CIHR IRSC

Research with IMPACT

Canadian Institutes of Health Research
Annual Report
2008–09

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

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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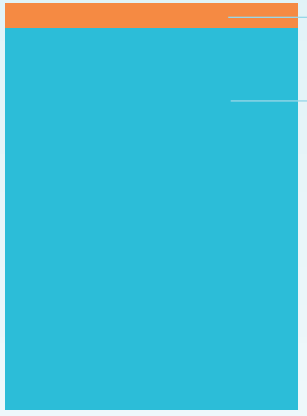


2008–09 Expenditures by Research Area

(in millions of dollars)

Operational Requirements	**6%**
Administration and Program Delivery	**58.9**
Grants and Awards Programs	**94%**
Open Competitions	**541.2**
Strategic Initiatives	**243.5**
Canada Research Chairs	**87.7**
Networks of Centres of Excellence	**27.8**
Institute Support Grants	**13.0**
Knowledge Translation	**9.6**
Centres of Excellence for Commercialization and Research	**4.4**

Total

986.1 100%

Note: Figures do not include refunds of previous years' grants and awards.

Breakdown by Strategic Outcome

(in millions of dollars)

Advances in Health Knowledge	**635.3**	**65%**
People and Research Capacity	**277.0**	**28%**
Knowledge Translation and Commercialization	**70.9**	**7%**
TOTAL	**983.2**	**100%**

Contents

Alain Beaudet, MD, PhD

Message from the President

Almost one year has passed since I commenced my term as President of the Canadian Institutes of Health Research (CIHR). During this time, I have had the privilege to meet some of the best health researchers in Canada. I have also met with federal and provincial ministers and deputy ministers to discuss some of the health-care challenges facing the citizens of this country. I have met with partners from the public and private sectors allied in our cause for improved health. These experiences have strengthened my conviction that Canada has the tools and the expertise to carry out high-impact research that will result in improved health and health care.

Improving health and health care for Canadians is the driving force behind CIHR's upcoming second five-year strategic plan and the raison d'être of our recent efforts to initiate bold new actions and strike major international research partnerships in areas of greatest public need and research strengths.

As Canada contends with a global recession, maintaining a healthy and productive workforce is key to our economic recovery. Poor mental health, which affects one in five Canadians, costs the economy billions annually in lost productivity. Chronic conditions, such as obesity, cardiovascular disease, diabetes, arthritis and neurodegenerative disorders, also take a significant toll on Canadians' productivity and well-being. The damage these diseases can do is even more daunting for vulnerable populations such as Inuit, First Nations and Métis communities in Canada.

To respond to these challenges and tangibly contribute to improving health and health care, CIHR must invest across the whole spectrum of health research. Our efforts to meet the health needs of Canadians will only succeed if we continue to apply the excellence-based, comprehensive approach that has become our trademark. As the CIHR 2008–09 Annual Report demonstrates, these efforts are paying off.

This report demonstrates how CIHR-supported health research projects deliver impact. Such projects include an innovative new drug therapy for Alzheimer's disease led by a research team from the University of Toronto. On the strength of promising results from early clinical testing, the U.S. Food and Drug Agency fast-tracked the drug for Phase II clinical trial, with results expected in 2010. CIHR investments have also contributed to new and effective technology for tracking water contaminants to their source. Developed at the University of Victoria, this technology has been used by a number of municipalities in the province, including Victoria, Kamloops and Kelowna, and will help ensure safer water supplies. And, new technology for knee-joint repair developed by researchers at École Polytechnique de Montréal holds the promise of dramatic health-care savings and increased quality of life for seniors.

Whether it's developing new therapies in neuroscience or new medical devices, research is an ongoing process. An active, sustainable research workforce is vital for providing fresh evidence, sparking new ideas and creating the innovations required for an effective response to health challenges. CIHR, on behalf of Canada and Canadians, invests in people and research projects of strategic importance to the country. The CIHR 2008–09 Annual Report demonstrates how these investments have the potential to improve health.

ALAIN BEAUDET, MD, PhD
President, Canadian Institutes of Health Research

INTRODUCTION

The Government of Canada launched the Science & Technology (S&T) Strategy in May 2007. The S&T Strategy is designed to put Canada at the leading edge of innovation that generates health, environmental, economic and societal benefits for Canadians.

To bring more clarity and focus to the S&T Strategy, the Science, Technology and Innovation Council (STIC) was charged with further developing the Strategy's four basic priorities: environmental science and technologies; natural resources and energy; health and related life sciences and technologies; and information and communications technologies.

The result was the creation of a detailed set of sub-priorities, approved by the Minister of Industry in September 2008.

Each of these sub-priorities represents an area of research and development that will benefit Canadians. The sub-priorities reflect domains in which Canada has demonstrable S&T strength, has a strategic advantage, or where increased focus would move Canada's capability in that area to become globally competitive. Additionally, each of these areas has already demonstrated the capacity for industry partnerships and commercial opportunities.

In all, seven of the sub-priorities have direct implications for CIHR. In each of these cases, CIHR can point both to existing investments in research and to plans for additional support. Examples include major new funding for a comprehensive longitudinal study on aging, research into nanomedicine and regenerative medicine, and research and partnership building in the field of neurosciences. CIHR-supported researchers are already producing research with impact in many of the STIC sub-priorities.

"Canada must focus its attention on strategic areas of development in research and innovation, thus enhancing our global competitiveness. The sub-priorities, covering both basic and applied research and innovation, will serve as a springboard to leadership by Canada in areas of significance to the nation."

Dr. Howard Alper
Chair, Science, Technology and Innovation Council

INNOVATIONS

FISH on a chip:
Cancer detection done faster, cheaper and better

Back at it:
Lifting device prevents injuries, helps workers resume jobs

Sound bites:
Finding the right fit for children's hearing aids

If the shoe fits:
Keeping seniors on their feet and out of the surgery ward

Make it stop:
Investigations aim to ease the suffering of chronic pain

Fatal reaction:
Children's genetic responses to abuse linked to suicide

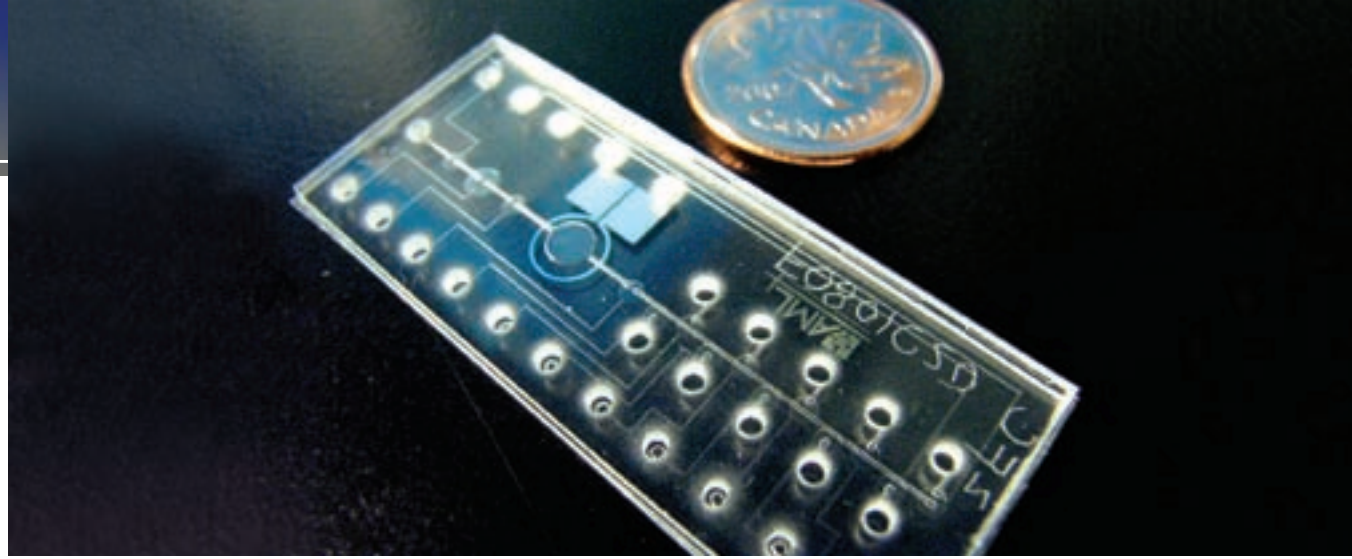
Plaque-buster:
Stopping Alzheimer's in its toxic tracks

Stem cell solution:
Gel implant helps the body repair worn out knees

Clean water:
Tracking water contaminants to their source protects health

Lots of MOXXI:
A prescription for the medical office of the future

Traditional nutrition:
Getting Northerners to revive their food culture



Microfluidic chip for automated FISH. *Photo courtesy of Dr. Vincent Siben*

"By identifying abnormal chromosomes, a device like FISH on a chip facilitates customizing treatment for individual patients, tailored to better target their disease. It's one of those situations where the patient and the health-care system can benefit enormously – and at lower cost."

Dr. Linda Pilarski
University of Alberta

Dr. Linda Pilarski
University of Alberta

FISH on a chip: Cancer detection done faster, cheaper and better

New technology ready to be commercialized as real-time test

Overview: **Dr. Linda Pilarski** and her colleagues at the **University of Alberta** have developed a new technology for diagnosing cancer faster (hours instead of days) and more economically (tens of dollars instead of hundreds). Dr. Pilarski's team devised a microfluidic chip the size of a microscope slide that can perform fluorescent in situ hybridization (FISH) – a technique to detect mutations in chromosomes for a number of different types of cancers – on a handheld diagnostic device. Currently, FISH is a complex and expensive process, which means that it's infrequently used in clinical situations. Dr. Pilarski's FISH on a chip will allow widespread use of the test because of its significantly higher speed and lower costs.

Impact: The device has strong potential for widespread clinical use. The rapid detection of chromosomal mutations will increase a physician's ability to tailor treatment strategies to target individual cancers. The FISH on a chip technology could be commercialized as an automated, real-time test for the detection and monitoring of cancer and other medical conditions.

"What industry really wants is something that will reduce time lost to injuries. It works very well and should be quite useful to lots of people."

Dr. Joan Stevenson
Queen's University

Back at it: Lifting device prevents injuries, helps workers resume jobs

Working prototype underwent test at auto assembly plant

Overview: Low back pain is one of North America's most challenging and costly occupational health issues. Soft tissue injuries in the Ontario workforce account for almost two-thirds of all lost-time claims – 40% of which are for back injuries. To address this growing problem, a team led by **Dr. Joan Stevenson** at **Queen's University** in Kingston is developing the Personal Lift Assistive Device (PLAD). Invented by **Dr. Mohammad Abdoli**, a former PhD student in Dr. Stevenson's lab and current Professor at **Ryerson University**, PLAD is an "external force generator." It attaches at the shoulders, pelvis and feet and has elastic elements that ease the load during lifting and forward bending.

Impact: Working with the Queen's team, Ove Industrial Design of Toronto developed a self-contained suit for PLAD that has been tested in auto assembly plants. The use of PLAD should reduce the risk of injuries among workers who are constantly bending and lifting. It may also be helpful in rehabilitating workers who suffer from low back pain and injuries, helping them to return to their jobs. Prevention of such a common injury should help reduce lost work time and ease the strain on the health-care system.

Dr. Joan Stevenson (left) and Dr. Mohammad Abdoli (right)
Photo courtesy of Paul Weeks

"Any clinic in the world now can purchase a device that offers the signal programmer we tested. The software uses our lab's procedures for setting the individual control parameters for a child. It's immensely satisfying to see it go forward to a clinical product."

