollar and exceeds the target of greater than or equal to 1.

Various evaluations of the activities contained in this Sub-Program have been completed over the past few years including: the Centres of Excellence for Commercialization and Research Program<sup>71</sup> in 2012; the Business-Led Networks of Centres of Excellence program<sup>72</sup> in 2012; and two evaluation reports in 2009 of the Networks of Centres of Excellence program's International Partnerships Initiative<sup>73</sup> and New Initiatives<sup>74</sup>.

## Program 1.4: Health and Health Services Advances

### Program Description:

Through the competitive peer review process based on internationally accepted standards of scientific excellence, this program aims to support the creation of new knowledge in strategic priority areas and its translation into improved health and a strengthened health system.

### 2012-13 Financial Resources and Human Resources (FTEs)

Financial Resources (\$ millions)					Human Resources (FTEs)		
Total Budgetary Expenditures (Main Estimates) 2012-13	Planned Spending 2012-13	Total Authorities (available for use) 2012-13	Actual Spending (authorities used) 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
261.1	260.9	276.0	260.9	0.0	106	86	20

### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Translation and use of health research takes place.	Impacts of CIHR funded research	Anecdotal evidence that work of CIHR funded researchers resulted in some long-term impacts	For details concerning the anecdotal evidence of CIHR funded researchers of this program, please see the Performance Analysis and Lessons Learned section below.

### Performance Analysis and Lessons Learned

Planned FTEs were higher than actual FTEs due to an internal reorganization which resulted in operations being streamlined and improved efficiencies being implemented.

CIHR has many funding mechanisms which were used in 2012-13 to facilitate all aspects of KT from knowledge synthesis to uptake. Below are examples from both signature and institute initiatives of how some of these tools have been successful in pushing knowledge from 'bench to bedside to best-practice'.

CIHR's Evidence-Informed Healthcare Renewal (EIHR)<sup>75</sup> signature initiative aims to provide timely and high-quality evidence on how best to finance, sustain and govern provincial, territorial and federal health care systems. In 2012-13, 57 integrated knowledge translation (KT) projects were funded totaling \$3.9M, aimed at addressing priority topics identified by health policy and decision makers. An EIHR Roundtable<sup>76</sup>, to facilitate health care renewal discussions and sharing of information among more than 30 organizations continued in 2012-13. Participating organizations created a "one-stop-shop" repository<sup>77</sup> of health care renewal evidence, facilitated by CIHR. This repository is a good example of a strong network for sharing of health care renewal evidence. Furthermore, EIHR-funded researchers produced seven knowledge syntheses which are currently being disseminated to stakeholders through various KT means for maximum uptake and impact.

In June 2012, researchers funded by the Institute of Circulatory and Respiratory Health<sup>78</sup> announced a web-based tool allowing physicians to estimate the risk of dying within seven days of presentation to hospital among acute heart

failure patients. Use of this tool can reduce the admission rate for cardiovascular disease- Canada's leading cause of hospitalization.

Finally, as part of CIHR's Inflammation in Chronic Disease<sup>79</sup> Signature Initiative, the Canadian National Transplant Research Program<sup>80</sup> (CNTRP) was launched in 2013, uniting transplant researchers with critical care research communities in an effort to develop new knowledge and health care practices which will address barriers to tissue and organ donation, thus improving health outcomes for transplant recipients in Canada. To date, 105 researchers across 9 provinces have collaborated to address barriers to donation, increase the number and quality of available organs, and improve quality of life and long-term survival rates of patients. Funding is provided through CIHR, in partnership with various national and provincial services and foundations, as well as industry, hospital and academic partners.

CIHR recognizes the importance of identifying lessons learned and using the potentials of its experience by evaluating challenges of these programs or processes in order to take corrective actions or to develop future directions. CIHR put emphasis on creating a vision to demonstrate management's engagement of continuous improvement. For instance, by being open to new and innovative partnerships that CIHR could not have anticipated when the initiative started, CNTRP will result in a higher number of partners than originally anticipated. This vision allows CIHR to be more effective, efficient and receptive to unplanned, innovative partnership initiatives.

