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CANADIAN INSTITUTES OF HEALTH RESEARCH

ANNUAL REPORT 2012–13

Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

Canada

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's health research investment agency. CIHR's mission is to create new scientific knowledge and to enable its translation into improved health, more effective health services and products, and a strengthened health care system for Canadians. Composed of 13 Institutes, CIHR provides leadership and support to more than 14,100 health researchers and trainees across Canada.

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All people profiled in this annual report have agreed to their appearance in it and approved their individual stories.

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CANADIAN INSTITUTES OF HEALTH RESEARCH
ANNUAL REPORT 2012–13

CIHR is...

13 Institutes Spanning 4 Research Themes

CIHR expenditures by primary research theme 2012–13

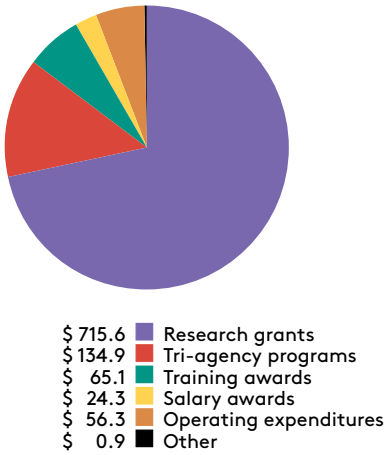
(in millions of dollars)

Research Theme	CIHR Expenditures 2012–13
Biomedical	$ 454.6
Clinical	$ 129.2
Health systems / services	$ 64.1
Social / Cultural / Environmental / Population health	$ 92.4

- Researchers applying for CIHR funding are requested, but not required, to indicate the primary theme of their research. As such, the figures above do not reflect an additional $200.5 million in CIHR investments for which no primary theme was identified.
- Excludes operating expenditures and partner contributions.
- Includes the Canada Research Chairs (CRC), Canada Excellence Research Chairs (CERC), Networks of Centres of Excellence (NCE) and Centres of Excellence for Commercialization and Research (CECR) programs.
- Due to rounding, figures may not reconcile with other published information.

CIHR expenditures by program type 2012–13

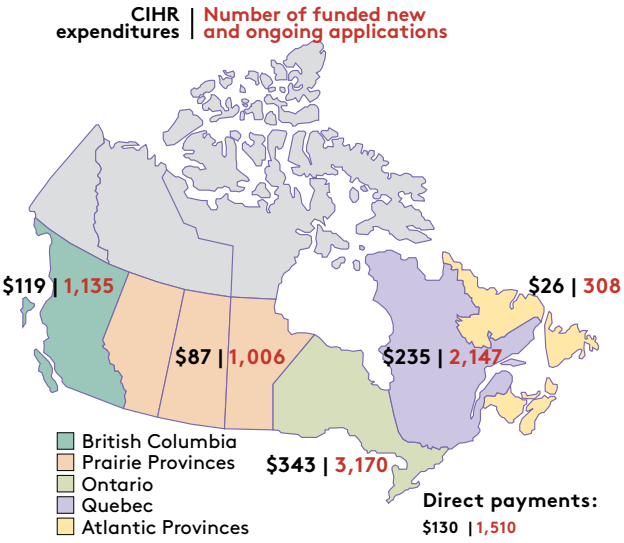
(in millions of dollars)



- Tri-agency programs include: Canada Research Chairs (CRC), Canada Excellence Research Chairs (CERC), Networks of Centres of Excellence (NCE) and Centres of Excellence for Commercialization and Research (CECR) programs.
- "Other" includes travel awards, exchange programs and award prizes.
- Excludes partner contributions.
- Due to rounding, figures may not reconcile with other published information.

CIHR expenditures by region 2012–13

(in millions of dollars)



- Includes tri-agency programs.
- Excludes operating expenditures and partner contributions.
- Due to rounding, figures may not reconcile with other published information.

National and International Partner Contributions

Cumulative leveraged partner contributions by sector for grants/awards 2012–13

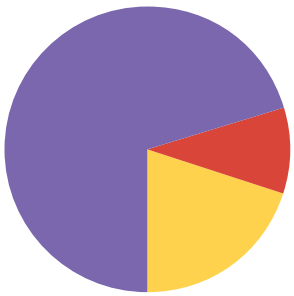
(in millions of dollars)

Sector	Newly funded grants/awards	Grants/awards with ongoing funding	Total new and ongoing grants/awards
International	$ 8.2	$ 41.1	$ 49.3
Private	$ 13.3	$ 56.5	$ 69.7
Public	$ 60.7	$ 122.4	$ 183.1
Total	$ 82.2	$ 219.9	$ 302.1

- Cumulative amounts include leveraged partner contributions for 2012–13, as well as future commitments for grants/awards that received funding in 2012–13. This includes newly funded grants/awards as well as those receiving ongoing funding.
- Leveraged partner contributions exclude funds from organizations that may not have a formal partnership agreement with CIHR. This represents an additional cumulative total contribution of $22.2 million.
- The public sector includes academia and the private sector includes voluntary organizations.
- Due to rounding, figures may not reconcile with other published information.

Leveraged partner contributions by program type 2012–13

(in millions of dollars)

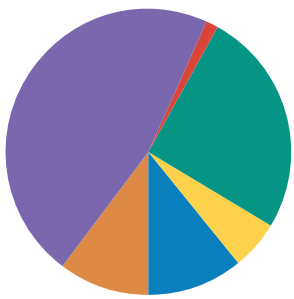


$ 95.6 CIHR programs
$ 12.9 CECR
$ 27.1 NCE

- Leveraged partner contributions include funds that are administered by CIHR on new and ongoing funded projects in 2012–13.
- CIHR programs include partner contributions to both open and strategic programs, as well as partner contributions to grants and awards with no CIHR expenditures.

Funded grant applications with international linkages 2012–13

(10% of total CIHR grants funded in 2012–13)



46.6 % North America
1.4 % Central/South America
25.6 % Europe
5.6 % Africa
10.2 % Oceania
10.7 % Asia

- International linkages include funded grant applications where at least one team member's primary institution is located outside Canada.
- Excludes applications funded through award programs.
- Central/South America includes South America, Central America and the Caribbean.
- Due to rounding, figures may not reconcile with other published information.

Contents

President's Message

In the past fiscal year, the Canadian Institutes of Health Research (CIHR) achieved significant progress towards objectives presented in our five-year strategic plan, *Health Research Roadmap*. The organization is now one year from the end of *Roadmap* and, as we review 2012–13, goals that appeared distant are now coming into sharper focus.

CIHR is committed to ensuring continued research excellence in Canada. To that end, CIHR was active throughout the year in stakeholder consultations for planned reforms to the Open Operating Grant Program and peer review process. At the end of this period, we released the final design for these reforms and, beginning with the next fiscal year, will move forward with implementation of these changes.

During 2012–13, CIHR also achieved a number of milestones in pursuit of research that addresses health and health system priorities. We have refined and developed a unique set of signature initiatives that bring together multiple CIHR Institutes and partners in the shared pursuit of well-defined research goals. We announced the results of two funding competitions for two major signature initiatives, Epigenetics and Personalized Medicine, and announced a funding opportunity for a new signature initiative to address the health inequities faced by First Nations, Inuit and Métis peoples in Canada.

Each of these initiatives demonstrates the power and importance of partnerships. In the past fiscal year, we continued to develop our capacity to partner effectively in order to accelerate the health and economic benefits of research. CIHR is pursuing novel business models that go beyond simple pooling of finances and involve true co-management of research with partners. CIHR is an active champion of the Strategy for Patient-Oriented Research (SPOR), which represents a broad coalition of stakeholders focused on addressing clear and achievable health objectives.

Finally, CIHR demonstrated its commitment to improved tracking of the impact of activities and investments. We produced two important evaluation reports on CIHR programs, as well as a joint evaluation with the Canada Foundation for Innovation (CFI) on national investments into medical imaging. In each case, the evaluations determined significant return on investment. For example, a joint CIHR-CFI case study of an important imaging tool for diagnosis of acute stroke, computed tomography perfusion, accelerated the translation of this new tool into clinical use by at least five years.

As we look forward to the next fiscal year, CIHR is well positioned to achieve even greater impact and progress towards our strategic goals.

Alain Beaudet, MD, PhD
President, Canadian Institutes of Health Research

Invest in World-Class Research

Staying at the Cutting Edge of Knowledge

Curiosity-driven research expands the boundaries of how we treat and prevent disease.

The Canadian Institutes of Health Research (CIHR) makes significant investments in health research on behalf of Canada and Canadians, support that allows the pursuit of bold, ambitious, fundamental research questions.

This kind of curiosity-driven health research greatly enriches our understanding of basic biological mechanisms and expands the boundaries of how we treat and prevent disease. In doing so, this research also sets the stage for future innovations that will build on these basic insights and, ultimately, lead to improved care and treatment for patients.

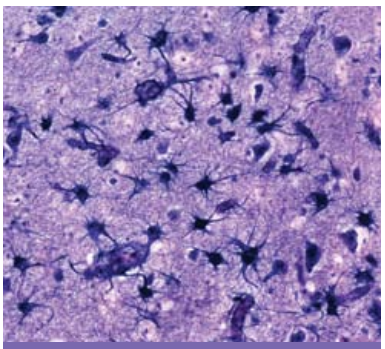
Support investigator-driven research through the Open Operating Grant Program

The CIHR Open Operating Grant Program directly supports investigator-driven research. It is the foundation of CIHR's investment infrastructure and represents the organization's single biggest financial investment, accounting for over 50% of CIHR's budget.

To maximize support for cutting-edge knowledge creation, CIHR has committed to maintaining a stable Open Operating Grant Program. CIHR established a goal of funding no fewer than 400 grants per competition and has succeeded in maintaining investment at this level over several years.

In 2012–13, CIHR released a finalized design plan for a renewed Open Operating Grant Program and peer review process to maintain the effectiveness of the program. CIHR will ensure through its investments that Canada remains at the forefront of knowledge. In the past year, CIHR demonstrated innovation in how it ensured the research community and knowledge users get the most out of this investment.

> It's beautiful research and very valuable information for the field … a potential signpost on the way to a vaccine.