Dr. Susan Scollie
University of Western Ontario

Dr. Susan Scollie
University of Western Ontario

Sound bites: Finding the right fit for children's hearing aids

Technology already being used by hearing aid manufacturer

Overview: Each year, more than 400 Canadian children are born with impaired hearing and many need hearing aids. Conventional hearing aids often have a limited ability to help children to hear low-volume, high-pitched sounds. This can make it more difficult for them to understand words or say certain sounds. In a project jointly funded by CIHR and the Natural Sciences and Engineering Research Council, **Dr. Susan Scollie** of the **University of Western Ontario** tested a new hearing aid technology that works by lowering the pitch of high frequency sounds and developed a method to optimize this benefit for young children. The three-year project pooled the expertise of audiologists, engineers, psychologists and speech-language pathologists.

Impact: The fitting method that Dr. Scollie's team developed and tested in the project has been paired with a commercial version of the hearing aid, and is now available through audiology clinics around the world. Several other research centres in the world have now taken up the commercialized technology and are beginning to use it in research.

"Older people fear falling, so they stay in. They don't exercise, so they lose functionality. It's a cycle of decline. Giving them more confidence – so they can go out more often – might be just enough to get them to boost up their strength."

Dr. Stephen Perry
Wilfrid Laurier University

If the shoe fits: Keeping seniors on their feet and out of the surgery ward

Innovative shoe insole restores seniors' sense of balance

Overview: Fear of falling often keeps older people from stepping out into the world to get fresh air and exercise. No wonder: according to Health Canada, one-third of Canadian seniors fall each year, with hip fractures the most common fall injury. About 20% of injury-related deaths among seniors can be traced back to a fall. To deal with this growing problem in an aging society, **Dr. Stephen Perry** of **Wilfrid Laurier University** developed Sole Sensor™, a shoe insert with a built-in ridge along the outside that improves the foot's sensory perception and prevents falls. Dr. Perry came up with the idea for the device while he was a CIHR-funded PhD student at the **University of Toronto**. He developed it with help from his supervisor **Dr. Brian Maki** and **Drs. William McIlroy** and **Geoff Fernie**.

Impact: Sole Sensor™ has important implications for improving quality of life for seniors – who will be able to walk more confidently, get more exercise and maintain health. The potential cost savings to the health-care system are considerable if the device can reduce stress on emergency rooms, surgery wards and orthopedic clinics. The patented technology has been licensed to Ontario-based Hart Mobility, who are manufacturing and marketing the inserts.

Dr. Stephen Perry
Wilfrid Laurier University

"What I've shown is that dysfunction of the nervous system can be the source of pain, not the primary disease. It's very important to have people recognize that chronic pain is a disease in itself – because then you have the obligation of treating it. It's a major unmet need."

Dr. Yves De Koninck
Laval University

Dr. Yves De Koninck
Laval University

Make it stop: Investigations aim to ease the suffering of chronic pain

Researchers commercializing discoveries with new life sciences company

Overview: Between 20% and 30% of Canadians experience chronic pain – pain that lasts for more than six months – at some point in their lives. Currently, chronic pain is mainly treated with morphine derivatives, which have questionable efficacy and several side-effects, including potential dependency problems. **Dr. Yves De Koninck** of **Laval University** has helped demonstrate that chronic pain is not a symptom but a disease in itself. His team has identified an ion pump dysfunction in the nervous system that amplifies the transmission of pain signals. Based on this discovery, he is developing a new class of painkillers – neurotherapeutics that act by modulating chloride in the central nervous system – designed to be more effective in providing relief from chronic pain without the side-effects and problems associated with morphine derivatives.

Impact: A CIHR Proof of Principle grant helped Dr. De Koninck and his research associates found Chlorion Pharma, a Quebec-based biopharmaceutical company focused on neurotherapeutics. The company is led by **Dr. Jeffrey Coull**, a former member of Dr. De Koninck's lab, who has developed a compound for pain relief and is preparing to test it in clinical trials.

"We know that the same process is involved in many different diseases, but each disease has its own story that, hopefully, we will be able to target with a specific drug. Epigenetics opens up tremendous possibilities."

Dr. Moshe Szyf
McGill University

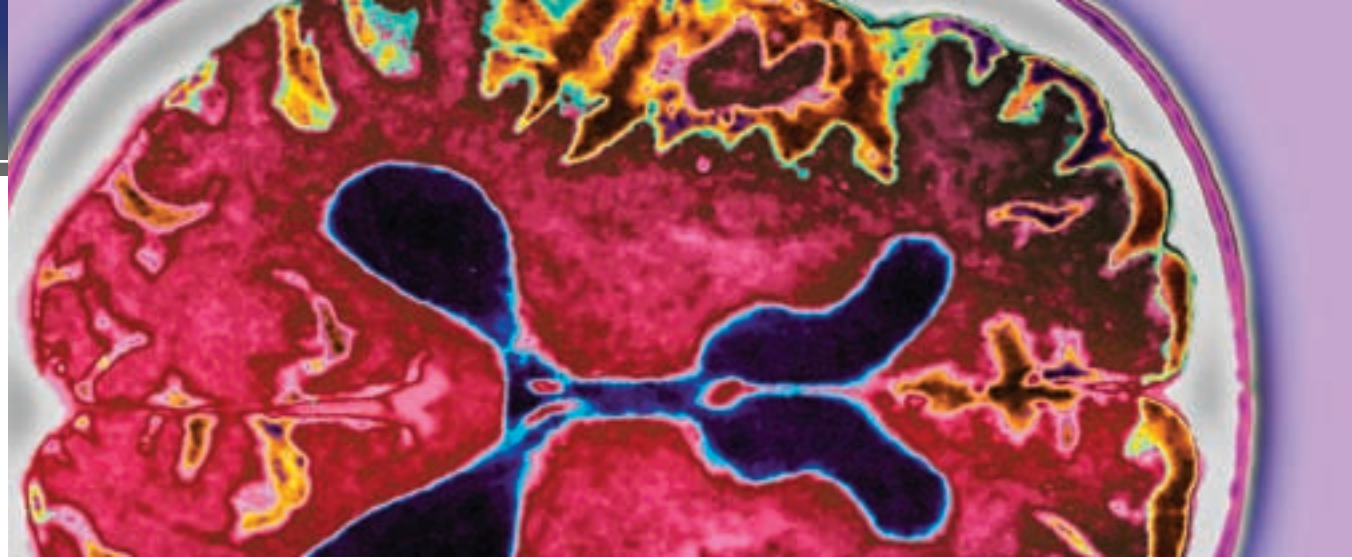
Fatal reaction: Children's genetic responses to abuse linked to suicide

Canadians are world leaders in significant new research field

Overview: **McGill University's Drs. Michael Meaney** and **Moshe Szyf** are leaders in the burgeoning field of epigenetics, which explains how environment and experience affect our genes. For instance, epigenetic factors such as methylation patterns that control gene expression may act as the mediators of communication between the environment and the genome. A CIHR-funded project – *Environmental stressors and epigenetic effects in major depression and suicide* – examined the methylation patterns of genes in subjects who were abused during childhood and died by suicide. Drs. Meaney and Szyf, in collaboration with **McGill** colleague **Dr. Gustavo Turecki**, found that early life events can alter the epigenetic status of the genes that mediate brain function and contribute to a higher risk of suicide.

Impact: Epigenetics represents an entirely new way of looking at, diagnosing and treating human disease. The transposition of animal data to human studies suggests that certain compounds have been shown to affect epigenetic changes and counteract negative nurturing influences in humans. This work holds promise for new approaches to pharmacology for difficult-to-treat mental disorders. It also has potential application for treating other diseases, such as cancer – an epigenetic disease in which the DNA methylation pattern is defective, leading to the production of tumours – and Alzheimer's disease.

Dr. Moshe Szyf
McGill University
Photo courtesy of McGill University



"I'm drawn to fixing something that's wrong. The question was, what does this peptide bind to that makes the neuron die? We hypothesized that its nearest binding partners would be the lipids within the cell membrane. So we characterized what lipids it liked and the characteristics of the various families it bound to and came up with a common structure. And that led to this drug."

Dr. JoAnne McLaurin
University of Toronto

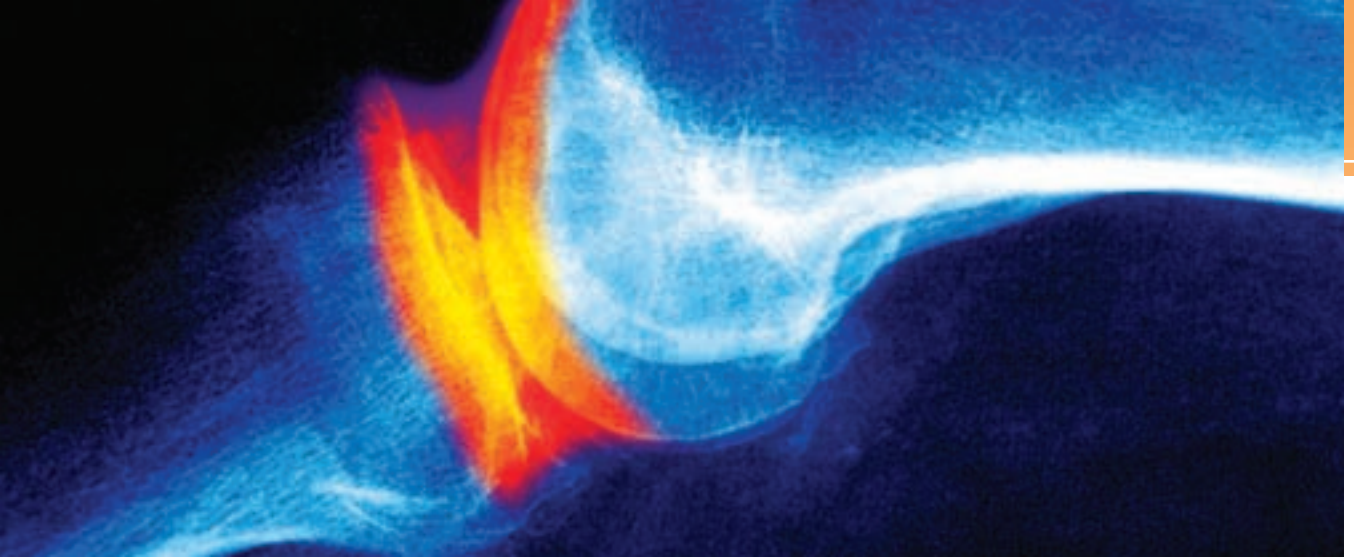
Dr. JoAnne McLaurin
University of Toronto

Plaque-buster: Stopping Alzheimer's in its toxic tracks

Drug fast-tracked for Phase II clinical trial

Overview: Alzheimer's disease affects 300,000 Canadians, gradually stealing cognitive ability and memory before causing death. One in three people over 85 has the disease or a related dementia. Abnormal deposits of the protein amyloid are believed to be involved in the pathology of the disease. Fragments, called Abeta 42, break off into toxic clusters that become plaque and interfere with the brain cells' ability to communicate with each other. **Dr. JoAnne McLaurin** of the **University of Toronto's Centre for Research in Neurodegenerative Diseases** has developed a drug called AZD-103/ELND005 that latches onto the Abeta 42 fragments to help flush them from the brain before plaque forms.