### Sub-Program 1.4.1 Institute Strategic Initiatives

#### Program Description:

The Institute Strategic Initiatives program is led by CIHR's 13 Institutes and funds grants and awards to support research and researchers in priority areas to address strategic health opportunities, threats and challenges to Canadians. The Institutes identify these strategic priority research areas in consultation with stakeholders from government, health care, patient and community groups, and industry. Proposals are solicited from researchers by issuing a Request for Applications outlining the specific theme/area where research is needed. Applications are peer reviewed using criteria specific to the funding opportunity.

#### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
240.7	238.0	2.7	98	78	20

#### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Health research is conducted, translated and used in priority areas	Outputs and impacts of funded research and success against objectives	Maintain or increase	CIHR met the 2012-13 target by funding 2,310 strategic initiative grants, which is an increase over the 2011-12 result of 2,260. For details concerning the impacts of this sub-program, please see the Performance Analysis and Lessons Learned section below.

## Performance Analysis and Lessons Learned

Planned FTEs were higher than actual FTEs due to an internal reorganization which resulted in operations being streamlined and improved efficiencies being implemented.

In an effort to achieve CIHR's goal of addressing health and health system research priorities, CIHR created signatures<sup>81</sup> and strategic initiatives<sup>82</sup> to attain greater focus and impact from our strategic investments. CIHR signature and strategic initiatives achieved the following in 2012-13:

- CIHR and partners funded 12 Community-Based Primary Health Care<sup>83</sup> innovation teams.
- As part of the International Collaborative Research Strategy for Alzheimer's Disease<sup>84</sup> signature initiative, CIHR launched the Canadian Consortium on Neurodegeneration in Aging<sup>85</sup>.
- CIHR announced the results of a major \$150.0M partnership with Genome Canada<sup>86</sup>; part of the Personalized Medicine Signature Initiative<sup>87</sup>. Seventeen projects in total have been approved for funding, which will focus on the application of genomics to tailor patient treatments and therapies in fields as diverse as epilepsy, autism, HIV/AIDS, cancer, cardiovascular disease, rare neurological diseases, and stroke, among others.
- CIHR invested \$23.5M in strategic HIV/AIDS research grants and capacity building programs through its HIV/AIDS Research Initiative<sup>88</sup>, supported by the Federal Initiative to Address HIV/AIDS in Canada and the Canadian HIV Vaccine Initiative.
- Drug Safety and Effectiveness Network<sup>89</sup> (DSEN) research was taken up by decision makers<sup>90</sup>. For example, a study by the DSEN-funded Canadian Collaboration for Drug Safety, Effectiveness and Network Meta-Analysis informed a therapeutic review by the Canadian Agency for Drugs and Technologies in Health on the treatment of atrial fibrillation, contributing several key messages on the use of new oral anticoagulants<sup>91</sup>.
- CIHR invested in several research projects on Multiple Sclerosis (MS). As an example, CIHR led a national coalition supporting a Phase I/II clinical trial on Chronic Cerebrospinal Venous Insufficiency (CCSVI) in individuals living with MS. The clinical trial, which began on November 1, 2012, has a total budget of approximately \$6.0M over four years. This study will determine whether the procedure is safe and efficient for MS patients.
- The Global Alliance for Chronic Disease<sup>92</sup> (GACD), a consortium of medical and health research funders including CIHR, has agreed to fund 15 teams from 19 countries to tackle the global health issue of hypertension, for a total investment of \$23.0M. GACD-funded teams came together in Ottawa for the first annual meeting of the joint technical steering committee in 2012.
- CIHR launched the Patient-Oriented Network in Adolescent and Youth Mental Health in October 2012. The network is the first launched under the Strategy for Patient-Oriented Research<sup>93</sup>, which aims to improve the health care system and health outcomes by providing the right clinical intervention to the right patient at the right time. The network is a \$25.0M collaborative effort between CIHR and the Graham Boeckh Foundation<sup>94</sup>.