Optogenetics may reveal brain's role in respiration

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, 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 (at left).

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.

Sugar clusters on a harmless bacterium could help develop HIV vaccine

Dr. Ralph Pantophlet of Simon Fraser University has discovered that a strain of the harmless plant bacterium *Rhizobium radiobacter* (at left) has surface sugar molecules that closely resemble those found on HIV-1, the most common strain of the human immunodeficiency virus. Dr. Pantophlet and his colleagues hypothesize that the *Rhizobium* sugar molecules can be formulated so that, when injected into the body, the immune system produces antibodies in response, in effect priming the system in case the real HIV invader makes an appearance. The result: the virus would be repelled before it could take hold.

Early tests with an animal model, whose results were published in *Chemistry & Biology* in 2012, show promise. Leading expert Dr. Dennis Burton of the Scripps Research Institute in California sees Dr. Pantophlet's *Rhizobium* findings as helping to find the way forward in the quest for an HIV/AIDS vaccine. "It's beautiful research and very valuable information for the field … a potential signpost on the way to a vaccine."

Nothing robotic about personalized care for stroke patients

A research team led by Dr. Sean Dukelow of the University of Calgary is using cutting-edge robotic technology to deliver personalized, tailored treatments to stroke survivors. Typically, physicians must rely on their own observations to rate a patient's abilities after stroke, a subjective practice that lacks consistency. Dr. Dukelow, a medical doctor who cares for patients at Foothills Medical Centre, is using an exoskeleton robot called KINARM (Kinesiologic Instrument for Normal and Altered Reaching Movements) developed by Dr. Stephen Scott at Queen's University.

The robot (at left) can precisely assess stroke patients so that their rehabilitation can be tailored to address specific deficits in vision, attention, sensation and movement. The CIHR-funded work is already causing clinicians to rethink established rehabilitation strategies. Dr. Dukelow's 331-participant study, published in 2012 in the *Journal of NeuroEngineering and Rehabilitation*, suggests that focusing on restoring motor function without investigating and addressing deficits in "position sense" – the ability to sense where an object is before reaching for it – may be counterproductive.

Are C-sections depriving kids of beneficial bacteria?

Dr. Anita Kozyrskyj of the University of Alberta is studying how Caesarean-section births (C-sections) may affect children's overall health by altering the types of bacteria they inherit from their mothers. Despite their negative public image, bacteria play an important role in many aspects of human health, from digestion to immune function. Trillions of microbes call the human body home, forming what researchers refer to as the microbiome. It is believed that some of these beneficial bacteria are passed from mother to child during the passage through the birth canal.

Dr. Kozyrskyj recently published a study in the *Canadian Medical Association Journal* comparing the bacterial DNA found in the fecal matter of children delivered by C-section and children delivered vaginally. She and her colleagues found that the C-section babies had lower levels of *Escherichia-Shigella* and *Bacteroides*, which are bacteria involved in immune function. This variation in gut bacteria could increase a child's risk of developing illnesses such as asthma and inflammatory bowel disease. As researchers learn more about the impact of delivery method on the microbiome, clinicians and expectant mothers will be able to make more informed decisions about when a C-section is appropriate. The research also provides valuable information that could help facilitate efforts to rebalance the microbiome of babies delivered by C-section.

Address Health and Health System Research Priorities

Seizing Opportunities and Filling Gaps Through Strategic Initiatives

> CIHR investments have helped build networks of scientists focused on collaboration, not competition.

The Canadian Institutes of Health Research (CIHR) and its Institutes have established a record of successful research investments. This support has helped researchers build multidisciplinary teams and networks of scientists focused on collaboration, not competition. The outcome has been actionable results in a number of areas of strategic importance – obesity, nano/regenerative medicine, palliative care, HIV/AIDS, mobility and aging, to name a few.

Leverage the strengths of multiple CIHR Institutes and partners focused on a single goal

In the past fiscal year, CIHR continued to build on and refine this successful model. The result is a set of new signature initiatives, focused on a single goal, that leverage the strengths of multiple CIHR Institutes and partners. Typically, these initiatives direct attention to areas where there is already a strong base of research as well as an opportunity to dramatically advance the field and produce new and effective health interventions for patients.

Epigenetics, the study of how environmental factors alter the way in which genes are expressed, is one such promising research area where CIHR Institutes and partners have combined resources. In 2012–13, Health Minister Leona Aglukkaq announced $41 million in funding for the Canadian Epigenetics, Environment and Health Research Consortium.

The Government of Canada also announced funding decisions for the Personalized Medicine signature initiative. Seventeen research teams each received grants of up to $10 million in funds from CIHR, Genome Canada, private industry, provincial funding organizations and other sources. The grants were awarded to the research teams with the strongest potential to produce important outcomes within four years.

Collectively, these and other CIHR signature initiatives are aligned with and contribute to the broader Strategy for Patient-Oriented Research (SPOR).

Ensure that the right patient receives the right treatment at the right time

SPOR is sharply focused on a single objective – ensuring that the right patient receives the right treatment at the right time. This clarity of purpose helps form an anchor point for CIHR's strategic initiatives. At the same time, the scope of research required to achieve this goal – identifying new strategies for prevention, diagnostics and treatment while also evaluating the economic and clinical effectiveness of existing treatments – will be well supplemented by the contributions of CIHR's signature initiatives.

> Combining the oral chemotherapy agent temozolomide with radiation after surgery more than doubled the two-year survival rate of younger patients with GBM.

Tell me what I really need to know about telehealth

With an aging population, Canada faces challenges caring for people with chronic diseases using already overstretched health care systems. Many care providers are investigating the use of home-based telehealth services – Internet and telephone consultations and video conferencing – to maximize limited resources and improve quality of care. As part of this investigation, decision makers must sort through and analyze thousands of publications describing existing research on implementing home-based telehealth. Inconsistent approaches and variable methodologies used in the original studies have complicated the process.

Funded by CIHR, a University of British Columbia team led by Dr. Sandra Jarvis-Selinger recently completed two years' work distilling five years of published research on home-based telehealth into an easily accessible and usable web-based format. Made available early in 2013, the dynamic, searchable website (hometelehealth.med.ubc.ca) provides provincial health authorities with a single source of concise, consistent information on the cost-effectiveness, clinical outcomes and patient/provider experiences of home-based telehealth services for diabetes, cardiovascular disease, stroke, chronic obstructive pulmonary disease, asthma and renal disease. Designed for application across Canada, the findings were compiled and disseminated with direct input from a team of B.C.-based telehealth experts, health professionals and patient advocates.

Researcher's work adds years to survival rates in brain cancer

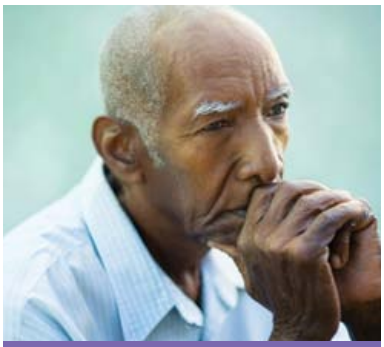
Glioblastoma multiforme (GBM) is the most common and aggressive form of brain cancer – every year over 1,100 Canadians are diagnosed with it. An international study found that using the oral chemotherapy agent temozolomide (known as TMZ or Temodal®) with radiation after surgery more than doubled the two-year survival rate of younger patients with GBM. Since the study, whose Canadian arm was led by Dr. Gregory Cairncross of the University of Calgary, the combination therapy with TMZ and radiation has become standard GBM care.

In 2012, Dr. Cairncross was the lead author of a *Journal of Clinical Oncology* study reporting that using a drug combination called PCV (procarbazine, lomustine, vincristine – a predecessor to TMZ) with radiation increases average survival rates to 15 years from 7 years for patients with less aggressive brain cancers called oligodendrogliomas. Building on the work of Dr. Cairncross and others, Toronto-based researchers Drs. Normand Laperriere of Princess Margaret Hospital and James Perry of Sunnybrook Health Sciences Centre are leading an international trial to examine whether TMZ combined with radiation has the same positive effects on elderly GBM patients.

Research helps Saskatchewan transform its health care system

Before Saskatchewan began transforming its health care system in 2010, provincial decision makers wanted to know what had and hadn't worked in other jurisdictions – and why. There was also some urgency: they wanted to know within six months so they could set to work. Through CIHR's Expedited Knowledge Synthesis Program, the University of British Columbia's Dr. Allan Best and his colleagues at Vancouver's InSource Research Group conducted a "rapid realist review" of 84 academic studies of "large system transformations" in health care. They were able to condense the findings into a handful of simple rules to guide Saskatchewan as it began its reforms.

Working in close collaboration with policy makers and care providers, the research team examined how to adapt those rules to the realities of the provincial health care system and find ways to apply them for optimal outcomes. The Ministry of Health leaders were so impressed with the results of the process, they recently invited Dr. Best and the InSource team to guide them in implementing their new "lean management" approach. "We're looking for what the research can tell us regarding what we should be thinking about and the kind of results others have had, good and bad, to help guide us on our way," says Kathleen Peterson, Director of Health System Planning for the Saskatchewan Ministry of Health.



Using deep brain stimulation to alleviate chronic depression

Approximately 10 to 20% of persons with chronic depression do not respond to medications and treatments prescribed to address this mood disorder. To treat those who are currently beyond help, researchers have been testing a technology called deep brain stimulation (DBS). Currently, over 100,000 patients have received DBS, and the technique has been used successfully on numerous patients with movement disorders such as Parkinson's disease. With DBS, electrodes are implanted in the brain to deliver low voltage electricity controlled by a pacemaker.

Dr. Andres Lozano of the University of Toronto published the results of a non-randomized, open-label study of DBS to treat major depression involving three centres and 21 patients. In the experiment, the research team used DBS to reduce neuron activity in a specific region of the brain that previous studies have linked to sadness. The study, published in the *Journal of Neurosurgery,* reported that 29% of patients achieved a 50% reduction in depression rating scores. When calculated at a 40% reduction in depression, considered as clinically significant, DBS helped 62% of patients.

Accelerate the Capture of Health and Economic Benefits

Patients, Partners and Co-Management of Research for Improved Patient Care

> Accelerating the health and economic benefits of research requires a willingness to test new business models for engaging partners and managing research.