Impact: After multiple Phase I Clinical Trials showed that AZD-103/ELND005 was well tolerated by humans, the U.S. Food and Drug Agency fast-tracked the drug for an 18-month Phase II clinical trial, with results expected in 2010. Transition Therapeutics, a Canadian biopharmaceutical company, has entered a worldwide agreement with the Elan Corporation for the joint development and commercialization of AZD-103/ELND005. This new Alzheimer's treatment – which patients can take in the form of a tablet – has tremendous life-improving, life-saving and commercial potential.



"What we're aiming at is to develop new ways to enhance the vascular response in the bone below the cartilage lesion, so we can treat older patients and extend the options of treatment for cartilage repair to people in their 60s and even in their 70s."

Dr. Caroline Hoemann
École Polytechnique de Montréal

Stem cell solution: Gel implant helps the body repair worn out knees

New technology being commercialized by Montreal-based biotech firm

Overview: Knee replacements represent a major health-care cost, and the wait for surgery can last years. **Dr. Caroline Hoemann** at **École Polytechnique de Montréal** and her colleagues **Dr. Georges-Étienne Rivard** at the **Sainte-Justine Hospital** in Montreal and **Dr. Hani El-Gabalawy** at the **University of Manitoba** have come up with creative approaches to boost the wound repair response to biodegradable gel implants that contain a polymer called chitosan. The implant coaxes the knee joint to repair itself by drawing stem cells to the damaged area that can then develop into healthy cartilage cells.

Impact: Because the implant is injected and solidified in the knee defect in a simple, outpatient-based surgery, use of the gel could save millions of dollars in health-care costs while keeping people physically active well into their senior years. The procedure was previously co-developed by Dr. Hoemann through other collaborations involving BioSyntech, a Quebec-based medical device company. The implant is already approved for clinical testing, and multi-centre randomized trials are now in progress across Canada and in Europe. BioSyntech is marketing the BST-CarGel® implant as its platform technology for repairing damaged cartilage, while avoiding invasive surgery.

Dr. Caroline Hoemann
École Polytechnique
de Montréal

"On every project, I start with the question: 'Who is going to use it?' That's the basic focus. Transferring the work to the end-users is what it's all about."

Dr. Asit Mazumder
University of Victoria

Dr. Asit Mazumder
University of Victoria
Photo courtesy of Diana Nethercott

Clean water: Tracking water contaminants to their source protects health

Many British Columbia communities use new assessment tool

Overview: Water is essential to Canada's economic prosperity. Safe drinking water is essential to the health of its population. Deaths and outbreaks of illness in recent years due to contaminated drinking water have greatly heightened Canadians' concerns. **Dr. Asit Mazumder**, an NSERC Industry Research Chair at the **University of Victoria**, led a four-year CIHR-funded collaborative study to track the sources of coliform bacteria contamination in several watersheds in the Okanagan and on Vancouver Island in British Columbia. To ensure knowledge transfer, Dr. Mazumder's research team partnered directly with federal and provincial government departments, livestock industries and municipalities.

Impact: As a result of the study, Dr. Mazumder's lab developed a unique risk assessment tool for measuring potential health risks to water supplies from fecal (human, livestock and wildlife) contamination of source water. The approach combines the use of molecular (DNA) markers with biochemical and geochemical markers of septic and sewage origins. Through co-operation with Dr. Mazumder's lab, the tool is now in use in Victoria, Kamloops, Vernon, Prince Rupert, and Kelowna. His lab works with federal and community partners to characterize and model the safety of ground water in First Nations communities across Canada.

"We've begun moving into emergency rooms. We're giving people in the emergency departments information about what drugs people are on. That's a huge time-saver, and it resolves the issue of not knowing what people were taking and inadvertently not prescribing what was needed – especially during admission."

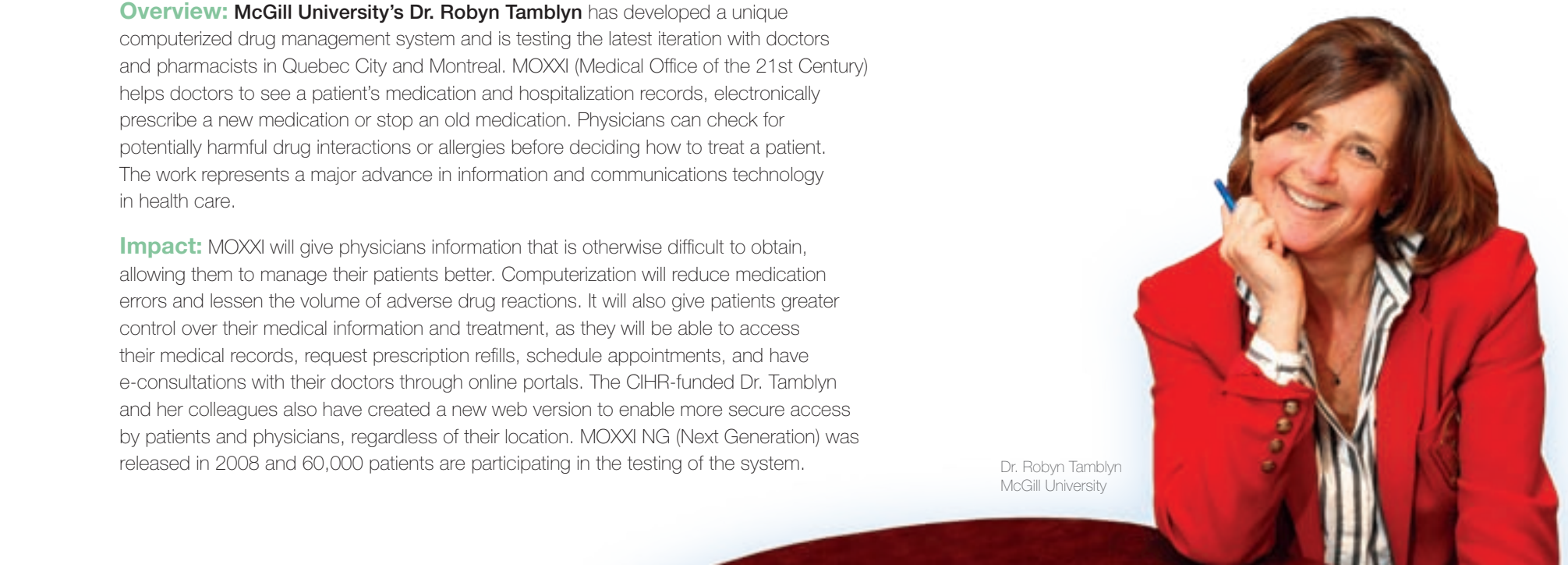
Dr. Robyn Tamblyn
McGill University

Lots of MOXXI: A prescription for the medical office of the future

New technology spells closing time for toxic drug cocktails

Overview: **McGill University's Dr. Robyn Tamblyn** has developed a unique computerized drug management system and is testing the latest iteration with doctors and pharmacists in Quebec City and Montreal. MOXXI (Medical Office of the 21st Century) helps doctors to see a patient's medication and hospitalization records, electronically prescribe a new medication or stop an old medication. Physicians can check for potentially harmful drug interactions or allergies before deciding how to treat a patient. The work represents a major advance in information and communications technology in health care.

Impact: MOXXI will give physicians information that is otherwise difficult to obtain, allowing them to manage their patients better. Computerization will reduce medication errors and lessen the volume of adverse drug reactions. It will also give patients greater control over their medical information and treatment, as they will be able to access their medical records, request prescription refills, schedule appointments, and have e-consultations with their doctors through online portals. The CIHR-funded Dr. Tamblyn and her colleagues also have created a new web version to enable more secure access by patients and physicians, regardless of their location. MOXXI NG (Next Generation) was released in 2008 and 60,000 patients are participating in the testing of the system.



Dr. Robyn Tamblyn
McGill University

"People in the community are more aware of the impact that good food has on health. Positive change is most effective when community leaders are in the driver's seat."

Dr. Harriet Kuhnlein
McGill University

Dr. Harriet Kuhnlein
McGill University

Fort McPherson (Teet'lit Zhen), Northwest Territories. *Photo courtesy of Peter Kuhnlein*

Traditional nutrition: Getting Northerners to revive their food culture

Research project helps launch community-led health promotion project

Overview: Canada's Aboriginal Peoples have unique health and nutritional challenges. This is particularly true in the Far North, where the traditional reliance on foods that are hunted, fished and collected locally has given way to dependence on high-fat, high-sugar convenience items flown or shipped in from the South. In response to a request from the Tetlit Gwich'in of Fort McPherson, Northwest Territories for help in addressing concerns over the changing dietary patterns and the increasing burden of chronic disease, **McGill University's Dr. Harriet Kuhnlein** undertook a two-year, CIHR-funded study to provide evidence for policy development to protect traditional food resources for their health-promoting properties, and to improve purchasing patterns in food stores. On a broader scale, these challenges are also being investigated by CIHR-supported researcher **Dr. Grace Egeland** of **McGill**, leader of the International Polar Year and Inuit Health Study.

Impact: Dr. Kuhnlein's study resulted in the launch of a community-driven, 18-month health promotion project emphasizing availability and access to traditional Gwich'in food and good quality market food. It spawned the publication of a community-edited book on Gwich'in food and health and led to the production of an independently funded documentary video about the concerns of the Tetlit Gwich'in for their traditional foods, and their efforts to improve nutrition and prevent chronic disease in Fort McPherson.

OVERVIEW AND HIGHLIGHTS 2008–09

CIHR is the Government of Canada's agency for health research. Its mandate is to "*excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health-care system*."

CIHR is composed of 13 Institutes and four central portfolios – research, knowledge translation, corporate affairs and resource planning and management. It provides leadership and support to more than 13,000 researchers and trainees in every province of Canada. Through CIHR, the Government of Canada is supporting health research that addresses society's highest priority health issues and contributes to economic growth and prosperity.

Organizational Highlights 2008–09

Building Canada's people advantage – new research and scholarship programs

Industry Minister Jim Prentice announced the launch of the Canada Excellence Research Chairs Program and the Vanier Canada Graduate Scholarship Program. These two new programs will position Canada as a global centre of excellence in research and education in support of the Government of Canada's Science and Technology Strategy. Both programs are a tri-agency initiative of CIHR, the Social Science and Humanities Research Council and the Natural Sciences and Engineering Research Council.

Vanier Canada Graduate Scholarships announcement: Rachelle Frenette-Cotton, Laval University (left) and Minister of State Gary Goodyear (right)

Bridging the gap between the lab and the marketplace

In an effort to advance the commercialization of research knowledge, CIHR has formed a Commercialization Advisory Committee. The committee will provide CIHR senior management with high-level strategic advice on ways to facilitate commercialization. The committee will also review results of the funding opportunities launched in response to the 2005 CIHR Commercialization and Innovation Strategy and offer its view on whether we are achieving our objectives in the area of commercialization and how CIHR might improve its commercialization programs.

Canada-France agreement on Alzheimer's disease

Health research funding organizations from Quebec (the Fonds de la recherche en santé du Québec, FRSQ), France (the Institut national de la santé et de la recherche médicale, Inserm) and Canada (CIHR's Institute of Neurosciences, Mental Health and Addiction and Institute of Aging) signed a co-operation agreement on Alzheimer's disease research. CIHR President Dr. Alain Beaudet represented the organization at the event held at the Institut national de recherche scientifique (INRS-Santé) in Laval.