## Sub-Program 1.4.2 Knowledge Translation Programs

### Program Description:

The Knowledge Translation (KT) Programs consist of a suite of funding opportunities that aim to support the synthesis, dissemination, exchange and ethically sound application of knowledge in any area of health research. These programs support the science of KT, capacity development in KT science, and integrated KT- collaborative research which involves researchers and knowledge users working together to address relevant research questions and to exchange and apply knowledge to help solve health and health system problems.

### 2012-13 Financial Resources – Sub-Program Level and Human Resources (FTEs)

Financial Resources For Program Sub Level (\$ millions)			Human Resources (FTEs)		
Planned Spending 2012-13	Actual Spending 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
20.2	22.9	2.7	8	8	0

### 2012-13 Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
Health research is translated more effectively	Number of knowledge translation activities supported by CIHR (and its partners where relevant) or resulting from CIHR activities (e.g. synthesis papers, briefs, participation in policy task forces, etc.)	Maintain or increase	CIHR met the 2012-13 target with an average of 16.9 KT activities per grant.
	Number of stakeholders engaged in CIHR KT	Maintain or increase	As part of the KT programs, participation for stakeholders is required and therefore based on the evaluation outlined below CIHR engaged 373 stakeholders through 373 grants between 2005 and 2010.
	Outputs and impacts of funded research and success against objectives	Maintain or increase	CIHR mostly met the 2012-13 target by funding 538 knowledge translation grants, which is a decrease from the 2011-12 result of 671. The decrease is a result of the winding down of some of the funding opportunities which were transferred to the Open Operating Grant Program.

## Performance Analysis and Lessons Learned

In 2012-13, CIHR supported 538 Knowledge Translation grants and spent \$21.9M on Knowledge Translation Programs as compared to \$27.8M in 2011-12. The decrease from \$27.8M in 2011-12 to \$21.9M in 2012-13 is mostly attributable to 2011-12 representing the last year of three-year funding to pilot the Knowledge Translation Supplement Grant Program, which represented an investment of \$5.9M in 2011-12. An evaluation of the knowledge translation programs began in 2012-13, and data collected to date shows that during the period from 2005 to 2010, an average of 16.9 KT activities per grant could be estimated from the 373 grants supported through three integrated knowledge translation programs (Partnerships for Health System Improvement<sup>95</sup> (PHSI), Knowledge Synthesis, and Knowledge to Action).

The integrated knowledge translation programs require the participation of a knowledge user throughout the research process; these individuals are often decision makers who are in a position to influence policy or practice. This eligibility requirement lets us presume that a minimum of 373 stakeholders were engaged. In addition, the PHSI program requires a minimum partnership contribution (cash or in-kind). These design elements help leverage funds/resources and/or facilitate collaboration between researchers and individuals or organizations with the goal to move health research into policies, practices, products or services.

An evaluation was completed in 2012-13, and the final report will be published in 2013-14. The findings of this report will be used to ensure the strengths of the Knowledge Translation programs are captured in CIHR's new open suite program design.

## Program 1.5: Internal Services

### Program Description:

Internal Services are groups of related activities and resources that are administered to support the needs of programs and other corporate obligations of an organization. These groups are: Management and Oversight Services; Communications Services; Legal Services; Human Resources Management Services; Financial Management Services; Information Management Services; Information Technology Services; Real Property Services; Materiel Services; Acquisition Services; and Travel and Other Administrative Services. Internal Services include only those activities and resources that apply across an organization and not to those provided specifically to a program.

### 2012-13 Financial Resources and Human Resources (FTEs)

Financial Resources (\$ millions)					Human Resources (FTEs)		
Total Budgetary Expenditures (Main Estimates) 2012-13	Planned Spending 2012-13	Total Authorities (available for use) 2012-13	Actual Spending (authorities used) 2012-13	Difference (Planned vs. Actual Spending) 2012-13	Planned 2012-13	Actual 2012-13	Difference (Planned vs. Actual FTEs) 2012-13
27.8	29.0	29.7	27.8	1.2	191	187	4

### Performance Analysis and Lessons Learned

Planned spending was slightly higher than actual spending primarily due to a \$1.0M reduction in CIHR's operating budget as a result of the streamlining of operations and the implementation of improved efficiencies. CIHR also carried forward \$2.4M of its operating budget to 2013-14. These decreases were offset by additional funding of \$2.3M for technical adjustments to cover employee salaries and other related benefits. The remainder of the reduction is due to operating efficiencies and reduced costs for peer review.