New knowledge created by research, while valuable, seldom translates into improved health outcomes without considerable effort.

Accelerating the health and economic benefits of research requires a willingness to test new business models for engaging partners and managing research. The Strategy for Patient-Oriented Research (SPOR) addresses these demands.

SPOR represents a coalition of federal, provincial and territorial levels of government. It represents a convergence of partners from the private sector, voluntary health organizations and philanthropic interests.

Capture patients' first-hand knowledge of the effectiveness and limitations of current treatments

SPOR stresses an active and direct role for patients and health care consumers in the research process to capture their first-hand knowledge of the effectiveness and limitations of current treatments and procedures. SPOR facilitates collaborations with a wide range of partners and engages these groups as co-managers of the research process. The strategy is purposely geared to address specific and achievable health challenges instead of long-term, open-ended research questions.

In 2012–13, Health Minister Leona Aglukkaq announced the first SPOR research network: Transformational Research in Adolescent Mental Health (TRAM).

Create measurable improvements in health care for 11- to 25-year-olds

Young people are more susceptible to mental health disorders than any other age group, yet because existing services tend to focus on younger children and older adults, they have the least access to care. TRAM focuses on creating measurable improvements in mental health care for 11- to 25-year-olds.

TRAM is the result of an exciting new partnership between the Graham Boeckh Foundation and CIHR that exemplifies a new way of doing business.

Under TRAM, the criteria and process for reviewing research proposals have changed dramatically and now include a mandatory planning workshop to refine the hypotheses of research protocols before applicants move forward in the evaluation process. Furthermore, successful research proposals must include the active participation of patient/family representatives, policy makers, researchers, service providers and community organizations.

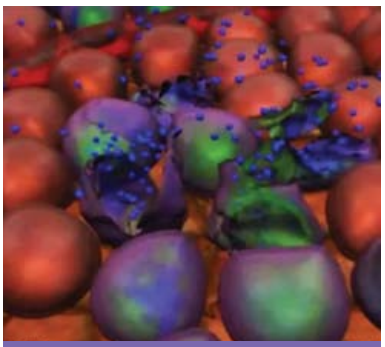
As CIHR enters fiscal year 2013–14, we are confident that the business models used to manage and support research will continue to improve and will yield strategic solutions to health challenges.

A roadside survey tool has scaled up into a new platform to help health care providers quickly turn reams of data into usable information.

New drug marks first advance in short bowel treatment in four decades

A new pharmaceutical developed by CIHR-funded researcher Dr. Daniel Drucker of Mount Sinai Hospital's Samuel Lunenfeld Research Institute 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.



One step closer to potential cancer treatment using virus to kill cancer cells

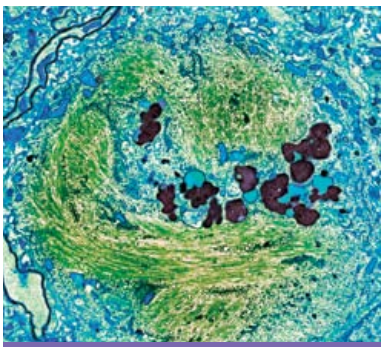
A naturally occurring, benign virus that does not cause any major illnesses in humans is proving effective against cancer cells (at left). Since 1998, when he identified the reovirus as a cancer killer in mice, Dalhousie University virologist Dr. Patrick Lee has steadily expanded the understanding of how the virus infects a cancer cell. The reovirus replicates within a cancer cell to produce thousands of particles that eventually rupture it (see photo). The released virus particles then seek out neighbouring cancer cells to repeat the process, leaving normal cells untouched. Dr. Lee's current work (his most recent paper on the reovirus appeared in early 2013 in *Molecular Therapy*) 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.

Software first built for survey helps decision makers analyze gaps in care

What began as a roadside survey tool has scaled up into a new software platform to help health care providers quickly turn reams of non-integrated data into usable information to support sound decisions. The work began in 2005 when Dr. Anne Snowdon asked Dr. Robert Kent of the University of Windsor's School of Computer Science to create software to compile child seat survey data for Transport Canada using BlackBerry devices. A local hospital then enlisted the team to develop a tracking tool to collect data to quickly identify ways to prevent falls among their elderly patients.

Dr. Snowdon then led a project in 2010 in partnership with the Erie St. Clair Local Health Integration Network – one of 14 in Ontario – to examine use of primary health care services throughout the region. The sophisticated software they developed was able to upload and analyze anonymized data from hospital administrative records, the Ontario Health Insurance Plan, Emergency Medical Services and Telehealth Ontario to pinpoint gaps in care. Dr. Snowdon, now Chair of the International Centre for Health Innovation at the Richard Ivey School of Business at Western University, and her colleagues have filed patent applications and are in discussions with several provincial health ministries to use the software platform.



Could a vaccine prevent the development of the devastating disease?

Researchers at Laval University and the Centre hospitalier universitaire de Québec are developing a vaccine that may help prevent, and possibly even treat, Alzheimer's disease. The illness is characterized by the accumulation of toxic amyloid beta molecules in the brain. Immune cells fail to clear the molecule and it aggregates in formations known as plaques (at left).

Dr. Serge Rivest and his team are studying the possibility of using monophosphoryl lipid A (MPL) to activate immune cells in the brain to eliminate amyloid beta. In a recent study published in the *Proceedings of the National Academy of Sciences*, they were able to clear a significant amount of amyloid beta and improve cognitive function in mice with Alzheimer's disease. If these findings can be replicated in humans, it would represent a major advance in the fight against Alzheimer's disease. The researchers are working with GlaxoSmithKline, the pharmaceutical company that originally developed and tested MPL as a vaccine adjuvant.

Organizational Excellence, Ethics and Impact

Tracking, Evaluating and Improving Performance

CIHR is accountable to Canadian taxpayers to track and measure the impact of its investments in health research.

The Canadian Institutes of Health Research (CIHR) produces value for Canada by helping support the creation of new scientific knowledge and enabling the translation of this knowledge into improved health, more effective health services and products, and a strengthened Canadian health care system.

Creating value also means being accountable – for CIHR, this accountability is to Canadian taxpayers to track and measure the impact of its investments in health research. In turn, value is linked to the ability to use measurements to continuously improve performance. In the past fiscal year, CIHR has delivered on both of these challenges.

Produce value for Canada

In 2012–13, CIHR published the results of three major evaluation studies. An evaluation of the Regenerative Medicine and Nanomedicine Initiative (RMNI) determined that the program helped keep Canada at the forefront of this emerging field of medical science. During its six years of existence, the RMNI received more than $80 million in funding, and almost half of its funded projects were granted patents or licences related to their research.

A second evaluation, this one of investments in medical imaging, was conducted jointly with the Canada Foundation for Innovation. A case study of CT perfusion, a technology used for diagnosis of acute stroke, reported an impressive 28 to 46% rate of return on investment.

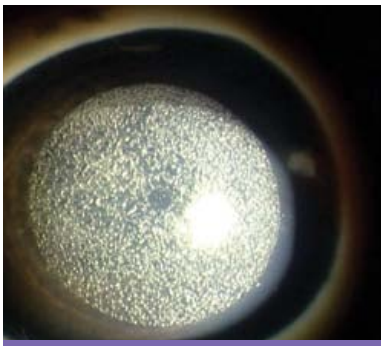
Improve the Open Operating Grant Program to reduce complexity

A third evaluation, focused on CIHR's flagship Open Operating Grant Program for investigator-driven research, determined that the program had achieved significant positive results but also flagged areas where improvements were required to reduce program complexity.

In 2012–13, CIHR made considerable progress towards a major reform of this program and the peer review process. It released the final design of its reform proposal at the end of 2012–13, after a year of thorough consultations with stakeholders using town hall discussions, meetings, emails, letters and an online survey.

In the past fiscal year, CIHR demonstrated commitment to continued improvement in the way in which it delivers value to Canadian taxpayers and remains innovative, strategic and current.

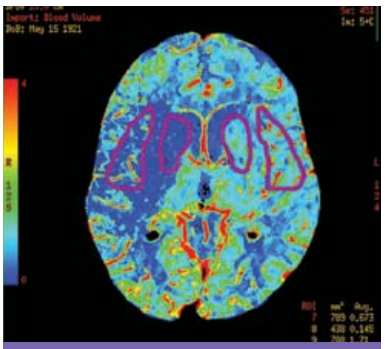
CIHR and CFI support accelerated the introduction of CT perfusion into clinical use by at least five years.



Strategic investment in regenerative medicine patently successful

The Regenerative Medicine and Nanomedicine Initiative (RMNI), a strategic investment of more than $80 million from its commencement in 2004 through its final funding opportunity in 2010, made a significant contribution to the Canadian health research enterprise. In 2012–13, CIHR's Evaluation Unit completed a detailed evaluation of the program which determined that 46% of RMNI research grants resulted in patents or licences, compared with a benchmark figure of 18% for the Open Operating Grant Program. Furthermore, 38% of RMNI grants resulted in intellectual property claims. RMNI investigators also were able to successfully leverage funds secured through RMNI to expand the scope of their work: for every dollar invested in an RMNI catalyst grant, the researchers secured $5.22 in additional grants/awards; for team grants, it was $1.44 per dollar invested.

CIHR's investment in RMNI has also paid off in terms of high-quality work: the scientific impact of publications produced by RMNI-funded researchers significantly exceeded the Canadian average in these fields, demonstrating that the initiative selected and funded excellent research such as that of Dr. Isabelle Brunette of the Maisonneuve-Rosemont Hospital in Montreal. The photo at left illustrates Dr. Brunette's work using ultrafast laser pulses to optimize shaping of human corneas to improve transplantation. The temporary microscopic vapour bubbles seen in the photo are created when a femotosecond laser pulse is fired at cornea tissue to create the corneal cut.