Cancer Stem Cell Consortium

Former Health Minister Tony Clement announced that Canada would contribute more than $100 million to the Cancer Stem Cell Consortium (CSCC), which will work with the California Institute for Regenerative Medicine (CIRM). The announcement was made at the BIO 2008 International Convention in San Diego, California, by Minister Clement, Dr. Alan Trounson, CIRM President, Robert N. Klein, Chairman of the Governing Board of CIRM, and Dr. Martin Godbout, CEO of Genome Canada and Chairman of the Board of the Cancer Stem Cell Consortium. CIHR is one of the Canadian partners in the CSCC.

Former Health Minister Tony Clement, right, with California Governor Arnold Schwarzenegger. Photo courtesy of The Canadian Press Images/ Denis Poroy

Launch of new public health chairs

Close to $13 million is being invested to fund 14 new Research Chairs active in public health. The Chairs are funded by CIHR's Institute of Population and Public Health and the Public Health Agency of Canada, in partnership with the Centre de recherche en prévention de l'obésité, the Heart and Stroke Foundation, the Fonds de la recherche en santé du Québec and the ministère de la Santé et des Services sociaux du Québec (Quebec Ministry of Health and Social Services). The Research Chairs will examine a range of pressing public health issues such as obesity, sexually transmitted diseases among youth, animal transmitted diseases, drug use, health among First Nations and Métis people, mental health in the workplace and the impact of neighbourhoods on our health.

Ensuring research informs policy

On November 21, 2008, CIHR held a workshop to provide key senior staff in the Federal Health Portfolio with an opportunity to build capacity in the area of evidence-based policy and planning and to support the portfolio's efforts to build a Science-Policy Interface (SPI). Some of the topics covered at the workshop included concrete examples of how other governments are working to build capacity for evidence-based policy and planning, the Federal Health Portfolio's efforts to build capacity for evidence-based policy, and key issues, opportunities and challenges that must be addressed as the Portfolio moves forward to strengthen its SPI initiatives.

Multinational research initiative for autism

CIHR's Institute of Neurosciences, Mental Health and Addiction is collaborating with South and Central America on a multinational initiative on autism. This partnership will help leverage expertise and resources to better coordinate research on autism with a common goal of improving diagnosis and treatment across the Americas.

Improving knowledge about the safety and effectiveness of drugs

In July 2008, the Government of Canada announced the new Drug Safety and Effectiveness Network (DSEN). CIHR, along with Health Canada are developing the Network together with stakeholders. The Network will enable more national research on the safety and effectiveness of drugs used by Canadians. DSEN will: link researchers through a new virtual network; help to coordinate a national agenda of research based on priorities identified by decision-makers; fund independent research on the safety and effectiveness of drugs in the marketplace; and assess the risks and benefits of drug products that are on the market.

Health Minister Leona Aglukkaq and CIHR President Dr. Alain Beaudet at funding announcement for the Drug Safety and Effectiveness Network.

Partnership on knowledge syntheses on the environment

CIHR, the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council have partnered in a funding opportunity to support knowledge syntheses on the environment. The environment is a multi-faceted topic that calls for contributions from across the many disciplines of Canada's research community. This program provides up to $100,000 to support multidisciplinary research initiatives designed to address important scientific and scholarly opportunities and problems related to the environment. Projects will draw on and synthesize existing research results and scholarship to respond to knowledge gaps identified by a variety of stakeholders involved in improving the environment.

New citizen engagement framework

Citizen engagement plays a key role in the knowledge translation process. Over the past fiscal year, CIHR developed and formalized a comprehensive set of guidelines for encouraging greater citizen engagement in decisions and activities involving health research in Canada. The new guidelines will help CIHR tap into citizens' knowledge, experiences, values and priorities. Increased citizen engagement will: enhance accountability and transparency; improve the relevance of research; facilitate the translation of research into practices; and help identify research gaps. The framework will be implemented in 2009–10.

Synapse CIHR Youth Connection brings science to northern kids

CIHR, in partnership with Actua (a non-profit organization devoted to developing interest in science, technology and engineering among Canada's youth), sent a group of science educators and CIHR Synapse mentors called 'The Dream Team' on a tour of northern communities, such as Inuvik, Tuktoyaktuk and Iqaluit. The team held week-long summer science camps with innovative and fun hands-on science activities that illustrate how health research is related to everyday life. The camps were part of a special effort to engage Aboriginal youth in health science activities. In February 2009, Health Minister Leona Aglukkaq participated in a CIHR Synapse event with school children at Aqsarniit Middle School in Iqaluit.

Health Minister Leona Aglukkaq with students at Aqsarniit Middle School in Iqualuit.

Preparing for Canada's aging population

The past fiscal year marked the launch of the Canadian Longitudinal Study on Aging (CLSA) a large, national, long-term study of adult development and aging. The study's longitudinal design and extended follow-up of 50,000 men and women aged 45 and older will provide a unique research platform that will accelerate our understanding of the complex interplay among the vast array of determinants of health, from gene-environment interactions to transitions to retirement. It will provide answers to a multitude of research questions and inform decision-makers on health and quality of life in aging. The CLSA was conceived by CIHR's Institute of Aging. Its development was driven by the research community and supported by CIHR and a number of other partners including: Statistics Canada, Health Canada and the Quebec Network for Research on Aging of the Fonds de la recherche en santé du Québec.

CIHR joins the International Human Microbiome Consortium

CIHR joined forces with research funding agencies in the United States, Europe, Australia, Japan, Korea and China to support the new International Human Microbiome Consortium, a coordinated global effort that will help researchers investigate the role of microbes in human health and disease. Through this effort, researchers around the globe will be able to share data and access funding for research projects. Canada's participation in this effort is being led by CIHR's Institute of Infection and Immunity.

Health Research Milestones 2008–09

CIHR-funded researcher discovers "master switch" for cell death gene

A ground-breaking study led by **Dr. Lorrie Kirshenbaum** at the **St. Boniface Hospital Research Centre** in Winnipeg has revealed a "master switch" for a gene that controls cell death in heart and cancer cells. This discovery, published in the journal *Proceedings of the National Academy of Sciences* could revolutionize the treatment of heart disease and cancer.

Improving preterm births: New study sets international standard

A CIHR-funded study led by **Dr. Kellie Murphy** of **Mount Sinai Hospital** has found evidence that will change how women at risk of preterm birth are prescribed antenatal corticosteroids (ACS). While it has previously been established that one course of ACS is beneficial for babies at risk of preterm birth, it was unknown until now whether this treatment continues to be effective in multiple courses. The study determined that multiple courses of ACS actually increase the probability the baby will suffer adverse effects such as weighing less and having a smaller head circumference. The findings were published in *The Lancet*.

Beta-blockers increase the risk of death and stroke

A new CIHR-funded study demonstrates that a beta-blocker given around the time of surgery decreases a patient's risk of a heart attack but increases their risk of major stroke and death. The results of the study led by **Drs. P.J. Devereaux** at **McMaster University** and **Homer Yang** at the **University of Ottawa** were published in *The Lancet*.

Screening out cancer cells

Dr. Mick Bhatia and his colleagues at **McMaster University** have developed a test that can help researchers distinguish cancer-causing stem cells from normal stem cells. This finding, published in *Nature Biotechnology*, could bring us one step closer to developing safe and effective stem cell therapies.

What makes good stem cells turn bad

Results from a CIHR-funded study conducted at the **BC Cancer Agency** may have found new ways to identify and shut down stem cells that produce breast tumours. Lead author, **Dr. Afshin Raouf**, says that these findings will help determine what turns a normal breast stem cell into a cancerous one. These findings could ultimately help to find ways to stop a tumour from growing or returning. The findings were published in the journal *Cell Stem Cell*.

Finding clues for nerve cell repair

A CIHR-funded study found a key mechanism involved in normal development of motor nerve cells (motor neurons) – cells that control muscles. This finding is crucial to understanding and treating a range of conditions involving nerve cell loss or damage. The study, conducted by **Dr. Stefano Stifani** of the **Montreal Neurological Institute, McGill University**, was published in the *Proceedings of the National Academy of Sciences*.

Boys as likely as girls to be exploited

A CIHR-funded study shows that among British Columbia youth who were street-involved or in custody, more than one in three have been sexually exploited. Contrary to popular stereotypes, the results demonstrate that males were just as likely to be sexually exploited as females. This study was led by **Dr. Elizabeth Saewyc**, associate professor in the School of Nursing at the **University of British Columbia**.

Drug advertising – powerful lessons for Canada

Direct-to-consumer advertising (DTCA) has had a powerful impact on prescription drug spending in the United States, according to a study by CIHR-funded researcher **Dr. Steve Morgan** from the **University of British Columbia**. U.S. pharmaceutical firms spent US$4.24 billion on DTCA in 2005 – 11 times what they spent in 1995. Over that period, the difference in per capita spending on prescription drugs between Canada – where DTCA that makes product claims is not allowed – and the United States soared from approximately C$31 to $356. The study was published in the inaugural edition of *Open Medicine*.

Discovery of gut-brain-liver circuit may lead to new diabetes drugs

Researchers at the **Toronto General Hospital Research Institute** have discovered a new signalling pathway between the gut, the brain and the liver which lowers blood sugar when activated. The CIHR-funded study, led by **Dr. Tony Lam**, may lead to the development of drugs that will lower glucose or blood sugar levels in people who suffer from obesity or diabetes. The study was published in *Nature*.

Major discovery in HIV research

Dr. Stephen Barr, a CIHR-funded researcher at the **University of Alberta**, identified a gene that blocks the late-stage AIDS virus from multiplying or spreading. This major discovery represents a significant advancement in the fight against HIV and AIDS. The study was published in the *Public Library of Science Pathogens*.

Gene discovery may lead to cure for hereditary heart problem

CIHR-funded researchers at **Memorial University**, led by **Drs. Sean Connors** and **Terry-Lynn Young**, discovered a gene that is responsible for a genetic heart condition highly prevalent in Newfoundland and Labrador. Those afflicted with the fatal condition rarely have symptoms. As a result of this discovery, life-saving interventions have already been taken by doctors. The study was published in the *American Journal of Human Genetics*.

Kraft Dinner comfort not always available to the poor

A CIHR-funded study shows that while Kraft Dinner may be considered a comfort food, low-income Canadians cannot always afford the basic ingredients like milk and butter needed to make it. Led by **Dr. Melanie Rock** from the Faculty of Medicine at the **University of Calgary**, the study suggests a need to monitor the problem of food insecurity. The results were published in the international journal *Agriculture and Human Values*.

PROVIDING STEWARDSHIP AND ACCOUNTABILITY

CIHR Governing Council

CIHR reports to Parliament through the Minister of Health. Its Governing Council comprises 20 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.

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.