CIHR was able to achieve significant savings with respect to its operating expenditures during 2012-13. In 2012-13, total operating expenditures decreased by approximately \$2.1M (or 3.6%) in comparison to 2011-12 due to an internal reorganization at CIHR in which operations were streamlined and improved efficiencies were identified, thus reducing CIHR's salary and employee benefit expenditures. CIHR was also able to significantly reduce both hospitality expenditures (12.0%) and travel expenditures (3.4%) as compared to the 2011-12 fiscal year through its expanded use of virtual peer review meetings.

In order to address the changing focus of CIHR's work, recent budgetary reductions and increasing complexity of both external partnerships and funding opportunities, the Research and Knowledge Translation Portfolio at CIHR underwent a major reorganization. As a result of the reorganization, the Platforms and Major Initiatives (PMI) Branch was created with the major goal of increasing internal capacity to develop, manage and monitor large-scale strategic initiatives and enhance performance measurement tools and practices. This will allow CIHR to better monitor the progress of significant strategic investments and provide ongoing feedback to both grant recipients and CIHR governance bodies. Ultimately, it will contribute to CIHR's overarching goal to improve the health of Canadians and the efficiency and effectiveness of the health care system.

In 2012-13, CIHR's Evaluation Unit conducted a comprehensive evaluation which determined that the OOGP is succeeding in its primary role of supporting knowledge creation, reporting that researchers funded by the program produce publications with a greater scientific impact than the health research average for Canada. The program also

plays a significant role in supporting capacity development in Canada's health research sector. The evaluation determined that an average of 8.61 research staff are trained on each open operating grant. Based on available data, the total number trained for all grants is estimated at 81,175 OOGP research staff between 2000 and 2010. The report has provided valuable and timely input into the current open suite program reform process for the OOGP.

## Section III: Supplementary Information

### Financial Statements Highlights

#### Condensed Statement of Operations and Departmental Net Financial Position

<b>Canadian Institutes of Health Research</b> <b>Condensed Statement of Operations and Departmental Net Financial Position</b> <b>(Unaudited)</b> <b>For the Year Ended March 31, 2013</b> <b>(\$ millions)</b>					
	2012-13 Planned Results	2012-13 Actual	2011-12 Actual	\$ Change (2012-13 Planned and Actual)	\$ Change (2012-13 Actual vs. 2011-12 Actual)
Total expenses	990.9	1,011.9	1,020.5	(21.0)	(8.6)
Total revenues	12.6	16.0	14.8	(3.4)	1.2
Net cost of operations before government funding and transfers	978.3	995.9	1,005.7	(17.6)	(9.8)
Departmental net financial position	1.6	0.3	(0.5)	1.3	0.8

Overall, total planned expenses are \$21.0M lower than actual expenses incurred in 2012-13. This is primarily due to additional funds received throughout the year through the supplementary estimates. CIHR received an additional \$15.0M through Budget 2012, as well as additional funding of \$22.1M for the Centres of Excellence for Commercialization and Research and for the Business-Led Networks of Centres of Excellence grants. There was an aggregate increase of \$3.0M due to various net transfers from or to other government departments. The remaining increase is due to a \$2.1M operating budget carry forward from the previous year and \$2.3M in technical adjustments to cover employee severance, salaries and other related benefits and entitlements. These increases were offset by a \$14.4M net decrease to CIHR's 2012-13 budget as a result of the streamlining of operations and the implementation of improved efficiencies.

Overall, total actual expenses decreased by \$8.6M in 2012-13 compared to 2011-12. This is primarily due to the EAP funding of \$6.9M coming to an end related to the Canada Graduate Scholarships program (program continues), the Pandemic Research Initiative (\$2.4M) not being renewed and increased expenses of \$0.6M in the Vanier Canada Graduate Scholarships.

Actual total revenue was higher than the prior year actual and higher than planned as a result of more money being received than expected from collaborators during the fiscal year to fund programs.