Significant return on research investments in much-needed imaging technology

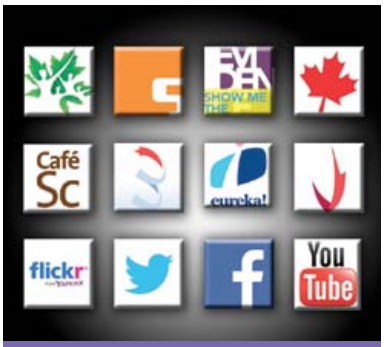
Medical imaging is a critical and widely used tool in the health care system. Canada is internationally recognized as a leader in research to develop new and more effective imaging technologies. In the past fiscal year, CIHR and the Canada Foundation for Innovation (CFI) released a joint study evaluating the socio-economic impact of investments made by both organizations to support medical imaging research.

A case study of one particular technology used for diagnosis of acute stroke, computed tomography (CT) perfusion, determined that CIHR and CFI support accelerated the introduction of CT perfusion into clinical use by at least five years. The evaluation also determined that, for every $1 invested, increased use of the new technique resulted in $1.50 to $2.30 in value to stroke victims. The net economic benefit attributable to the CIHR/CFI investment was estimated at $42 million to $86 million from 2000 through 2011.

Evaluating CIHR's Open Operating Grant Program and peer review process

The Open Operating Grant Program (OOGP) plays a core role in CIHR's programming. In 2012–13, CIHR's Evaluation Unit conducted a comprehensive evaluation of the OOGP and peer review process. The evaluation 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 consistently greater scientific impact than the health research average for Canada and other OECD comparators (based on average of relative citations).

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 reform process for the OOGP and peer review process. The OOGP as it is currently designed has met its key program objectives. Findings from the evaluation demonstrate how the program has contributed to the creation and dissemination of health-related knowledge and supported high-quality research.



Outreach as you like it: Interacting with CIHR in person and online

An early adopter of social media, CIHR has pioneered new ways of reaching out to Canadians on the subject of health research. Those early efforts have established the agency's virtual presence so strongly that by the end of the second quarter of the 2012–13 fiscal year, CIHR had registered over 1 million Facebook fans. Some three-quarters of these connected through the Health Research in Canada page, while the *Show me the Evidence* digital magazine attracted another 174,000 fans. Traffic from the social media sites to the CIHR website grew by 231% over the same period a year earlier. On YouTube, meanwhile, CIHR videos were viewed more than 77,000 times.

Not all outreach, however, is virtual. The Synapse program, aimed at attracting Canadian youth to the subject of health research, had some 1,100 active mentors in the first half of 2012–13 who put in over 21,000 volunteer hours working with more than 121,000 students. And the successful Café Scientifique program, in operation since 2006, celebrated its 500th café in Montreal with a discussion on how nutrition can help seniors stay healthy. Both the Synapse and Café programs also play an important role in helping engage and communicate with one of CIHR's most important stakeholders – Canada's research community.

Providing Stewardship and Accountability

CIHR Governing Council

CIHR reports to Parliament through the Minister of Health. Its Governing Council comprises up to 18 Canadians who have been appointed by Order in Council to renewable three-year terms. Council members represent a wide range of backgrounds and disciplines, reflecting CIHR's broad mandate and vision.

Dr. Alain Beaudet
(Chair)
President
Canadian Institutes of Health Research

Mr. Keith G. Anderson
Senior Policy Advisor and
Health Management Consultant
British Columbia

Dr. James Brien
Professor of Pharmacology
and Toxicology
Queen's University

Dr. Nadine Caron
Assistant Professor
Northern Medical Program
University of British Columbia

Dr. Harvey Max Chochinov
(until June 27, 2012)
Canada Research Chair in Palliative Care
Professor of Psychiatry
University of Manitoba and
CancerCare Manitoba

Ms. Maura Davies
President and Chief Executive Officer
Saskatoon Health Region

Dr. Brett B. Finlay
(until February 27, 2013)
Professor
Michael Smith Laboratories
Department of Biochemistry and
Molecular Biology
University of British Columbia

Mme Michèle Fortin
(since June 21, 2012)
President and CEO
Télé-Québec
Montreal, Quebec

Dr. Terry Klassen
(since May 31, 2012)
Director of Research
Manitoba Institute of Child Health
Associate Dean, Academic
Faculty of Medicine
University of Manitoba

Dr. Paul Kubes
(since May 3, 2012)
Professor and Director
Snyder Institute for Chronic Diseases
Faculty of Medicine
University of Calgary

Mr. Martin LeBlanc
President and CEO
Caprion Proteomics
Montreal, Quebec

Dr. Nicole Letourneau
Professor
Faculty of Nursing
University of Calgary

Dr. Christopher W. Loomis
Vice-President (Research)
Memorial University of Newfoundland

Dr. Patrick John McGrath
(until June 27, 2012)
Canada Research Chair
Vice-President Research
IWK Health Centre
Professor of Psychology,
Pediatrics and Psychiatry
Dalhousie University

Dr. Bernard Prigent
Vice-President and Medical Director
Pfizer Canada
Montreal, Quebec

Dr. Ray Rajotte
(until February 27, 2013)
Professor of Surgery and Medicine
Director
Surgical-Medical Research Institute
Director
Islet Transplantation Group
University of Alberta

Dr. Robert S. Sheldon
(until June 27, 2012)
(Non-Voting)
Professor of Cardiac Sciences,
Medicine and Medical Genetics
Associate Dean of Clinical Research
University of Calgary
Vice-President Research
Calgary Health Region

Mr. H. Arnold Steinberg
(until June 27, 2012)
(Vice-Chair)
Chancellor
McGill University

Ms. Lori Turik
(since March 1, 2012)
Executive Director
International Centre for
Health Innovation
Richard Ivey School of Business
Western University

The Honourable
Michael H. Wilson
(since April 5, 2012)
(Vice-Chair)
Chairman
Barclays Capital Canada Inc.
Toronto, Ontario

Ms. Glenda Yeates
(Ex Officio, Non-Voting)
Deputy Minister
Health Canada

CIHR Institutes

CIHR is composed of 13 innovative Institutes. These Institutes bring together all partners in the research process – those who fund research, those who carry it out and those who use its results – to share ideas and focus on what Canadians need: good health and the means to prevent and fight diseases when they happen.

Each Institute is headed by a Scientific Director who is a leader in his or her field. Scientific Directors receive guidance from their Institute Advisory Boards, made up of volunteers from all areas of the health research community.

CIHR Institute of Aboriginal Peoples' Health (CIHR-IAPH)

Dr. Malcolm King
University of Alberta

CIHR-IAPH fosters the advancement of a national health research agenda to improve and promote the health of First Nations, Inuit and Métis peoples in Canada through research, knowledge translation and capacity building. Our pursuit of research excellence is enhanced by respect for community research priorities and Indigenous knowledge, values and cultures.

CIHR Institute of Aging (CIHR-IA)

Dr. Yves Joanette
University of Montreal

As Canada's population ages, there is a growing need to transform longer life expectancy into optimal health and to improve care for elderly people facing health challenges. That is why CIHR-IA supports a wide range of health research, including initiatives on mobility in aging, health systems and services for an aging population, and the International Collaborative Research Strategy on Alzheimer's Disease and related disorders. We aim to facilitate the exchange of new knowledge around the challenges and the opportunities of caring for our aging population.

CIHR Institute of Cancer Research (CIHR-ICR)

Dr. Morag Park
McGill University

CIHR-ICR supports cancer research based on internationally accepted standards of excellence, which bears on preventing and treating cancer and improving the health and quality of life of cancer patients and survivors across Canada. Our strategic research priorities span the continuum of cancer and currently focus on the following: lifestyle, environment and cancer; diagnosis and guided therapy, towards personalized medicine; cancer initiation and progression; and survivorship.

CIHR Institute of Circulatory and Respiratory Health (CIHR-ICRH)

Dr. Jean L. Rouleau
University of Montreal

Heart, lung and blood vessel diseases are the major health burdens facing Canadians – yet if we understood how our genes, the environment and our behaviour interplay to cause these common illnesses, they might be preventable. Furthermore, advances in knowledge and technology have the potential for improving our ability to prevent, diagnose and treat these conditions. CIHR-ICRH is dedicated to supporting career development, research infrastructure and excellence in research programs and projects toward achieving these goals.

CIHR Institute of Gender and Health (CIHR-IGH)

Dr. Joy Johnson
University of British Columbia

CIHR-IGH fosters research excellence regarding the influence of gender and sex on the health of women and men throughout life, and applies these research findings to identify and address pressing health challenges. Accounting for gender and sex in health research supports the design of interventions and programs to improve the health of *everybody*.

CIHR Institute of Genetics (CIHR-IG)

Dr. Paul Lasko
McGill University

CIHR-IG supports research on the human and other genomes and on all aspects of genetics, basic biochemistry and cell biology. New advances in genetics and genomics, and in the understanding of how cells work, pose challenges to our health care system and often raise complex ethical, legal and social issues. CIHR-IG is addressing these challenges to develop solutions that benefit Canadians.

CIHR Institute of Health Services and Policy Research (CIHR-IHSPR)

Dr. Robyn Tamblyn
McGill University

CIHR-IHSPR is helping the country meet the challenge of making high-quality health care available to all those who need it, when and where they need it, while also ensuring that Canada's health care system is responsive, efficient and sustainable. We do so by fostering research excellence and innovation, supporting the brightest minds and catalyzing the application of research findings to policies, practices and programs that provide real-world benefits.

CIHR Institute of Human Development, Child and Youth Health (CIHR-IHDCYH)

Dr. Shoo Lee
University of Toronto

CIHR-IHDCYH promotes and supports research that improves the health and development of mothers, infants, children, youth and families in Canada and throughout the world. Through our support, researchers address a wide range of health concerns, including those associated with reproduction, early development, childhood and adolescence.

CIHR Institute of Infection and Immunity (CIHR-III)

Dr. Marc Ouellette
Laval University

Through our strategic initiatives, CIHR-III supports research and helps to build research capacity in the areas of infectious disease and the immune system. Our programs address a wide range of health concerns including antibiotic resistance, the human microbiome, hepatitis C, HIV/AIDS, pandemic influenza, transplantation, inflammation in chronic disease and vaccine technologies. These initiatives focus on various aspects of disease development and progression mechanisms, disease prevention and treatment and health promotion through public policy.