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 Governing Council, 2008–09

DR. ALAIN BEAUDET
(as of July 2008)
(*Chair*)
President
Canadian Institutes of Health Research

MR. H. ARNOLD STEINBERG
(*Chair,* November 2007 – June 2008)
Vice-Chair
Principal
Cleman Ludmer Steinberg, Inc.
Director
McGill University Health Centre Foundation
MUHC Research Institute and Canadian
Patient Safety Institute

MR. KEITH G. ANDERSON
Senior Policy Advisor
British Columbia Ministry of Health
Adjunct Professor
Department of Gerontology
Simon Fraser University

DR. JAMES BRIEN
Professor of Pharmacology and Toxicology
Director of Research
Faculty of Health Sciences
Queen's University

DR. MICHEL BUREAU
(until August 2008)
Professor
Faculty of Medicine
University of Sherbrooke
Director General
Ministère de la Santé et des Services sociaux du Québec

DR. HARVEY MAX CHOCHINOV
Canada Research Chair in Palliative Care
Professor of Psychiatry
University of Manitoba and
CancerCare Manitoba

DR. BRETT B. FINLAY
Professor
Michael Smith Laboratories
Department of Biochemistry and Molecular Biology
University of British Columbia

DR. NICOLE LETOURNEAU
Professor
Faculty of Nursing
University of New Brunswick

DR. CHRISTOPHER W. LOOMIS
Vice-President (Academic) Pro Tempore
Memorial University of Newfoundland

DR. PATRICK JOHN MCGRATH
Vice-President Research
IWK Health Centre
Professor of Psychology, Pediatrics and Psychiatry
Dalhousie University

DR. ARTHUR PORTER
(until September 2008)
Director-General and CEO
McGill University Health Centre

DR. RAY RAJOTTE
Professor of Surgery and Medicine
Director
Surgical-Medical Research Institute
Director
Islet Transplantation Group
University of Alberta

DR. CAROL RICHARDS
(until August 2008)
Director
Centre for Interdisciplinary Research in Rehabilitation
and Social Integration
Quebec Rehabilitation Institute
Professor
Department of Rehabilitation
Faculty of Medicine
Laval University

MR. MORRIS ROSENBERG
(Ex-Officio)
Deputy Minister
Health Canada

DR. JANET ROSSANT
Chief of Research
Hospital for Sick Children
Professor
Department of Medical Genetics and Microbiology
University of Toronto

DR. JEAN L. ROULEAU
Dean of Medicine
University of Montreal

DR. ROBERT S. SHELDON
Professor of Cardiac Sciences, Medicine and Medical Genetics
Associate Dean of Clinical Research
University of Calgary
Vice-President Research
Calgary Health Region

DR. BILL THOMLINSON
Executive Director
Canadian Light Source Inc.
University of Saskatchewan

DR. CORNELIA WEIMAN
Co-Director
Indigenous Health Research Development Program
Assistant Professor
Department of Public Health Sciences
Faculty of Medicine
University of Toronto

DR. PIERRE CHARTRAND
(until June 2008)
Acting President
Canadian Institutes of Health Research

CIHR Executive Management Team

DR. ALAIN BEAUDET
President

MS. CHRISTINE FITZGERALD
Executive Vice-President

DR. IAN GRAHAM
Vice-President, Knowledge Translation

DR. PIERRE CHARTRAND
Vice-President, Research

MR. JAMES ROBERGE
Chief Financial Officer
Vice-President, Resource Planning and Management

CIHR Institutes

CIHR Scientific Directors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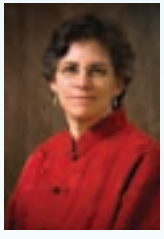
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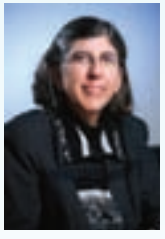
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1. **CIHR Institute of Aboriginal Peoples' Health**
   a) **Dr. Jeff Reading**
   (until December 2008)
   University of Victoria

   b) **Dr. Malcolm King**
   (as of January 2009)
   University of Alberta

2. **CIHR Institute of Aging**
   Dr. Anne Martin-Matthews
   University of British Columbia

3. **CIHR Institute of Cancer Research**
   a) **Dr. Philip Branton**
   (until July 2008)
   McGill University

   b) **Dr. Morag Park**
   (as of August 2008)
   McGill University

4. **CIHR Institute of Circulatory and Respiratory Health**
   Dr. Peter Liu
   University Health Network
   University of Toronto

5. **CIHR Institute of Gender and Health**
   Dr. Joy Johnson
   University of British Columbia

6. **CIHR Institute of Genetics**
   Dr. Roderick McInnes
   Hospital for Sick Children
   University of Toronto

7. **CIHR Institute of Health Services and Policy Research**
   Dr. Colleen M. Flood
   University of Toronto

8. **CIHR Institute of Human Development, Child and Youth Health**
   Dr. Michael Kramer
   Montreal Children's Hospital
   McGill University

9. **CIHR Institute of Infection and Immunity**
   Dr. Bhagirath Singh
   University of Western Ontario

10. **CIHR Institute of Musculoskeletal Health and Arthritis**
    Dr. Jane Aubin
    University of Toronto

11. **CIHR Institute of Neurosciences, Mental Health and Addiction**
    a) **Dr. Rémi Quirion**
    (until March 2009)
    Douglas Hospital Research Centre
    McGill University

    b) **Dr. Anthony Phillips**
    (as of April 2009)
    University of British Columbia

12. **CIHR Institute of Nutrition, Metabolism and Diabetes**
    a) **Dr. Diane Finegood**
    (until December 2008)
    Simon Fraser University

    b) **Dr. Philip Sherman**
    (as of January 2009)
    University of Toronto

13. **CIHR Institute of Population and Public Health**
    a) **Dr. John Frank**
    (until June 2008)
    University of Toronto

    b) **Dr. Nancy Edwards**
    (as of July 2008)
    University of Ottawa

FINANCIAL STATEMENT DISCUSSION AND ANALYSIS

Financial Highlights

- The 2008-09 net cost of operations for CIHR was $972.8 million, a decrease of 2.6% as compared to 2007-08.
- CIHR grants and awards expenses totalled $927.2 million in 2008-09, a decrease of approximately 3.0% as compared to 2007-08.
- CIHR's operations and administration expenses totalled $58.9 million, an increase of $3.6 million (or 6.5%) over 2007-08. Operations and administration expenses were comprised of $40.6 million in salaries and employee benefits (68.9%) and $18.3 million in non-salary expenses (31.1%). Operations and administration expenses continue to comprise less than the target maximum value of 6.0% of total CIHR expenses.
- Total assets ($20.1 million) and total liabilities ($24.3 million) are both significantly lower than in 2007-08 due primarily to a $20 million decrease in grants payable in 2008-09. The $20 million Gairdner Foundation grant was accrued as at March 31, 2008 and was disbursed during the 2008-09 year. This $20 million decrease in grants payable also resulted in a corresponding $20 million decrease in the "Due from the Consolidated Revenue Fund" balance during the 2008-09 fiscal year.
- The acquisition of tangible capital assets ($1.3 million) is relatively consistent with the prior year. The amortization of tangible capital assets ($0.7 million) decreased by 62.7% as compared to 2007-08 due to a change in the estimated useful life of CIHR's largest asset class (Informatics software).
- CIHR parliamentary appropriations for 2008-09 totalled $974.0 million, a decrease of $19.7 million (or 2.0%) as compared to 2007-08.
- CIHR did not spend all available and planned funding in 2008-09. CIHR had surplus parliamentary appropriations totalling $4.6 million, which was 76.5% less than in 2007-08. A surplus of $3.8 million occurred in the Operating expenditures parliamentary appropriation due to projects being cancelled or not starting as quickly as planned along with improvements in operational efficiencies. There was also a minor surplus ($0.8 million) in the Grants parliamentary appropriation.

Analysis

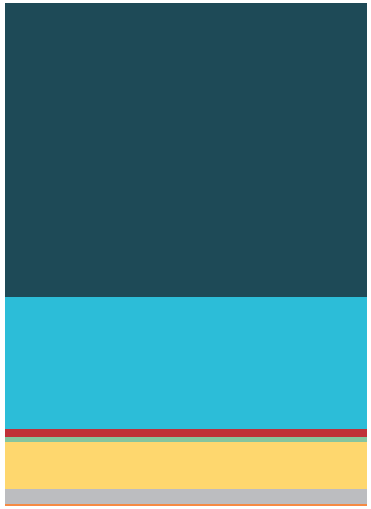
CIHR's growth is almost entirely dependent on increases to its appropriations as approved by Parliament. The 2.0% decrease in parliamentary appropriations (or $19.7 million) in 2008-09 resulted primarily from a decrease to appropriations for the Centres of Excellence for Commercialization and Research (CECR) program. In 2007-08, CIHR received $73.5 million of parliamentary appropriations in support of the launch of the new CECR program, whereas in 2008-09 $4.4 million in appropriations was provided for the CECR program. This decrease to CIHR parliamentary appropriations for the CECR program was partially offset by CIHR receiving increased parliamentary appropriations from the $34 million base budget increase announced in the 2008 Federal Budget, as well as additional 2008-09 appropriations for CIHR in key targeted strategic areas such as the Canada Graduate Scholarships program ($4.8 million), pandemic preparedness research ($3.4 million), HIV/AIDS research ($3.2 million), the National Anti-Drug Strategy ($0.9 million) and Fabry's disease ($0.8 million). CIHR also received approximately $1.5 million more in transfers from other government departments (primarily from the Public Health Agency of Canada (PHAC) and Health Canada) than it did in 2007-08 to fund research projects in key research areas such as Hepatitis C and influenza research.

A reduction in CIHR parliamentary appropriations also resulted in commensurate decreases to its net cost of operations and grant and award expenses. The CIHR net cost of operations decreased by 2.6% (or $26.2 million) in 2008-09 as compared to 2007-08. Grants and Awards expenses in 2008-09 totalled $927.2 million, a decrease of $28.9 million or 3.0% as compared to 2007-08.

The following graphic indicates how 2008-09 Grants and Awards expenses were allocated by program area. Priority is given to funding health research and researchers through open competitions, strategic initiatives and knowledge translation. CIHR also participates with other federal granting agencies (NSERC, SSHRC) in a number of tri-agency programs, including the Canada Research Chairs, the Networks of Centres of Excellence, and the Centres of Excellence for Commercialization and Research.

2008–09 GRANTS AND AWARDS EXPENSES*

$927.2 million



- Open Competitions (58.4%)
- Strategic Initiatives (26.3%)
- Institute Support Grants (1.4%)
- Knowledge Translation (1.0%)
- Canada Research Chairs (9.4%)
- Networks of Centres of Excellence (3.0%)
- Centres of Excellence for Commercialization and Research (0.5%)

*Figures do not include refunds of previous years' expenses.

As the graphic indicates, CIHR invests the largest share of its budget on grants and awards through open competitions, enabling individual researchers, or groups of investigators, to pursue research projects in any area of health research. Applications for grants and awards undergo rigorous peer review by committees of experts in the field. This process helps to ensure that only excellent health research proposals that meet internationally accepted standards of excellence are funded by CIHR.

Strategic initiatives comprise the second largest area of grants and awards investments and it targets high priority research areas identified by CIHR's Institutes after broad consultations with stakeholders and partners. These strategic initiatives address emerging health threats and other important health issues of concern to Canadians including areas of health research such as obesity, cancer, vulnerable populations such as youth and aboriginals, pandemic preparedness, HIV/AIDS, or measures to improve the effectiveness of the Canadian health-care system.

Knowledge Translation (KT) is a critical and growing part of CIHR's mandate focused on the synthesis, exchange and ethically sound application of knowledge to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products and a strengthened health-care system. In 2008–09, grants and awards expenses related directly to Knowledge Translation increased by 16.8%.