## Condensed Statement of Financial Position

<b>Canadian Institutes of Health Research Condensed Statement of Financial Position (Unaudited) As at March 31, 2013 (\$ millions)</b>			
	<b>2012-13</b>	<b>2011-12</b>	<b>Change</b>
Total net liabilities	12.1	15.1	(3.0)
Total net financial assets	9.3	10.8	(1.5)
Departmental net debt	2.8	4.3	(1.5)
Total non-financial assets	3.1	3.8	(0.7)
Departmental net financial position	0.3	(0.5)	0.8

Total net liabilities and net financial assets decreased by \$3.0M and \$1.5M, respectively, over the prior year, having a positive impact on the Departmental net debt. These corresponding decreases resulted directly from the following:

- CIHR's termination of employee severance provisions and payments made to employees during 2012-13, which resulted in a decreased liability of \$1.5M;
- Recognition of additional revenues in 2012-13, whereby CIHR disbursed funds on behalf of external parties to fund additional health research grants and awards, which resulted in a decreased liability of \$2.4M; and
- The decrease in assets is primarily a result of the overall reduction in liabilities noted above as well as the increased amortization of tangible capital assets in 2012-13.

## Financial Statements

CIHR's 2012-13 Audited Financial Statements can be found on the CIHR website<sup>96</sup> and form an integral part of the Annual Report. Included with this year's audited financial statements are the:

1. Statement of Management Responsibility Including Internal Control Over Financial Reporting;
2. Financial Statements and notes; and
3. Annex: Summary of the Assessment of Effectiveness of the Systems of Internal (with Action Plan).

## List of Supplementary Information Tables

All electronic supplementary information tables listed in the 2012-13 Departmental Performance Report can be found on CIHR website<sup>97</sup>.

- ▶ Details on Transfer Payment Programs
- ▶ Greening Government Operations
- ▶ Internal Audits and Evaluations
- ▶ Sources of Respendable and Non-Respendable Revenue

## Tax Expenditures and Evaluations Report

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance publishes cost estimates and projections for these measures annually in the Tax Expenditures and Evaluations publication<sup>98</sup>. The tax measures presented in the Tax Expenditures and Evaluations publication are the sole responsibility of the Minister of Finance.

## Section IV: Other Items of Interest

### Organizational Contact Information

Canadian Institutes of Health Research  
160 Elgin Street, 9<sup>th</sup> Floor  
Address Locator 4809A  
Ottawa, Ontario  
K1A 0W9

Email: [info@cihr-irsc.gc.ca](mailto:info@cihr-irsc.gc.ca)  
Telephone: 613-941-2672  
Toll Free: 1-888-603-4178  
Fax: 613-954-1800

