



**BIRTH > GROWTH > STRENGTH > VALUE > IMPACT**  
ANNUAL REPORT 2004-2005





**In the five years since CIHR was created,** we have built a brand new organization and forged a health research community in Canada that is founded on excellence, and is strategic, responsive, relevant and delivering on the outcomes that matter to Canadians – better health, a stronger and sustainable health care system and the knowledge-based economy of the 21st century. As we move forward, CIHR will continue to build on the bold and transformative mandate given to us by Parliament, ensuring that Canadians can look forward to a healthier and more prosperous future.

**Canadian Institutes of Health Research**

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## CONTENTS

<b>CIHR at a Glance</b>	<b>3</b>
-------------------------	----------

<b>President's Message</b>	<b>4</b>
----------------------------	----------

<b>CIHR Update and Overview</b>	<b>6</b>
---------------------------------	----------

### **BIRTH (2000-01) 8**

Research Advances	10
Funding Excellent Research	10
Building Teams	11
Supporting Commercialization	11
Building New Partnerships	12
Expanding CIHR's Reach	13
<i>Indicators</i>	13
Organizational Growth	14
Recognizing Excellence	14
Supporting an Evidence-Based Health Care System	14
<b>Moments of Note</b>	<b>15</b>

### **GROWTH (2001-02) 16**

Research Advances	18
Building Teams	18
Funding Excellent Research	19
Building New Partnerships	19
Building Capacity	19
Supporting an Evidence-Based Health Care System	20
Organizational Growth	20
Supporting Knowledge Translation	21
<i>Indicators</i>	21
International Partnerships	22
Training the Next Generation	22
Ethics in Research	22
Recognizing Excellence	22
<b>Moments of Note</b>	<b>23</b>

### **STRENGTH (2002-03) 24**

Funding Excellent Research	26
Building New Partnerships	26
Training the Next Generation	27
Supporting an Evidence-Based Health Care System	27
Organizational Growth	28
Supporting Knowledge Translation	29
<i>Indicators</i>	29
Research Advances	30
Recognizing Excellence	30
<b>Moments of Note</b>	<b>31</b>

### **VALUE (2003-04) 32**

Research Advances	34
Funding Excellent Research	35
Responding to Emerging Diseases	35
Building New Partnerships	36
Ethics in Research	36
International Reach	37
<i>Indicators</i>	37
Supporting an Evidence-Based Health Care System	38
Recognizing Excellence	38
<b>Moments of Note</b>	<b>39</b>

### **IMPACT (2004-05) 40**

Research Advances	42
Funding Excellent Research	43
Recognizing Excellence	43
Ethics in Research	44
International Reach	44
Organizational Growth	45
<i>Indicators</i>	45
Supporting an Evidence-Based Health Care System	46
Building New Partnerships	46
<b>Moments of Note</b>	<b>47</b>

<b>The Way Ahead</b>	<b>48</b>
----------------------	-----------

<b>Providing Stewardship and Accountability</b>	<b>50</b>
---	-----------

<b>Governing Council</b>	<b>50</b>
--------------------------	-----------

<b>Institutes of Excellence</b>	<b>51</b>
---------------------------------	-----------

<b>Peer Review</b>	<b>52</b>
--------------------	-----------

<b>Management Discussion and Analysis</b>	<b>53</b>
---	-----------

<b>Auditor's Report and Financial Statements</b>	<b>55</b>
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## 2004-05 EXPENDITURES BY OUTPUT AREA

(IN MILLIONS OF DOLLARS)

Breakdown of Research Expenditures	
<b>Open Competition</b>	<b>TOTAL \$448.4 M</b>
Grants	\$334.6 M
Collaborative Grants	\$50.1 M
Salary Support	\$30.9 M
Research Training	\$32.8 M
<b>Strategic Initiatives</b>	<b>TOTAL \$170.7 M</b>
Grants	\$115.5 M
Collaborative Grants	\$33.4 M
Salary Support	\$8.9 M
Research training	\$8.7 M
Other Grants	\$4.2 M

**Operational Requirements**  
*Administration*

6%  
\$47.6 M

**Flow-through Funds**

*NCE*

*Canada Research Chairs*

11%

\$25.0 M

\$60.6 M



**Research**

*Open Competition*

*Strategic Initiatives & Other Grants*

83%

\$448.4 M

\$170.7 M

**TOTAL: \$752.3 MILLION**

Note: Figures do not include donations for health research, endowments for health research, and refunds of previous years' expenses.

## CIHR AT A GLANCE

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's agency for health research. Its mandate is to create and translate new knowledge to help ensure improved health for Canadians, more effective health services and products and a strengthened Canadian health care system.

CIHR takes an inclusive approach, linking researchers from all disciplines, from the social sciences to biomedical sciences, informatics and engineering. Through its 13 Institutes, CIHR brings these researchers together across disciplinary and geographic boundaries to address health research themes of importance to Canadians.