As noted earlier, the key business driver for CIHR is being provided parliamentary appropriations by the Federal Government. The table below summarizes the parliamentary appropriations received by CIHR in fiscal year 2008–09:

SUMMARY OF PARLIAMENTARY APPROPRIATIONS

(in millions of dollars)

	2008–09 Main Estimates	2008–09 Supplementary Estimates	2008–09 Total Appropriations
Operating Expenses			
Salaries (including Employee Benefits)	29.7	7.9	37.6
Non-Salary Expenses	17.6	1.1	18.7
Total – Operating Expenditures	**47.3**	**9.0**	**56.3**
Grants and Awards			
CIHR ongoing budget	674.4	–	674.4
Canada Research Chairs	103.6	–	103.6
Networks Centres of Excellence	27.5	(1.4)	26.1
HIV/AIDS research initiative	21.2	–	21.2
Canada Graduate Scholarships Program	18.9	0.3	19.2
Institute Support Grants	13.0	–	13.0
Fabry's Disease & Expensive Drugs	12.4	–	12.4
Pandemic Preparedness research initiative	6.4	0.5	6.9
International Polar Year research initiative	3.9	–	3.9
Budget 2008 increase	–	29.3	29.3
CECR funding	–	4.4	4.4
Business-Led Networks of Centres of Excellence	–	1.7	1.7
Other Program Funding	–	1.6	1.6
Total – Grants & Awards	**881.3**	**36.4**	**917.7**
Total 2008–09 CIHR Parliamentary Appropriations	**928.6**	**45.4**	**974.0**
Total 2008–09 Authorities Spent			**969.4**
Total Surplus of Appropriations for 2008–09			**4.6**

Note: CIHR received a $34 million ongoing budget increase through the 2008 Federal Budget, which as per the table above, was allocated to CIHR's 2008–09 parliamentary appropriations through the Supplementary Estimates. Of that $34 million, $29.3 million was allocated to Vote 25 (Grants) and the remaining $4.7 million was allocated to Vote 20 (Operating Expenses), employee benefits and accommodation charges.

CIHR had a surplus of parliamentary appropriations totalling $4.6 million in 2008–09 as follows:

	Vote	Surplus Appropriations
20	Operating Expenses	$ 3.8 million
25	Grants	$ 0.8 million
	Total Surplus of Parliamentary Appropriations	**$ 4.6 million**

- The majority of surplus funds in 2008–09 are from Vote 20 (Operating Expenses). The surplus funds in Vote 20 (Operating Expenses) are mainly due to projects being cancelled or not starting as quickly as planned, as well as improvements in operational efficiencies. Please note that CIHR is able to carry forward up to 5% of its operating budget from one period into the next fiscal year should it not be fully spent in a particular fiscal year. CIHR can carry forward $2.1 million of its 2008–09 operating budget lapse to the 2009-10 fiscal year, meaning its actual lapse is only $2.5 million for 2008–09.
- CIHR does not have the authority to carry forward any unspent Grants appropriations from one year to the next. CIHR did, however, only lapse $0.8 million in its Grants Vote for 2008–09, $16.5 million (or 95%) less than was lapsed in the previous fiscal year. Overall lapsed funds decreased by 76.5% as compared to 2007–08.

Risks and Uncertainties

CIHR continuously assesses opportunities, challenges and risks at three levels: strategic, programmatic and corporate. The major risks facing CIHR, as identified by the organization are as follows:

- Research takes time and a sustained investment. A large portion of CIHR's budget is committed to grants and awards that extend over three to five years. CIHR is continually challenged by the need to provide this longer-term funding while maintaining its capacity to fund new projects. To meet this challenge, CIHR has introduced investment modelling to better forecast the future impacts of funding decisions and the concept of "steady-state" dynamics to ensure relative stability in the number of applications funded and success rates, over time.
- Finding the appropriate balance between strategic (i.e. targeted) and investigator-initiated research is critical to success in health research. The balance varies from one field of health to another so that no single formula exists. CIHR's Governing Council approves CIHR's budget including the strategic allocation of grant funding to its various programs. A single management committee, chaired by the President of CIHR, reviews the results of the grants and awards competitions, to ensure scientific excellence and coherence with Governing Council direction. Together these measures help ensure that CIHR achieves the appropriate balance.

- There is a risk that CIHR may not be able to fulfill its knowledge translation mandate, which could result in the inability to demonstrate impact, and a lost opportunity to transform the results of the new knowledge created by CIHR funding into new health and health-care practices, products or services for the benefit of Canadians. This risk is being mitigated in two ways. The first is the establishment and planned expansion of knowledge translation programs that encourage researchers to synthesize and disseminate their results and work directly with knowledge users to find solutions. The second is the establishment of the infrastructure within CIHR to act as a convener and to promote the synthesis and dissemination of specific research results.
- The current level of operating funding limits CIHR's ability to implement some of its planned business transformation initiatives. This could result in delays in the development of processes, information and tools to support effective management and decision making. To mitigate this risk CIHR has implemented an integrated operational planning process which requires managers to plan activities and identify resource requirements or issues on an annual basis and a process to review progress against these plans on a quarterly basis. CIHR is also developing a five-year investment roadmap that plots the planned evolution of its programming and operating budget.

Rising Demand for Research Funding

- CIHR is confronted with increased application pressure from the health research community caused in part by a robust and growing community of practitioners, CIHR's broadened mandate to serve all health research disciplines and by the significant investments in health-related infrastructure being made by federal and provincial governments and other funders.
- Notwithstanding the more than doubling of CIHR's budget since its inception in 2000, the percentage of successful grant and award applicants in major competitions have fallen at a time when the number of applications that are assessed by peer review committees as being deserving of funding has tripled over that same timeframe.
- Going forward, it will be very important for CIHR to rigorously prioritize its activities and to seek additional parliamentary appropriations to ensure that Canada does not lose many of its outstanding investigators and fully reap the contribution they can make to improving the health of Canadians, increasing the effectiveness of health services and products and strengthening the Canadian health-care system.

Variance Analysis

CHANGE IN KEY FINANCIAL INDICATORS

As evidenced by the table below, CIHR's net cost of operations and grants and awards expenses have decreased slightly in relative proportion to the decreased parliamentary appropriations received by CIHR in 2008–09. Operations and administration expenses increased as compared to 2007–08 due primarily to higher employee salaries and benefits.

(in millions of dollars)

	2008–09	2007–08	Increase / (Decrease)	% Increase / (Decrease)
Parliamentary Appropriations	974.0	993.7	(19.7)	(2.0 %)
Net Cost of Operations	972.8	999.0	(26.2)	(2.6 %)
Grants & Awards Expenses	927.2	956.1	(28.9)	(3.0 %)
Operations and Administration Expenses	58.9	55.3	3.6	6.5 %
Salaries and Employee Benefits Expenses	40.6	36.5	4.1	11.2 %

- In 2008–09, the ratio of operations and administration expenses to total expenses incurred was approximately 6.0%, an increase of 0.5% from 2007–08.

CHANGE IN EXPENSES BY STRATEGIC OUTCOME

(in millions of dollars)

Strategic Outcome	2008–09	2007–08	Increase / (Decrease)	% Increase / (Decrease)
Advances in Health Knowledge	635.3	547.8	87.5	16.0 %
People and Research Capacity	277.0	317.4	(40.4)	(12.7 %)
Knowledge Translation and Commercialization	70.9	143.1	(72.2)	(50.5 %)
Total Expenses	**983.2**	**1,008.3**	**(25.1)**	**(2.5 %)**

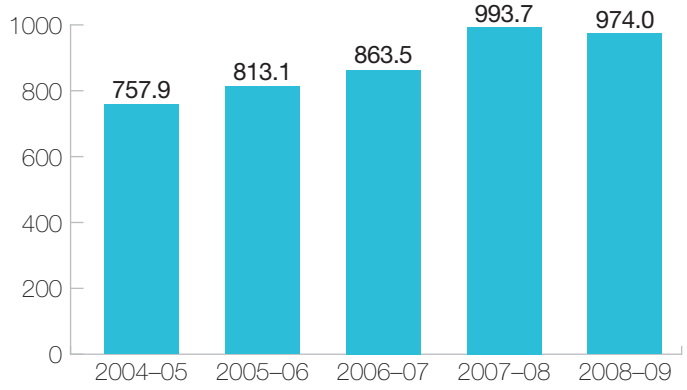
- Total expenses decreased by 2.5% in 2008–09 as compared to 2007–08 due to decreased parliamentary appropriations allocated to CIHR.
- The increase in expenses allocated to the "Advances in Health Knowledge" strategic outcome resulted from CIHR management allocating a greater portion of its 2008–09 grants and awards budget to the Open Operating Grants Program as well as increased expenses in priority areas of health research such as pandemic preparedness research, HIV/AIDS research, obesity and childhood health.

- Expenses allocated to the “People and Research Capacity” strategic outcome decreased in 2008–09 as a result of CIHR management allocating a lesser portion of its 2008–09 grants and awards budget to salary and training award programs. In addition, CIHR incurred a one-time expense in 2007–08 resulting from the $20 million grant disbursed to the Gairdner Foundation to support the “Canada Gairdner International Awards”.
- The decrease in expenses allocated to the “Knowledge Translation and Commercialization” strategic outcome is due to significantly reduced funding for the CECR program in 2008–09, dropping to $4.4 million in 2008–09 from $73.5 million in 2007–08. Expenditures for the CECR program were much higher in 2007–08 due to the launch of this new program. CIHR expects that future streams of CECR funding will be consistent with funding received in 2008–09.

Trend Analysis

CIHR PARLIAMENTARY APPROPRIATIONS

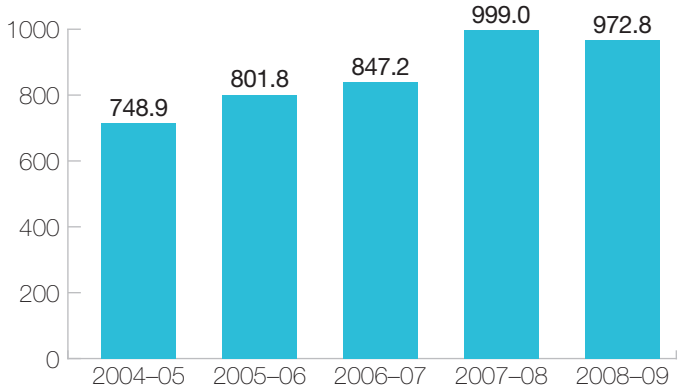
(in millions of dollars)



- CIHR parliamentary appropriations declined by $19.7 million (or 2.0%) in 2008–09 as compared to 2007–08 due to a reduction in parliamentary appropriations for the CECR program. This is the first time since CIHR inception in 2000 that CIHR parliamentary appropriations have decreased from one fiscal year to the next.
- Despite a decline in parliamentary appropriations in 2008–09, CIHR parliamentary appropriations have risen by $216.1 million over the past five fiscal years, from $757.9 million in 2004–05 to $974.0 million in 2008–09.
- CIHR parliamentary appropriations have increased by 28.5% since 2004–05, an average yearly increase of approximately 6.6%.

CIHR NET COST OF OPERATIONS

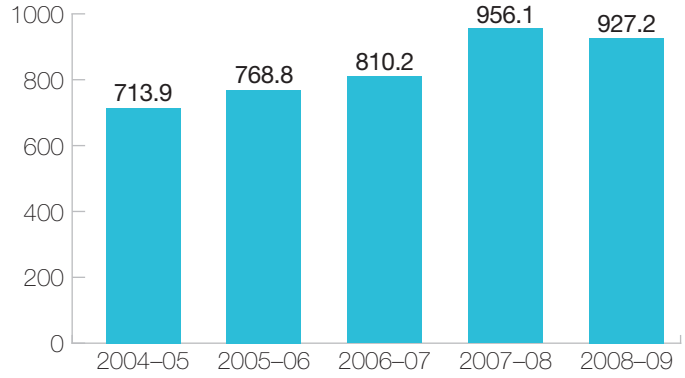
(in millions of dollars)



- CIHR net cost of operations decreased to $972.8 million, a decline of $26.2 million (or 2.6%) as compared to 2007–08. This decrease resulted from the aforementioned decline in CIHR parliamentary appropriations for 2008–09.
- Despite a decrease to CIHR net cost of operations in 2008–09, the net cost of operations has increased significantly over the past five years, from $748.9 million in 2004–05 to $972.8 million in 2008–09.
- CIHR net cost of operations has increased by $223.9 million or 29.9% since 2004–05, an average yearly increase of approximately 7.0%.