CIHR Institute of Musculoskeletal Health and Arthritis (CIHR-IMHA)

Dr. Phillip Gardiner
Interim Scientific Director
University of Manitoba

Move It or Lose It! Musculoskeletal (MSK) health, including muscle, joint and bone health, is dependent on optimal amounts of physical activity. MSK disorders such as osteoporosis and arthritis can limit mobility and ability to be physically active, creating a vicious circle of inactivity and MSK degeneration. CIHR-IMHA is working to better understand and treat MSK (including skin and oral) diseases and injury and to improve the health of Canadians by focusing on our flagship theme of physical activity.

CIHR Institute of Neurosciences, Mental Health and Addiction (CIHR-INMHA)

Dr. Anthony Phillips
University of British Columbia

From diseases of the central nervous system, to addiction, to mental ill health, to the five senses through which we interpret the world, CIHR-INMHA is concerned with discovering how the brain works and with seeking new ways of using this knowledge to improve the treatment of brain-related illnesses, which are recognized internationally as leading causes of life-long disability.

CIHR Institute of Nutrition, Metabolism and Diabetes (CIHR-INMD)

Dr. Philip Sherman
University of Toronto

CIHR-INMD supports research that addresses the causes, prevention, screening, diagnosis, treatment and palliation of a wide range of conditions associated with hormone, digestive system, kidney and liver function. CIHR-INMD has identified four strategic priorities that will guide the Institute from 2010 to 2014: food and health; continuum of care; environments, genes and chronic disease; and seeking solutions to obesity.

CIHR Institute of Population and Public Health (CIHR-IPPH)

Dr. Nancy Edwards
University of Ottawa

CIHR-IPPH supports innovative research and knowledge translation to understand the processes, system elements and impacts of multi-level program and policy interventions on health improvements in Canada and globally. This renewed focus requires researchers and other stakeholders to explore pathways to health equity and population health ethics so that all people can reach their full health potential regardless of gender, race or socioeconomic status.

CIHR Executive Management Team

CIHR's Executive Management Team provides leadership and decision making for strategic, corporate policy and management areas that support and contribute to the strategic directions set out by the Governing Council.

Dr. Alain Beaudet
President

Ms. Christine Fitzgerald
Executive Vice-President
(until May 1, 2012)

Dr. Jane E. Aubin
Chief Scientific Officer
Vice-President, Research
(until April 30, 2012)
Chief Scientific Officer
Vice-President, Research and Knowledge Translation
(since May 1, 2012)

Mr. James Roberge
Chief Financial Officer
Vice-President, Resource Planning and Management
(until April 30, 2012)
Chief Financial Officer
Executive Vice-President
Vice-President, Resource Planning and Management
(since May 1, 2012)

Dr. Robert Thirsk
Vice-President, Public, Government and Institute Affairs
(since August 13, 2012)

Mr. Christian Sylvain
Acting Vice-President, Public, Government and Institute Affairs
(May 1, 2012 until August 12, 2012)

Financial Statement Discussion and Analysis

Disclaimer

This Financial Statement Discussion and Analysis (FSD&A) should be read in conjunction with the Canadian Institutes of Health Research (CIHR) annual audited financial statements and accompanying notes for the year ended March 31, 2013.

The responsibility for the integrity and objectivity of the FSD&A for the year ended March 31, 2013, and all information contained in the financial statements rests with the management of CIHR.

Highlights

1. Statement of Financial Position

Condensed Statement of Financial Position (in millions of dollars)

As at March 31	% Change	2013	2012
Total liabilities	-19.9%	$ 12.1	$ 15.1
Total financial and non-financial assets	-14.5%	$ 12.4	$ 14.5

These corresponding decreases resulted directly from the following:

- CIHR's severance termination provisions and payments made to employees during the year, resulting 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, resulting in a decreased liability of $2.4M;
- CIHR settlement on employment equity complaint and CIHR's one-time special vacation provisions, resulting in an increased liability of $0.9M;
- 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.

2. Statement of Operations and Departmental Net Financial Position

Condensed Statement of Operations and Departmental Net Financial Position (in millions of dollars)

For the year ended March 31	% Change	2013	2012
Total expenses	-0.8%	$ 1,011.9	$ 1,020.5
Net cost of operations before government funding	-1.0%	$ 995.9	$ 1,005.7

These corresponding decreases are attributable to the 0.7% decrease in Parliamentary authorities provided by the Government of Canada to CIHR in 2012–13 as compared to the prior fiscal year.

Analysis

3. Risk Analysis

CIHR understands the importance of risk management and has integrated risk management considerations into its strategic and operational planning, business processes and decision making. CIHR has a risk management framework that sets out how CIHR identifies, assesses and mitigates risk. The framework also provides a governance model that promotes the accountability for risk management as well as defining the ongoing review and updating process for existing and potential risks to the organization. CIHR has identified four primary risks, as follows:

3.1. Reform of the Open Suite of Programs

There is a risk that CIHR's reforms to the Open Suite of Programs, including changes to the peer review process, will not be understood or supported by external stakeholders.

To mitigate this risk, CIHR implemented a governance structure for the implementation of the reforms, developed an integrated plan and conducted a number of forums across the country with key stakeholders to get their input and feedback on the proposed changes. This work will be beneficial when the transition plan, which will pilot and phase in components of the changes, is implemented.

3.2. Knowledge Translation

Given CIHR's lack of direct control over all the factors that influence the uptake and use of research, there is a risk 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.

To mitigate this risk, CIHR has developed KT strategies for all CIHR institutes and initiatives. CIHR has also established a core suite of KT programs and will monitor progress on KT activities and outcomes.

3.3. Results Management

There is a risk that CIHR will be unable to adequately and efficiently evaluate and report on its performance and make the necessary changes to ensure impact.

To mitigate this risk, CIHR will strengthen its performance measurement frameworks and activities at all levels (programs, initiatives and operations). This will improve CIHR's ability to track and monitor performance outcomes related to research and operational activities. Currently underway are IT systems revisions to ensure an appropriate data architecture is in place to support information and reporting plans, and the development and implementation of data quality and monitoring standards.

3.4. Institute Organizational Model

Due to the institute virtual organizational model, there is a risk of disruptions and corporate memory loss during transitions that may compromise the Institutes' ability to achieve planned outcomes or their mandate in support of CIHR's strategic objectives.

To mitigate this risk, management has implemented an institute transition plan and renewal schedule. In addition, an ongoing process has been established to assess the performance of Scientific Directors.

4. Variance Analysis

4.1. Variances between current year actual results and budget

CIHR is financed by the Government of Canada through Parliamentary authorities. In 2012–13, CIHR was provided with $1,008.1M of Parliamentary authorities, a decrease of $7.1M (or 0.7%) as compared to 2011–12. The Government of Canada provided CIHR with reduced Parliamentary authorities in 2012–13, as follows:

Parliamentary Authorities (in millions of dollars)	**2012–13**
Strategy for Patient-Oriented Research	$ 15.0
New funding for Business-Led Networks of Centres of Excellence	6.1
New funding for Centres of Excellence for Commercialization and Research	4.0
Transfers from the Public Health Agency of Canada	2.2
Budget 2012 Implementation	(15.0)
Incremental reductions due to the sunsetting of programs	
Pandemic Preparedness Strategic Research Initiative	(4.3)
Isotopes Supply Initiative	(4.9)
Incremental Funding for the Canada Graduate Scholarship program	(7.0)
Reprofiling of Grant Programs	(2.1)
Other Reductions	(1.1)
Total reduction in Parliamentary Authorities	$ (7.1)

The foregoing 0.7% decreases in Parliamentary authorities paralleled the corresponding decreases in total Parliamentary authorities used by CIHR (1.2%), grants and awards expenses (1.1%) and the net cost of operations before government funding (1.0%).

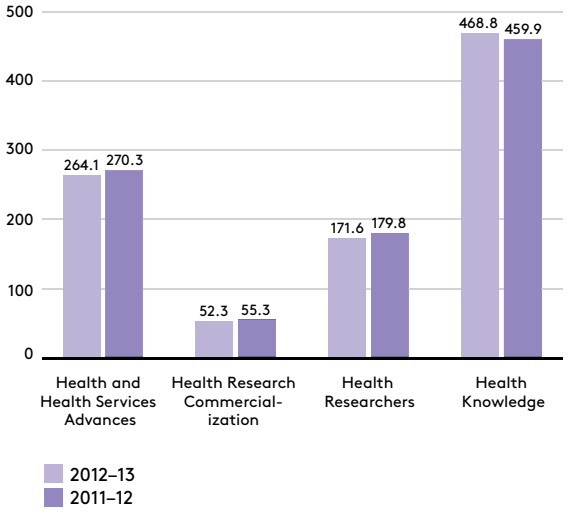
4.2. Variances between current year actual results and prior year actual results

Segmented Information (in millions of dollars) (Refer to note 12 of the financial statements)

For the year ended March 31	**% Change**	**2013**	**2012**
Grants and awards	-0.9%	$ 956.7	$ 965.3
Total operating expenses	3.0%	$ 62.8	$ 61.0

Grants and awards expenditures decreased by 0.9% (or $8.6M) primarily due to reduced expenditures within the Health Researchers program activity (the largest portion attributable to the Canada Graduate Scholarships program) and the Health and Health Services Advances program activity (particularly due to the sunsetting of the Pandemic Preparedness Strategic Research and Isotopes Supply Initiatives). These reductions were partially offset by the increased expenditures within the Health Knowledge program activity (mostly due to increased successful applicants within the Open Operating Grant Program) as displayed in the following graphic:

Grants and Awards by Program Activity
(in millions of dollars)

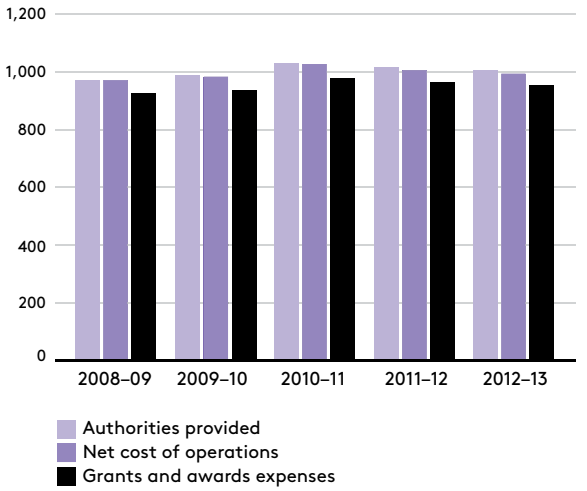


Total operating expenses increased by 3.0% (or $1.8M) primarily due to increased employee salaries and benefits ($1.8M) and other slight variations across the other classes. The increase is a direct result of the required one-time adjustment related to severance termination, which occurred in 2011–12, and the pay equity settlement reached during 2012–13.