## Endnotes

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- <sup>1</sup> CIHR, <http://www.cihr-irsc.gc.ca/>
- <sup>2</sup> Mandate, <http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=2330441&File=25&Mode=1&Language=E>
- <sup>3</sup> 13 “virtual” institutes, <http://www.cihr-irsc.gc.ca/e/9466.html>
- <sup>4</sup> Minister of Health, <http://www.hc-sc.gc.ca/ahc-asc/minist/index-eng.php>
- <sup>5</sup> Health Canada, <http://www.hc-sc.gc.ca/index-eng.php>
- <sup>6</sup> Public Health Agency of Canada, <http://www.phac-aspc.gc.ca/index-eng.php>
- <sup>7</sup> Natural Sciences and Engineering Research Council, <http://www.nserc-crsng.gc.ca/>
- <sup>8</sup> Social Sciences and Humanities Research Council, <http://www.sshrc-crsh.gc.ca/home-accueil-eng.aspx>
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- <sup>10</sup> Science Council, <http://www.cihr-irsc.gc.ca/e/33807.html>
- <sup>11</sup> Executive Management Committee, <http://www.cihr-irsc.gc.ca/e/25920.html>
- <sup>12</sup> Health Research Roadmap: Creating innovative research for better health and health care, <http://www.cihr-irsc.gc.ca/e/40490.html>
- <sup>13</sup> CIHR Three-Year Implementation Plan and Progress Report, <http://www.cihr-irsc.gc.ca/e/46093.html>
- <sup>14</sup> Open Suite of Programs and Peer Review Process, <http://www.cihr-irsc.gc.ca/e/46099.html>
- <sup>15</sup> Open Operating Grant Program Competitions, <http://www.cihr-irsc.gc.ca/e/46341.html>
- <sup>16</sup> Orphanet, <http://www.orpha.net/consor/cgi-bin/index.php>
- <sup>17</sup> Japan Science and Technology Agency, <http://www.jst.go.jp/EN/>
- <sup>18</sup> CIHR's Canadian Epigenetics, Environment and Health Research Consortium Signature Initiative, <http://www.cihr-irsc.gc.ca/e/43602.html>
- <sup>19</sup> Strategy for Patient-Oriented Research (SPOR), <http://www.cihr-irsc.gc.ca/e/41204.html>
- <sup>20</sup> Pathways to Health Equity for Aboriginal Peoples Signature Initiative, <http://www.cihr-irsc.gc.ca/e/43630.html>
- <sup>21</sup> Expedited Knowledge Synthesis, <http://www.cihr-irsc.gc.ca/e/43989.html>
- <sup>22</sup> Ministry of Health for British Columbia, <http://www.gov.bc.ca/health/>
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- <sup>24</sup> Best Brains Exchange, <http://www.cihr-irsc.gc.ca/e/43978.html>
- <sup>25</sup> Collaborative Health Research Projects, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/grants-subs/CHRP-PRCS\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/grants-subs/CHRP-PRCS_eng.asp)
- <sup>26</sup> The Montreal Neurological Institute, <http://www.mni.mcgill.ca/>
- <sup>27</sup> McGill, <http://www.mcgill.ca/>
- <sup>28</sup> Western University, <http://www.uwo.ca/>
- <sup>29</sup> Dr. Louis Collins, <http://www.bic.mni.mcgill.ca/PersonalCollinsdlouis/HomePage>
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- <sup>33</sup> Natural Sciences and Engineering Research Council (NSERC), [http://www.nserc-crsng.gc.ca/index\\_eng.asp](http://www.nserc-crsng.gc.ca/index_eng.asp)
- <sup>34</sup> 2011 CIHR International Review Report, <http://www.cihr-irsc.gc.ca/e/31680.html>
- <sup>35</sup> Design Discussion Document, [http://www.cihr-irsc.gc.ca/e/documents/design\\_discussion\\_doc-en.pdf](http://www.cihr-irsc.gc.ca/e/documents/design_discussion_doc-en.pdf)
- <sup>36</sup> Report, <http://www.cihr-irsc.gc.ca/e/45846.html>
- <sup>37</sup> Policy on Access to Research Outputs, <http://www.cihr-irsc.gc.ca/e/46068.html>
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- <sup>39</sup> Whole-of-government framework, <http://www.tbs-sct.gc.ca/ppg-cpr/frame-cadre-eng.aspx>
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- <sup>45</sup> Data from RRS, <http://www.cihr-irsc.gc.ca/e/45318.html>
- <sup>46</sup> ScienceWatch, <http://sciencewatch.com/>
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- <sup>49</sup> H-index, <http://www.scopus.com/hirsch/author.url?accessor=authorProfile&auIdList=35399481100&authorName=Hegele%2c+Robert+Alexander&origin=AuthorProfile&display=hIndex&documentCount=539&txGid=DE0AD277BCCFF628A9CB1DA5C26ACDE1.FZg2ODcJC9ArCe8WOZPvA%3a4>
- <sup>50</sup> Scopus 16-07-2013, <http://www.scopus.com/home.url?zone=header&origin=authorHirsch>
- <sup>51</sup> Summative Evaluation of the Interagency Advisory Panel and Secretariat on Research Ethics, [http://www.nserc-crsng.gc.ca/\\_doc/Reports-Rapports/evaluations/PRE-SRE\\_Evaluation\\_Final%20Report\\_ATIP-2009\\_e.pdf](http://www.nserc-crsng.gc.ca/_doc/Reports-Rapports/evaluations/PRE-SRE_Evaluation_Final%20Report_ATIP-2009_e.pdf)
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