CIHR GRANTS AND AWARDS EXPENSES

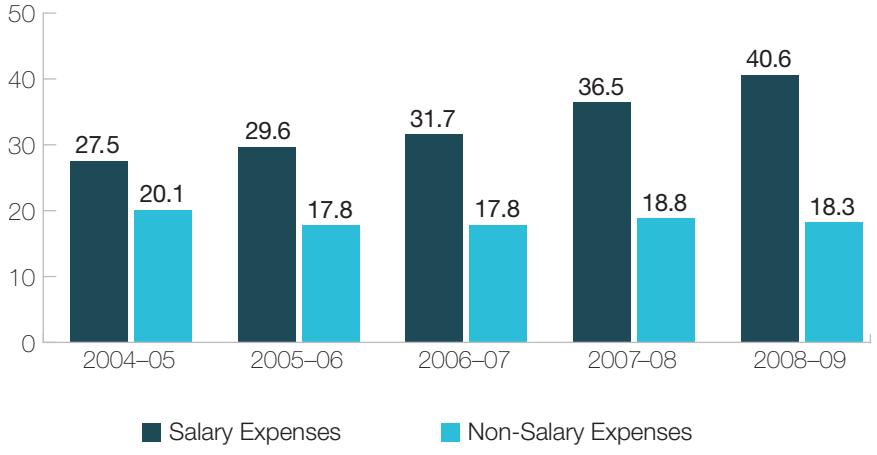
(in millions of dollars)



- CIHR grants and awards expenses decreased by $28.9 million (or 3.0%) in 2008–09 due to decreased parliamentary appropriations received by CIHR.
- Despite a slight decrease in 2008–09, CIHR grants and awards expenses have increased by $213.3 million since 2004–05, from $713.9 million to $927.2 million in 2008–09.
- CIHR grants and awards expenses have increased by 29.9% since 2004–05, an average yearly increase of approximately 7.0%.

CIHR OPERATIONS AND ADMINISTRATION EXPENSES

(in millions of dollars)



- CIHR operations and administration expenses have increased by 23.7% during the past five fiscal years, from $47.6 million in 2004–05 to $58.9 million in 2008–09.
- In 2008–09, salaries and employee benefits made up 68.9% of total operations and administration expenses, compared to 57.8% in 2004–05.
- As shown in the chart above, the proportion of the operating budget allocated to salaries and employee benefits has increased each year over the past five fiscal years.
- CIHR management will ensure that operations and administration expenses remain less than 6.0% of total expenses in future fiscal years.

AUDITOR'S REPORT AND FINANCIAL STATEMENTS

Canadian Institutes of Health Research

MANAGEMENT RESPONSIBILITY FOR FINANCIAL STATEMENTS

Responsibility for the integrity and objectivity of the accompanying financial statements of the Canadian Institutes of Health Research (CIHR) for the year ended March 31, 2009 and all information contained in these statements rests with CIHR's management. These financial statements have been prepared by management in accordance with Treasury Board accounting policies and year-end instructions issued by the Office of the Comptroller General, which are consistent with Canadian generally accepted accounting principles for the public sector.

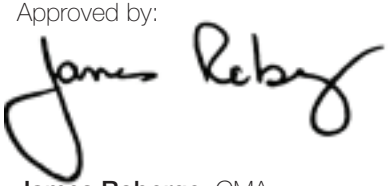
Management is responsible for the integrity and objectivity of the information in these financial statements. Some of the information in the financial statements is based on management's best estimates and judgement and gives due consideration to materiality. To fulfil its accounting and reporting responsibilities,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

Management maintains a system of financial management and internal control designed to provide reasonable assurance that financial information is reliable, that assets are safeguarded and that transactions are in accordance with the *Financial Administration Act*, are executed in accordance with prescribed regulations, within Parliamentary authorities, and are properly recorded to maintain accountability of Government funds and endowments. Management also seeks to ensure the objectivity and integrity of data in its financial statements by careful selection, training and development of qualified staff, by organizational arrangements that provide appropriate divisions of responsibility and by communication programs aimed at ensuring that regulations, policies, standards and managerial authorities are understood throughout the organization.

The CIHR Audit Committee, selected jointly by the President and the Comptroller General and appointed by the Treasury Board, provides independent, objective advice, guidance, and assurance on the adequacy of the CIHR control and accountability processes. In accordance with the Treasury Board Directive on Departmental Audit Committees, the Audit Committee has reviewed the financial statements with management and external auditors and discussed any significant issues and findings from the audit prior to recommending acceptance of the financial statements to the President and Governing Council.

The financial statements of CIHR have been audited by the Auditor General of Canada, the independent auditor for the Government of Canada.

Approved by:



James Roberge, CMA
Chief Financial Officer

Alain Beaudet, MD, PhD
President

Ottawa, Canada
May 29, 2009

Auditor General of Canada
Vérificatrice générale du Canada

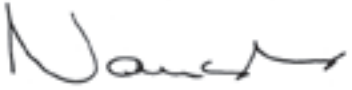
AUDITOR'S REPORT

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

I have audited the statement of financial position of the Canadian Institutes of Health Research (CIHR) as at March 31, 2009 and the statements of operations, equity and cash flow for the year then ended. These financial statements are the responsibility of CIHR's management. 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 plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of CIHR as at March 31, 2009 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.



Nancy Y. Cheng, FCA
Assistant Auditor General
for the Auditor General of Canada

Ottawa, Canada
May 29, 2009

240 rue Sparks Street, Ottawa, Ontario K1A 0G6

STATEMENT OF OPERATIONS FOR THE YEAR ENDED MARCH 31

(in thousands of dollars)

	2009	2008
EXPENSES (Note 4)		
Advances in health knowledge	635,264	547,858
People and research capacity	277,009	317,424
Knowledge translation and commercialization	70,932	143,060
TOTAL EXPENSES	**983,205**	**1,008,342**
REVENUES (Note 5)		
Advances in health knowledge	6,697	5,099
People and research capacity	2,920	2,954
Knowledge translation and commercialization	748	1,332
TOTAL REVENUES	**10,365**	**9,385**
NET COST OF OPERATIONS	**972,840**	**998,957**

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

STATEMENT OF FINANCIAL POSITION AS AT MARCH 31

(in thousands of dollars)

	2009	2008
ASSETS		
Financial assets		
Due from the Consolidated Revenue Fund	15,612	36,371
Accounts receivable:		
Other Federal Government departments	216	296
External parties	218	465
Advances	190	196
Total financial assets	**16,236**	**37,328**
Non-financial assets		
Prepaid expenses	150	82
Tangible capital assets (Note 6)	3,753	3,134
Total non-financial assets	**3,903**	**3,216**
TOTAL ASSETS	**20,139**	**40,544**
LIABILITIES		
Accounts payable and accrued liabilities		
Other Federal Government departments	1,460	465
External parties	4,002	3,894
Gairdner Foundation grant (Note 7)	–	20,000
Vacation pay and compensatory leave	1,123	1,316
Deferred revenue (Note 8)	10,151	12,011
Employee severance benefits (Note 9)	7,591	6,573
TOTAL LIABILITIES	**24,327**	**44,259**
EQUITY OF CANADA	**(4,188)**	**(3,715)**
TOTAL LIABILITIES AND EQUITY OF CANADA	**20,139**	**40,544**

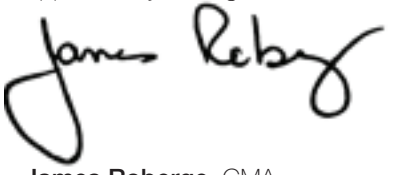
Contingent liabilities (Note 10)
Contractual obligations (Note 11)

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

Approved by Governing Council:

Alain Beaudet, MD, PhD
President

Approved by Management:



James Roberge, CMA
Chief Financial Officer

STATEMENT OF EQUITY FOR THE YEAR ENDED MARCH 31

(in thousands of dollars)

	2009	2008
EQUITY OF CANADA, BEGINNING OF YEAR	(3,715)	(740)
Net cost of operations	(972,840)	(998,957)
Net cash provided by Government	986,771	969,803
Change in Due from the Consolidated Revenue Fund	(20,759)	20,620
Services provided without charge by other Government departments (Note 12)	6,355	5,559
EQUITY OF CANADA, END OF YEAR	**(4,188)**	**(3,715)**

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

STATEMENT OF CASH FLOW FOR THE YEAR ENDED MARCH 31

(in thousands of dollars)

	2009	2008
OPERATING ACTIVITIES		
Net cost of operations	972,840	998,957
Non-cash items:		
Amortization of tangible capital assets	(696)	(1,868)
Services provided without charge by other Government departments	(6,355)	(5,559)
	(7,051)	(7,427)
Variations in Statement of Financial Position:		
(Decrease) in accounts receivable and advances	(333)	(312)
Increase (decrease) in prepaid expenses	68	(363)
Decrease (increase) in liabilities	19,932	(22,150)
	19,667	(22,825)
Cash Used by Operating Activities	**985,456**	**968,705**
CAPITAL INVESTMENT ACTIVITIES		
Acquisitions of tangible capital assets	1,315	1,098
Cash Used by Capital Investment Activities	**1,315**	**1,098**
FINANCING ACTIVITIES		
NET CASH PROVIDED BY GOVERNMENT OF CANADA	**986,771**	**969,803**

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

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED MARCH 31, 2009

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 three strategic outcomes. The first strategic outcome is advances in health knowledge, achieved by funding excellent and ethical health research across all disciplines that are relevant to health. The second strategic outcome is people and research capacity, achieved by providing funding to develop and sustain health researchers in vibrant, innovative and stable research environments. The third strategic outcome is knowledge translation and commercialization, achieved by CIHR's knowledge translation activities and funding aimed to accelerate the transformation of research results into health benefits for Canadians and an improved health-care system as well as helping to move new research breakthroughs toward potential commercial applications.

CIHR is led by a President who is the Chairperson of a Governing Council of not more than nineteen other 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. Significant Accounting Policies

These financial statements have been prepared in accordance with Treasury Board accounting policies and year-end instructions issued by the Office of the Comptroller General, which are consistent with Canadian generally accepted accounting principles for the public sector. The most significant accounting policies are as follows:

(a) Parliamentary appropriations – CIHR is financed by the Government of Canada through Parliamentary appropriations. Appropriations provided to CIHR do not parallel financial reporting according to generally accepted accounting principles since appropriations are primarily based on cash flow requirements. Consequently, items recognized in the statement of operations and the statement of financial position are not necessarily the same as those provided through appropriations from Parliament. Note 3 provides a high-level reconciliation between the bases of reporting.

(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 Federal Government.

(c) Due from the Consolidated Revenue Fund represents the amount of cash that CIHR is entitled to draw from the Consolidated Revenue Fund without further appropriations, in order to discharge its liabilities.