5. Trend Analysis

5.1. Grants and Awards

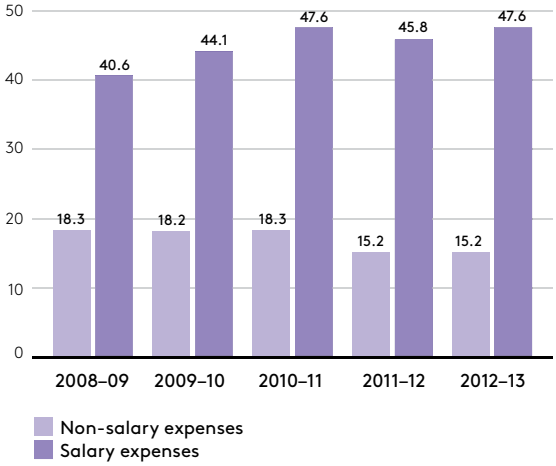
CIHR Net Cost of Operations and Grants and Awards Expenses
(in millions of dollars)



- As evidenced by the above chart, net cost of operations and grants and awards expenses increase or decrease on a yearly basis in relative proportion to changes in the Parliamentary authorities provided to CIHR by the Government of Canada.

5.2 Operating Expenses

Operating Expenses
(in millions of dollars)



- In 2012–13, salaries and employee benefits made up 75.8% of total operating expenses, compared to 75.0% in 2011–12. Although the ratio slightly increased by 0.8%, salaries and benefits increased by 4.0% as compared to 2011–12 due to the required one-time adjustment for severance termination in 2011–12 and the pay equity complaint settlement in 2012–13.
- Total operating expenses increased by 3.0% in 2012–13 mostly due to the aforementioned increases noted in salaries and benefits.
- The ratio of operating expenses to total expenses was 6.2% in 2012–13, consistent with prior fiscal years.

Financial Outlook: 2013–14

On March 21, 2013, Minister of Finance James Flaherty tabled in Parliament the Government budget for fiscal year 2013–14. Budget 2013 lays out a plan for jobs and economic growth and ensuring Canada's economic advantage today will translate into the long-term prosperity of tomorrow. In doing so, the Government is taking the necessary actions in all areas that drive economic progress and prosperity by connecting Canadians with available jobs, helping manufacturers and businesses succeed in the global economy, creating a new building Canada plan, investing in world-class research and innovation, and supporting families and communities. More specifically, the Economic Action Plan 2013 includes additional funding[1] which will affect CIHR's outlook, as follows:

- Additional funding of $15M in 2013–14 and ongoing for CIHR for its Strategy for Patient-Oriented Research.

Consequently, CIHR is expected to continue to remain in good financial position as the Government of Canada returns to fiscal balance over the medium term. CIHR management anticipates that additional funding through permanent increases and transfers will enable CIHR's total budget to reach $1B before year end.

[1] Refer to the following link: www.budget.gc.ca/2013/doc/plan/budget2013-eng.pdf.

Auditor's Report and Financial Statements

Canadian Institutes of Health Research

Statement of Management Responsibility Including Internal Control over Financial Reporting

Responsibility for the integrity and objectivity of the accompanying financial statements for the year ended March 31, 2013, and all information contained in these statements rests with the management of the Canadian Institutes of Health Research (CIHR). These financial statements have been prepared by management using the Government's accounting policies, which are based on Canadian public sector accounting standards.

Management is responsible for the integrity and objectivity of the information in these financial statements. Some of the information in the financial statements is based on management's best estimates and judgment, and gives due consideration to materiality. To fulfill its accounting and reporting responsibilities, management maintains a set of accounts that provides a centralized record of CIHR's financial transactions. Financial information submitted in the preparation of the Public Accounts of Canada, and included in CIHR's *Departmental Performance Report*, is consistent with these financial statements.

Management is also responsible for maintaining an effective system of internal control over financial reporting (ICFR) designed to provide reasonable assurance that financial information is reliable, that assets are safeguarded and that transactions are properly authorized and recorded in accordance with the *Financial Administration Act* and other applicable legislation, regulations, authorities and policies.

Management seeks to ensure the objectivity and integrity of data in its financial statements through careful selection, training, and development of qualified staff; through organizational arrangements that provide appropriate divisions of responsibility; through communication programs aimed at ensuring that regulations, policies, standards and managerial authorities are understood throughout CIHR and through conducting an annual risk-based assessment of the effectiveness of the system of ICFR.

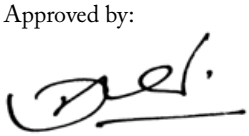
The system of ICFR is designed to mitigate risks to a reasonable level based on an ongoing process to identify key risks, to assess effectiveness of associated key controls, and to make any necessary adjustments.

A risk-based assessment of the system of ICFR for the year ended March 31, 2013, was completed in accordance with the Treasury Board *Policy on Internal Control*, and the results and action plans are summarized in the annex.[1]

The effectiveness and adequacy of CIHR's system of internal control is documented by the Chief Financial Officer, who conducts periodic assessments of different areas of CIHR's operations, and reviewed by CIHR's Audit Committee, which oversees management's responsibilities for maintaining adequate control systems and the quality of financial reporting, and which recommends the financial statements to the President of CIHR and its Governing Council.

The Office of the Auditor General of Canada, the independent auditor for the Government of Canada, has expressed an opinion on the fair presentation of the financial statements of CIHR which does not include an audit opinion on the annual assessment of the effectiveness of CIHR's internal controls over financial reporting.

Approved by:



Alain Beaudet, MD, PhD
President

Thérèse Roy, CPA, CA (Quebec)
Chief Financial Officer
Vice-President, Resource Planning and Management

Ottawa, Canada
June 25, 2013

[1] Summary of the Assessment of Effectiveness of the Systems of Internal Control over Financial Reporting and the Action Plan of the Canadian Institutes of Health Research for the Fiscal Year 2012–13 (Unaudited) www.cihr-irsc.gc.ca/e/47009.html.

Auditor General of Canada
Vérificateur général du Canada

Independent Auditor's Report

To the Canadian Institutes of Health Research and the Minister of Health

I have audited the accompanying financial statements of the Canadian Institutes of Health Research, which comprise the statement of financial position as at 31 March 2013, and the statement of operations and departmental net financial position, statement of change in departmental net debt and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

In my opinion, the financial statements present fairly, in all material respects, the financial position of the Canadian Institutes of Health Research as at 31 March 2013, and the results of its operations, changes in its net debt, and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Lissa Lamarche, CA
Principal
for the Auditor General of Canada

25 June 2013
Ottawa, Canada

Canadian Institutes of Health Research

Statement of Financial Position

As at March 31

(in thousands of dollars)	2013	2012
Liabilities		
Accounts payable and accrued liabilities (note 4)	$ 4,268	$ 3,872
Vacation pay and compensatory leave	2,084	1,544
Deferred revenue (note 5)	3,961	6,357
Employee future benefits (note 6)	1,771	3,285
Total liabilities	**12,084**	**15,058**
Financial assets		
Due from the Consolidated Revenue Fund	$ 8,221	$ 10,221
Accounts receivable and advances (note 7)	1,108	554
Total financial assets	**9,329**	**10,775**
Departmental Net Debt	**$ 2,755**	**$ 4,283**
Non-financial assets		
Prepaid expenses	$ 606	$ 595
Tangible capital assets (note 8)	2,491	3,172
Total non-financial assets	**3,097**	**3,767**
Departmental net financial position	**$ 342**	**$ (516)**

Contractual obligations (note 9)
Contingent liabilities (note 10)

The accompanying notes form an integral part of these financial statements.

Approved by:

Alain Beaudet, MD, PhD
President

Ottawa, Canada
June 25, 2013

Thérèse Roy, CPA, CA (Quebec)
Chief Financial Officer
Vice-President, Resource Planning and Management

Canadian Institutes of Health Research

Statement of Operations and Departmental Net Financial Position

For the Year Ended March 31

(in thousands of dollars)	2013	2013	2012
	Planned Results (note 2)		
Expenses			
Health Knowledge	$ 455,902	$ 478,346	$ 469,075
Health and Health Services Advances	264,185	276,591	283,056
Health Researchers	197,045	172,767	181,672
Health Research Commercialization	42,451	52,709	55,984
Internal Services	31,349	31,511	30,685
Total expenses	**990,932**	**1,011,924**	**1,020,472**
Revenues			
Health Knowledge	$ 6,023	$ 96	$ 85
Health and Health Services Advances	3,389	15,813	14,584
Health Researchers	2,621	100	86
Health Research Commercialization	567	–	2
Total revenues	**12,600**	**16,009**	**14,757**
Net cost of operations before government funding	**$ 978,332**	**$ 995,915**	**$ 1,005,715**
Government funding			
Net cash provided by Government	$ 974,164	$ 991,792	$ 1,005,601
Change in due from the Consolidated Revenue Fund	(400)	(2,000)	(2,568)
Services provided without charge by other government departments (note 11)	6,389	6,981	7,113
Net cost of operations after government funding	**(1,821)**	**(858)**	**(4,431)**
Departmental net financial position – Beginning of year	**(260)**	**(516)**	**(4,947)**
Departmental net financial position – End of year	**$ 1,561**	**$ 342**	**$ (516)**

Segmented information (note 12)

The accompanying notes form an integral part of these financial statements.