(d) Revenues

- Funds received from external parties for specified purposes are recorded upon receipt as deferred revenues. These revenues are recognized in the period in which the related expenses are incurred.
- Other revenues are accounted for in the period in which the underlying transaction or event occurred that gave rise to the revenues.

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

- Grants and awards are recognized when the entitlement has been established, the recipient has met the eligibility criteria, and program authority exists.
- Vacation pay and compensatory leave are expensed as the benefits accrue to employees under their respective terms of employment.
- Services provided without charge by other Government departments 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 recorded as expenses in the financial statements but are recorded as revenue on an appropriation basis and therefore are excluded when determining current year appropriations used.

(g) Employee future benefits

i. Pension benefits: Eligible employees participate in the Public Service Pension Plan, a multiemployer defined benefit plan administered by the Government of Canada. CIHR's contributions to the Plan are charged to expenses in the year incurred and represent the total obligation of CIHR to the Plan. Current legislation does not require CIHR to make contributions for any actuarial deficiencies of the Plan.

ii. Severance benefits: Employees are entitled to severance benefits under labour contracts or conditions of employment. These benefits are accrued as employees render the services necessary to earn them. The obligation relating to the benefits earned by employees is calculated using information derived from the results of the actuarially determined liability for employee severance benefits for the Government as a whole.

(h) Accounts receivable – These are stated at amounts expected to be ultimately realized. A provision for doubtful accounts is made for any amounts where recovery is considered uncertain.

(i) Contingent liabilities – Contingent liabilities are potential liabilities which 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 is 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

Amounts included in work-in-progress are uncompleted capital projects which are transferred to the appropriate asset class upon completion, and are then amortized according to CIHR's policy.

(k) Measurement uncertainty – The preparation of these financial statements in accordance with Treasury Board accounting policies and year-end instructions issued by the Office of the Comptroller General, which are consistent with Canadian generally accepted accounting principles for the public sector, 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 vacation pay and compensatory leave, employee severance benefits, the useful life of tangible capital assets, and services provided without charge. Actual results could differ significantly 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 Appropriations

CIHR receives most of its funding through annual parliamentary appropriations. Items recognized in the statement of operations and the statement of financial position in one year may be funded through parliamentary appropriations 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 appropriations used

(in thousands of dollars)

	2009	2008
Net Cost of Operations	**972,840**	**998,957**
Adjustments for items affecting net cost of operations but not affecting appropriations:		
Add (Less):		
Services provided without charge	(6,355)	(5,559)
Gairdner Foundation grant (Note 7)	–	(20,000)
Refunds of previous years' expenses	2,901	3,087
Employee severance benefits	(1,018)	(1,325)
Amortization of tangible capital assets	(696)	(1,868)
Vacation pay and compensatory leave	193	(206)
Other adjustments	168	249
	(4,807)	(25,622)
Adjustments for items not affecting net cost of operations but affecting appropriations:		
Add (Less):		
Acquisitions of tangible capital assets	1,315	1,098
Prepaid expenses	68	(363)
Current Year Appropriations Used	**969,416**	**974,070**

(b) Appropriations provided and used

(in thousands of dollars)

	2009	2008
Parliamentary appropriations provided		
Vote 20 – Operating expenditures	51,032	45,060
Less:		
Lapsed appropriation	(3,794)	(2,333)
	47,238	42,727
Vote 25 – Grants	917,670	943,967
Less:		
Lapsed appropriation	(794)	(17,251)
	916,876	926,716
Statutory contributions to employee benefit plans	5,302	4,627
Current Year Appropriations Used	**969,416**	**974,070**

(c) Reconciliation of net cash provided by Government to current year appropriations used

(in thousands of dollars)

	2009	2008
Net cash provided by Government	986,771	969,803
Refunds of previous years' expenses	2,901	3,087
	989,672	972,890
Change in net position in the Consolidated Revenue Fund		
Variation in accounts receivable and advances	333	312
Variation in accounts payable and accrued liabilities	1,103	1,338
Variation in deferred revenue	(1,860)	(719)
Variation in Gairdner Foundation grant	(20,000)	–
Other adjustments	168	249
	(20,256)	1,180
Current Year Appropriations Used	**969,416**	**974,070**

4. Expenses

(in thousands of dollars)

	2009	2008
Grants and Awards		
Open competitions	541,216	516,541
Strategic initiatives	243,453	210,842
Gairdner Foundation grant (Note 7)	–	20,000
Institute support grants	13,000	13,000
Knowledge translation	9,607	8,224
Canada Research Chairs	87,683	86,482
Networks of Centres of Excellence	27,837	27,500
Centres of Excellence in Commercialization and Research	4,442	73,512
Total grants and awards	927,238	956,101
Less: Refunds of previous years' grants and awards	(2,901)	(3,087)
	924,337	953,014
Operations and Administration		
Salaries and employee benefits	40,589	36,551
Professional and special services	5,838	5,300
Travel	3,854	3,696
Accommodation	3,386	3,399
Furniture, equipment and software	1,733	1,813
Other	1,688	1,262
Communication	1,084	1,439
Amortization of tangible capital assets	696	1,868
Total operations and administration	58,868	55,328
Total Expenses	**983,205**	**1,008,342**

5. Revenues

The following are the revenues recognized for the year:

(in thousands of dollars)

	2009	2008
Donations for health research	10,213	9,235
Cost sharing agreements with other Government departments	150	150
Endowments for health research	2	–
Total Revenues	**10,365**	**9,385**

6. Tangible Capital Assets

(in thousands of dollars)

	Cost				Accumulated amortization					
Capital asset class	**Opening balance**	**Acquisitions**	**Transfers, disposals and write-offs**	**Closing balance**	**Opening balance**	**Amortization**	**Transfers, disposals and write-offs**	**Closing balance**	**2009 Net Book Value**	**2008 Net Book Value**
Informatics hardware	2,070	491	–	2,561	1,715	159	–	1,874	687	355
Informatics software	8,733	767	26	9,526	6,190	498	–	6,688	2,838	2,543
Office equipment	345	57	–	402	158	34	–	192	210	187
Vehicles	32	–	–	32	9	5	–	14	18	23
Work-in-progress	26	–	(26)	–	–	–	–	–	–	26
Total	**11,206**	**1,315**	**–**	**12,521**	**8,072**	**696**	**–**	**8,768**	**3,753**	**3,134**

Amortization expense (in thousands of dollars) for the year ended March 31, 2009 is $696 (2008 – $1,868). During 2008–09, CIHR had a change in accounting estimate relating to the useful life of internally developed informatics software, which resulted in a decrease to amortization expense of $1,954 in 2008–09.

7. Gairdner Foundation Grant

On March 31, 2008, CIHR entered into a funding agreement with the Gairdner Foundation, a not-for-profit, independent organization devoted to the recognition of outstanding achievement in health research worldwide. CIHR agreed to provide the Gairdner Foundation with a grant at the requisition of the Minister of Health in the amount of $20,000,000. Since the endowment had not been paid out as of March 31, 2008, an accrual was made on the financial statements. The endowment has since been paid out and no such accrual exists as at March 31, 2009.

8. Deferred Revenue

Monies received as donations from various organizations and individuals for health research as well as interest on endowments are recorded as deferred revenue until such time as they are disbursed in accordance with agreements between the contributor and CIHR or in accordance with the terms of the endowments.

The transactions relating to these accounts are as follows:
(in thousands of dollars)

	2009	2008
Donations for Health Research		
Balance, beginning of the year	12,005	12,726
Add:		
Donations received	8,151	8,049
Interest earned	200	465
Less:		
Grants expensed	10,213	9,235
Balance, End of the Year	**10,143**	**12,005**
Interest on Endowments for Health Research		
Balance, beginning of the year	6	4
Add:		
Interest earned	2	3
Less:		
Miscellaneous expenses	–	1
Balance, End of the Year	**8**	**6**
Total Deferred Revenue	**10,151**	**12,011**

9. Employee Benefits

Employees of CIHR are entitled to specific benefits on or after termination or retirement, as provided for under various collective agreements or conditions of employment.

(a) Pension benefits: CIHR's employees participate in the Public Service Pension Plan, which is sponsored and administered by the Government of Canada. Pension benefits accrue up to a maximum period of 35 years at a rate of 2 percent per year of pensionable service, multiplied by 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. 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.

The expense for the year ended March 31, 2009 represents approximately 2.0 times (2.1 in 2008) the contributions by employees.

CIHR's and employees' contributions to the Public Service Pension Plan for the year were as follows:
(in thousands of dollars)

	2009	2008
CIHR's contributions	3,827	3,373
Employees' contributions	1,911	1,584

(b) Severance benefits: CIHR provides severance benefits to its employees based on eligibility, years of service and final salary. These severance benefits are not pre-funded. Benefits will be paid from future appropriations. Information about the severance benefits, measured as at March 31, is as follows:
(in thousands of dollars)

	2009	2008
Accrued benefit obligation, beginning of year	6,573	5,248
Expense for the year	1,125	1,624
Benefits paid during the year	(107)	(299)
Accrued Benefit Obligation, End of Year	**7,591**	**6,573**

10. Contingent Liabilities

CIHR may be subject to legal claims in the normal course of business. In management's view, there are currently no such claims with a material impact on the financial statements and consequently, no provision has been made.

During the 2008–09 fiscal year, the legal suit initiated by the Public Service Alliance of Canada for employment equity against her Majesty the Queen, which was disclosed in the 2007–08 CIHR financial statements, was withdrawn and no further legal action has been taken.

11. Contractual Obligations

CIHR is committed to disburse grants and awards in future years subject to the appropriation of funds by Parliament. In addition, the nature of CIHR's operating activities result in some multi-year contracts whereby CIHR will be committed to make some future payments when the goods or services are rendered. Future year contractual obligations are as follows:

(in thousands of dollars)

	2010	2011	2012	2013	2014 and thereafter	Total
Grants and Awards	759,191	576,202	368,558	219,198	110,538	**2,033,687**
Operating	2,497	44	6	–	–	**2,547**
Total	**761,688**	**576,246**	**368,564**	**219,198**	**110,538**	**2,036,234**

12. Related Party Transactions

CIHR is related in terms of common ownership to all Government of Canada departments, agencies, and Crown Corporations. CIHR enters into transactions with these entities in the normal course of business at prices and terms comparable to other suppliers, except as shown below. Transactions with the entities below were entered into in the normal course of business and are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

(a) Services provided without charge by other Government departments

During the year, CIHR received services which were obtained without charge from other Government departments. The estimated costs of these services have been included as an expense in the department's Statement of Operations in the following amounts:
(in thousands of dollars)

	2009	2008
Accommodation provided by Public Works and Government Services Canada	3,386	3,399
Employer's contribution to the health and dental insurance plans provided by Treasury Board Secretariat	2,746	2,027
Audit services provided by the Office of the Auditor General of Canada	223	133
Total Services Provided Without Charge by Other Government Departments	**6,355**	**5,559**

(b) Administration of programs on behalf of other Government departments

CIHR administers funds received from other federal departments and agencies to issue grants, awards and related payments on their behalf. During the year, CIHR administered $150,000 ($150,000 in 2008) in funds for grants and awards. These amounts are reflected in CIHR's Statement of Operations as both revenues and expenses.

(c) 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. During the year, other federal departments and agencies administered $91,189,579 in funds for grants and awards ($91,061,335 in 2008), primarily pertaining to the Canada Research Chairs program. These amounts are reflected in CIHR's Statement of Operations as expenses.

13. Financial Instruments

The fair values of financial assets and liabilities approximate the carrying amounts of these instruments due to the short period to maturity.