Canadian Institutes of Health Research

Statement of Change in Departmental Net Debt

For the Year Ended March 31

(in thousands of dollars)	2013	2013	2012
	Planned Results (note 2)		
Net Cost of Operations after government funding	**$ (1,821)**	**$ (858)**	**$ (4,431)**
Change due to tangible capital assets			
Acquisition of tangible capital assets	800	853	414
Amortization of tangible capital assets	(958)	(1,534)	(1,224)
Total change due to tangible capital assets	**(158)**	**(681)**	**(810)**
Change due to prepaid expenses:	–	11	(204)
Net decrease in departmental net debt	**(1,979)**	**(1,528)**	**(5,445)**
Departmental net debt – Beginning of year	**4,283**	**4,283**	**9,728**
Departmental net debt – End of year	**$ 2,304**	**$ 2,755**	**$ 4,283**

The accompanying notes form an integral part of these financial statements.

Canadian Institutes of Health Research

Statement of Cash Flows

For the Year Ended March 31

(in thousands of dollars)	2013	2012
Operating activities		
Net cost of operations before government funding	$ 995,915	$ 1,005,715
Non-cash items:		
Amortization of tangible capital assets	(1,534)	(1,224)
Services provided without charge by other government departments (note 11)	(6,981)	(7,113)
Variations in Statement of Financial Position:		
Increase (decrease) in accounts receivable and advances	554	(147)
Increase (decrease) in prepaid expenses	11	(204)
Decrease (increase) in accounts payable and accrued liabilities	(396)	1,335
Increase in vacation pay and compensatory leave	(540)	(37)
Decrease in deferred revenue	2,396	1,233
Decrease in future employee benefits	1,514	5,629
Cash used in operating activities	**990,939**	**1,005,187**
Capital activities		
Acquisitions of tangible capital assets	853	414
Proceeds on disposal of capital assets	–	–
Cash used in capital activities	**853**	**414**
Net cash provided by Government of Canada	**$ 991,792**	**$ 1,005,601**

The accompanying notes form an integral part of these financial statements.

Notes to the Financial Statements

For the Year Ended March 31, 2013

1. Authority and Objectives

The Canadian Institutes of Health Research (CIHR) was established in June 2000 under the *Canadian Institutes of Health Research Act,* replacing the former Medical Research Council of Canada. It is listed in Schedule II to the *Financial Administration Act* as a departmental corporation.

CIHR's objective is to excel, according to international standards of scientific excellence, in the creation of new knowledge, and its translation into improved health, more effective health services and products, and a strengthened Canadian health care system. CIHR achieves these objectives through its strategic outcome of being a world-class health-research enterprise that creates, disseminates and applies new knowledge across all areas of health research. The strategic outcome is based on four program activities. The first program activity is Health Knowledge; these programs aim to support the creation of new knowledge across all areas of health research to improve health and the health system. The second, Health and Health Services Advances, aims to support the creation of new knowledge in strategic priority areas and its translation into improved health and a strengthened health system. The third program activity, Health Researchers, aims to build health research capacity to improve health and the health system by supporting the training and careers of excellent health researchers. The fourth, Health Research Commercialization, aims to support and facilitate the commercialization of health research to improve health and the health system.

CIHR is led by a President who is the Chairperson of a Governing Council of not more than eighteen members appointed by the Governor in Council. The Governing Council sets overall strategic direction, goals and policies and oversees programming, resource allocation, ethics, finances, planning and accountability.

CIHR has thirteen Institutes that focus on identifying the research needs and priorities for specific health areas, or for specific populations, then developing strategic initiatives to address those needs. Each Institute is led by a Scientific Director who is guided by an Institute Advisory Board, which strives to include representation of the public, researcher communities, research funders, health professionals, health policy specialists and other users of research results.

CIHR's grants, awards and operating expenditures are funded by budgetary authorities. Employee benefits are funded by statutory authorities.

2. Summary of Significant Accounting Policies

These financial statements have been prepared using the Government's accounting policies stated below, which are based on Canadian public sector accounting standards. The presentation and results using the stated accounting policies do not result in any significant differences from Canadian public sector accounting standards.

Significant accounting policies are as follows:

(a) Parliamentary authorities – CIHR is financed by the Government of Canada through Parliamentary authorities. Financial reporting of authorities provided to CIHR does not parallel financial reporting according to generally accepted accounting principles since authorities are primarily based on cash flow requirements. Consequently, items recognized in the Statement of Operations and Departmental Net Financial Position and the Statement of Financial Position are not necessarily the same as those provided through authorities from Parliament. Note 3 provides a reconciliation between the bases of

reporting. The planned results amounts in the Statement of Operations and Departmental Net Financial Position are the amounts reported in the future-oriented financial statements included in the 2012–13 Report on Plans and Priorities (Unaudited).

(b) Net cash provided by Government – CIHR operates within the Consolidated Revenue Fund (CRF), which is administered by the Receiver General for Canada. All cash received by CIHR is deposited to the CRF and all cash disbursements made by CIHR are paid from the CRF. The net cash provided by Government is the difference between all cash receipts and all cash disbursements including transactions between departments of the Government.

(c) Amounts due from the CRF are the result of timing differences at year end between when a transaction affects authorities and when it is processed through the CRF. Amounts due from the CRF represent the net amount of cash that CIHR is entitled to draw from the CRF without further authorities to discharge its liabilities.

(d) Revenues

- Funds received from external parties for specified purposes are recorded upon receipt as deferred revenue. These revenues are recognized in the period in which the related expenses are incurred.
- Funds that have been received are recorded as deferred revenue, provided CIHR has an obligation to other parties for the provision of goods, services, or the use of assets in the future.
- Other revenues are accounted for in the period in which the underlying transaction or event that gave rise to the revenue takes place.

(e) Expenses – Expenses are recorded on the accrual basis:

- Grants and awards (transfer payments) are recorded as expenses when authorization for the payment exists and the recipient has met the eligibility criteria or the entitlements established for the transfer payment program. In situations where payments do not form part of an existing program, transfer payments are recorded as expenses when the Government announces a decision to make a non-recurring transfer, provided the enabling legislation or authorization for payment receives parliamentary approval prior to the completion of the financial statements.
- Vacation pay and compensatory leave are accrued as the benefits are earned by employees under their respective terms of employment.
- Services provided without charge by other government departments for accommodation and employer contributions to the health and dental insurance plans are recorded as operating expenses at their estimated cost.

(f) Refunds of previous years' expenses – These amounts include the return of grants and awards funds to CIHR in the current fiscal year for expenses incurred in previous fiscal years due to cancellations; refunds of previous years' expenses related to goods or services; and adjustments of previous years' accounts payable. These refunds and adjustments are presented against the related expenses in the financial statements but are recorded as revenue in accordance with accounting policies and therefore are excluded when determining current year authorities used.

(g) Employee future benefits

- Pension benefits: Eligible employees participate in the Public Service Pension Plan, a multiemployer defined benefit pension plan administered by the Government. CIHR's contributions to the Plan are charged to expenses in the year incurred and represent the total departmental obligation to the Plan. CIHR's responsibility with regard to the Plan is limited to its contributions. Actuarial surpluses or deficiencies are recognized in the financial statements of the Government of Canada, as the Plan's sponsor.

- Severance benefits – CIHR executives and non-represented employees: Prior to October 2, 2011, CIHR executives and non-represented employees were entitled to severance benefits under labour contracts or conditions of employment for voluntary and involuntary departures. These benefits were accrued as employees rendered the services necessary to earn them. Effective October 2, 2011, CIHR non-represented employees and executives were no longer eligible to accrue severance benefits for voluntary departures (e.g. resignation and retirement). Employees were provided with three options in relation to the severance termination provisions, such as the immediate payout of the accumulated weeks of severance at their current rate of pay, retain the accumulated weeks of severance with a payout upon termination of employment with CIHR or retirement at their exit rate of pay, or a combination thereof. These changes have been reflected in the calculation of the outstanding severance benefit obligation. Severance benefits continue to accrue for involuntary departures, however, benefits payable would be reduced by the severance termination option exercised for service up to and including October 1, 2011, should an involuntary departure occur.

(h) Accounts receivable and advances are stated at the lower of cost and net recoverable value. A valuation allowance is recorded for receivables and advances where recovery is considered uncertain.

(i) Contingent liabilities – Contingent liabilities are potential liabilities that may become actual liabilities when one or more future events occur or fail to occur. To the extent that the future event is likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded. If the likelihood is not determinable or an amount cannot be reasonably estimated, the contingency is disclosed in the notes to the financial statements.

(j) Tangible capital assets – All tangible capital assets having an individual initial cost of $5,000 or more are recorded at their acquisition cost.

Amortization of tangible capital assets is done on a straight-line basis over the estimated useful life of the capital asset as follows:

Asset class	Amortization period
Informatics hardware	3–5 years
Informatics software	3–10 years
Office equipment	10 years
Vehicles	5 years

Assets under construction are recorded in the applicable capital asset class in the year that they become available for use and are not amortized until they become available for use.

(k) Measurement uncertainty – The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses reported in the financial statements. At the time of preparation of these statements, management believes the estimates and assumptions to be reasonable. The most significant items where estimates are used are contingent liabilities, the liability for employee future benefits and the useful life of tangible capital assets. Actual results could significantly differ from those estimated. Management's estimates are reviewed periodically and, as adjustments become necessary, they are recorded in the financial statements in the year they become known.

3. Parliamentary Authorities

CIHR receives most of its funding through annual Parliamentary authorities. Items recognized in the Statement of Operations and Departmental Net Financial Position and the Statement of Financial Position in one year may be funded through Parliamentary authorities in prior, current or future years. Accordingly, CIHR has different net results of operations for the year on a government funding basis than on an accrual accounting basis. The differences are reconciled in the following tables:

(a) Reconciliation of net cost of operations to current year authorities used

(in thousands of dollars)	2013	2012
Net cost of operations before government funding	**$ 995,915**	**$ 1,005,715**
Adjustments for items affecting net cost of operations but not affecting authorities:		
Amortization of tangible capital assets	(1,534)	(1,224)
Services provided without charge by other government departments	(6,981)	(7,113)
Increase in vacation pay and compensatory leave	(540)	(37)
Decrease in employee future benefits	1,514	5,629
Refunds of previous years' grants and awards	7,616	5,825
Other adjustments	200	85
	275	3,165
Adjustments for items not affecting net cost of operations but affecting authorities:		
Acquisitions of tangible capital assets	853	414
Increase (decrease) in prepaid expenses	11	(204)
	864	210
Current year authorities used	**$ 997,054**	**$ 1,009,090**

(b) Authorities provided and used

(in thousands of dollars)	2013	2012
Authorities provided:		
Vote 20 - Operating expenditures	$ 52,860	$ 55,908
Vote 25 - Grants	949,075	952,647
Statutory amounts	6,133	6,662
Less:		
Authorities available for future years	(2,453)	(2,117)
Frozen allotments	–	(2,093)
Reprofiled Grants	(7,748)	–
Lapsed: Operating	(260)	–
Lapsed: Grants	(553)	(1,917)
Current year authorities used	**$ 997,054**	**$ 1,009,090**

4. Accounts Payable and Accrued Liabilities

The following table presents details of CIHR's accounts payable and accrued liabilities:

(in thousands of dollars)	2013	2012
Accounts payable - Other government departments and agencies	$ 214	$ 1,493
Accounts payable - External parties	1,661	914
Total accounts payable	1,875	2,407
Accrued liabilities	2,393	1,465
Total accounts payable and accrued liabilities	**$ 4,268**	**$ 3,872**

5. Deferred Revenue

Deferred revenue represents the balance at year end of unearned revenues stemming from amounts received from external parties that are restricted in order to fund the expenditures related to specific research projects and stemming from amounts received for fees prior to services being performed. Revenue is recognized in the period that these expenditures are incurred or in which the service is performed. Details of the transactions related to this account are as follows:

(in thousands of dollars)	2013	2012
Opening balance	**$ 6,357**	**$ 7,590**
Amounts received	13,613	13,524
Revenue recognized	(16,009)	(14,757)
Closing balance	**$ 3,961**	**$ 6,357**

6. Employee Future benefits

(a) Pension benefits:

CIHR's employees participate in the Public Service Pension Plan, which is sponsored and administered by the Government. Pension benefits accrue up to a maximum period of 35 years at a rate of 2% per year of pensionable service, times the average of the best five consecutive years of earnings. The benefits are integrated with the Canada/Quebec Pension Plans benefits and they are indexed to inflation.

Both the employees and CIHR contribute to the cost of the Plan. The 2012–13 expense (in thousands of dollars) amounts to $4,379 ($4,790 in 2011–12) which represents approximately 1.7 times (1.8 times in 2011–12) the contributions by employees.

CIHR's responsibility with regard to the Plan is limited to its contributions. Actuarial surpluses or deficiencies are recognized in the financial statements of the Government of Canada, as the Plan's sponsor.

(b) Severance benefits:

CIHR provides severance benefits to its employees based on eligibility, years of service and salary at termination of employment. These severance benefits are not pre-funded. Benefits will be paid from future authorities. Information about the severance benefits, estimated as at the date of these statements, is as follows:

As part of collective agreement negotiations with certain employee groups, and changes to conditions of employment of CIHR executives and non-represented employees, the accumulation of severance benefits under the employee severance pay program ceased for these employees commencing 2011–12. Employees subject to these changes have been given the option to be immediately paid in full or partial value of benefits earned to date or collect the full remaining value of benefits on termination from the public service. These changes have been reflected in the calculation of the outstanding severance benefit obligation.

(in thousands of dollars)	2013	2012
Accrued benefit obligation – Beginning of year	**$ 3,285**	**$ 8,914**
Expense for the year	175	(3,109)
Benefits paid during the year	(1,689)	(2,520)
Accrued benefit obligation – End of year	**$ 1,771**	**$ 3,285**

CIHR reduced its severance liability in 2011–12 by $3,109,000 as a result of changes made to its severance benefit entitlements under its conditions of employment. This reduction was required to better reflect CIHR's current severance liability given these changes. The use of the government-wide actuarial assumptions for calculating the severance liability was not reflective anymore of CIHR's severance liability.

7. Accounts Receivable and Advances

The following table presents details of CIHR's accounts receivable and advances balances:

(in thousands of dollars)	2013	2012
Receivables - Other government departments and agencies	$ 550	$ 124
Receivables - External parties	355	232
Accountable advances	203	203
Subtotal	1,108	559
Allowance for doubtful accounts on receivables from external parties	–	(5)
Net accounts receivable	**$ 1,108**	**$ 554**

8. Tangible Capital Assets

(in thousands of dollars)

	Cost				Accumulated amortization				Net Book Value	
Capital asset class	Opening balance	Acquis-itions	Disposals and write-offs	Closing balance	Opening balance	Amortiz-ation	Disposals and write-offs	Closing balance	2013	2012
Informatics hardware	$ 2,903	$ 406	$ (1,500)	$ 1,809	$ 2,526	$ 212	$ (1,500)	$ 1,238	$ 571	$ 377
Informatics software	11,473	433	(85)	11,821	8,943	1,267	(85)	10,125	1,696	2,530
Office equipment	570	14	(67)	517	325	51	(67)	309	208	245
Vehicles	28	–	–	28	8	4	–	12	16	20
Total	**$ 14,974**	**$ 853**	**$ (1,652)**	**$ 14,175**	**$ 11,802**	**$ 1,534**	**$ (1,652)**	**$ 11,684**	**$ 2,491**	**$ 3,172**

Amortization expense (in thousands of dollars) for the year ended March 31, 2013 is $1,534 (2012 – $1,224).

9. Contractual Obligations

The nature of CIHR's activities can result in some large multi-year contracts and obligations whereby CIHR will be obligated to make some future payments in order to carry out its grants and awards payment programs or when the services/goods are received. Significant contractual obligations that can be reasonably estimated are summarized as follows:

(in thousands of dollars)

Contractual Obligations	2014	2015	2016	2017	2018 and thereafter	Total
Grants and awards	$ 815,750	$ 595,421	$ 372,050	$ 215,775	$ 118,524	**$ 2,117,520**
Operating expenditures	2,376	143	18	16	–	**2,553**
Total	**$ 818,126**	**$ 595,564**	**$ 372,068**	**$ 215,791**	**$ 118,524**	**$ 2,120,073**

10. Contingent Liabilities

CIHR may be subject to claims in the normal course of business. A legal suit for wrongful dismissal was initiated by an ex-employee against the Canadian Institutes of Health Research. The amount of this claim, as it relates to CIHR, is estimated to be $500,000. The outcome of this litigation is not presently determinable and no estimated liability has been accrued or expense recorded in the financial statements.

In management's view, this claim does not have any material impact on the financial statements, and consequently, no provision has been made for the claim.

11. Related Party Transactions

CIHR is related as a result of common ownership to all Government departments, agencies and Crown Corporations. CIHR enters into transactions with these entities in the normal course of business and on normal trade terms. During the year, CIHR received common services which were obtained without charge from other Government departments as disclosed below.

(a) Common services provided without charge by other government departments

During the year, CIHR received services without charge from certain common service organizations, related to accommodation and the employer's contribution to the health and dental insurance plans. These services provided without charge have been recorded in CIHR's Statement of Operations and Departmental Net Financial Position as follows:

(in thousands of dollars)		2013		2012
Accommodation provided by Public Works and Government Services Canada	$	3,529	$	3,605
Employer's contribution to the health and dental insurance plans provided by Treasury Board Secretariat		3,452		3,508
Total	**$**	**6,981**	**$**	**7,113**

The Government has centralized some of its administrative activities for efficiency, cost-effectiveness purposes and economic delivery of programs to the public. As a result, the Government uses central agencies and common service organizations so that one department performs services for all other departments and agencies without charge. The costs of these services, such as the payroll and cheque issuance services provided by Public Works and Government Services Canada and audit services provided by the Office of the Auditor General of Canada are not included in CIHR's Statement of Operations and Departmental Net Financial Position.

(b) Administration of CIHR funds by other government departments

Other federal departments and agencies administer funds on behalf of CIHR to issue grants, awards and related payments. Other federal departments and agencies are forecasted to administer $98,514,139 in funds for grants and awards ($98,472,582 in 2011–12), primarily pertaining to the Canada Research Chairs program. These expenses are reflected in CIHR's Statement of Operations and Departmental Net Financial Position.

12. Segmented Information

Presentation by segment is based on CIHR's program activity architecture. The presentation by segment is based on the same accounting policies as described in the Summary of significant accounting policies in note 2. The following table presents the expenses incurred and revenues generated for the main program activities, by major object of expense and by major type of revenue. The segment results for the period are as follows:

(in thousands of dollars)	2013						2012
	Health Knowledge	Health and Health Services Advances	Health Researchers	Health Research Commercial-ization	Internal Services	Total	Total
Transfer payments							
Grants and Awards	$ 468,749	$ 264,060	$ 171,611	$ 52,307	$ –	$ 956,727	$ 965,274
Refunds of previous years' grants and awards	(5,402)	(1,117)	(903)	(194)	–	(7,616)	(5,825)
Total transfer payments	463,347	262,943	170,708	52,113	–	949,111	959,449
Operating Expenses							
Salaries and employee benefits	11,722	10,935	1,787	557	22,615	47,616	45,771
Professional and special services	528	810	9	–	2,307	3,654	3,629
Accommodation	668	858	199	39	1,764	3,528	3,604
Travel	1,860	864	60	–	349	3,133	3,345
Other	190	76	4	–	1,448	1,718	1,916
Amortization of tangible capital assets	–	–	–	–	1,534	1,534	1,224
Communication	23	103	–	–	942	1,068	1,058
Furniture, equipment and software	8	2	–	–	552	562	476
Total operating expenses	14,999	13,648	2,059	596	31,511	62,813	61,023
Total expenses	478,346	276,591	172,767	52,709	31,511	1,011,924	1,020,472
Revenues							
Donations for health research	96	15,813	100	–	–	16,009	14,755
Endowments for health research	–	–	–	–	–	–	2
Total revenues	96	15,813	100	–	–	16,009	14,757
Net cost from continuing operations	**$ 478,250**	**$ 260,778**	**$ 172,667**	**$ 52,709**	**$ 31,511**	**$ 995,915**	**$ 1,005,715**