CIHR is building partnerships, nationally and internationally, to bring new perspectives to health and ensure that research findings are applied where they are needed. It supports our current generation of health researchers, while taking innovative approaches to training the next generation, facilitating the development of interdisciplinary teams of young researchers.

CIHR's research funding is allocated on a competitive, merit-reviewed basis. The majority of competitions provide support for innovative and high-impact research in all areas of health, while strategic initiatives challenge researchers to respond to specific health challenges and scientific opportunities of high priority to Canadians.



### **CIHR's 13 Institutes**

**Aboriginal Peoples' Health**

**Aging**

**Cancer Research**

**Circulatory and Respiratory Health**

**Gender and Health**

**Genetics**

**Health Services and Policy Research**

**Human Development, Child and Youth Health**

**Infection and Immunity**

**Musculoskeletal Health and Arthritis**

**Neurosciences, Mental Health and Addiction**

**Nutrition, Metabolism and Diabetes**

**Population and Public Health**

# C



P R E S I D E N T ' S M E S S A G E

# CHIR

**Dr. Alan Bernstein, O.C., FRSC**  
*President, Canadian Institutes of Health Research*

**CANADIANS CARE VERY DEEPLY ABOUT THEIR OWN HEALTH, THE HEALTH OF THEIR LOVED ONES AND THE SUSTAINABILITY AND QUALITY OF THE CANADIAN HEALTH CARE SYSTEM. IT WAS WITH THIS IN MIND THAT PARLIAMENTARIANS CREATED THE CANADIAN INSTITUTES OF HEALTH RESEARCH (CIHR) FIVE YEARS AGO.**

It has been my privilege to lead the birth of this wonderful new organization over its first five years. CIHR was given a broad mandate with a problem-based and strategic approach to health and our health care system, building on a strong foundation of research excellence. Now, from the vantage point of five years later, I am proud to say that we've taken tremendous strides forward since June 7, 2000.

CIHR-funded researchers span the gamut from the biosciences, to engineering and bioinformatics, to the humanities and social sciences. Members of these widely varying disciplines are working together, each bringing to bear the perspective of his or her discipline to strengthen the whole.

Our 13 Institutes have built communities, bringing together research funders, researchers and research users, including policy-makers and practitioners, to work in collaboration to set strategic priorities for research and to ensure that Canadians realize the value of research through results that are applied as quickly and effectively as possible.

CIHR is known throughout the world for creating national networks of multi-disciplinary teams, formed to address specific problems from a multitude of perspectives.

On all indicators – number of grants, average value of grants, number of strategic initiatives, number of institutions with CIHR-funded researchers – CIHR has shown a steady pattern of growth over five years.

The results of CIHR-funded research are making an impact on health promotion, prevention, diagnosis and treatment in areas as varied as heart disease, cancer and child health.

CIHR is constantly growing and evolving; we are guided in the next stage of our evolution by *Blueprint*, a strategic plan that charts our course for the next several years.

Our successes could not have happened without the sustained support of the Government of Canada. In each of the past five years, including in times of fiscal restraint, the Government has seen fit to provide CIHR with an increase to its annual budget. This expression of confidence has been much appreciated by all members of the health research community.

None of our successes to date could have happened without the involvement of our many partners in the voluntary health sector, universities, hospitals and research institutions, industry, the provinces, and that of the Scientific Directors and all of our staff who have guided our 13 Institutes and all our progress through the first five years.

Finally, CIHR is only as good as the researchers it supports. I thank investigators from across Canada who have supported CIHR with the excellence of their research.

A handwritten signature in black ink, appearing to read "Alan Bernstein". The signature is fluid and cursive, with a long horizontal stroke at the end.

**Dr. Alan Bernstein, O.C., FRSC**

## CIHR UPDATE AND OVERVIEW

The year 2004-05 was a time both of looking back, as CIHR completed its fifth year of operations, and of looking forward, as the organization and the health research community together set goals for the next five years.

Since 2000, when CIHR was created, the growth in the number of researchers supported and the funding provided to them has been significant. The breadth of research being undertaken is increasing exponentially, with topics ranging from the social determinants of health, to the health of rural and northern residents, molecular profiling of human cancers and tissue repair and regeneration.

Now, CIHR is looking forward, with four major strategic initiatives that respond to Canadian priorities and evolving scientific opportunities: Global Health Research Initiative; Clinical Research; Regenerative Medicine and Nanomedicine; and the Canadian Lifelong Health Initiative.

In its work, CIHR is guided by the five strategic directions set out in *Investing in Canada's Future: CIHR's Blueprint for Health Research and Innovation*, a strategic plan that charts a path for CIHR's next phase of growth. Last year's annual report demonstrated how CIHR is already addressing these areas, and future annual reports will show the progress that continues to be made. This year, however, the annual report presents highlights of the first five years of CIHR's existence, to illustrate the phenomenal growth that has occurred in Canada's health research community.

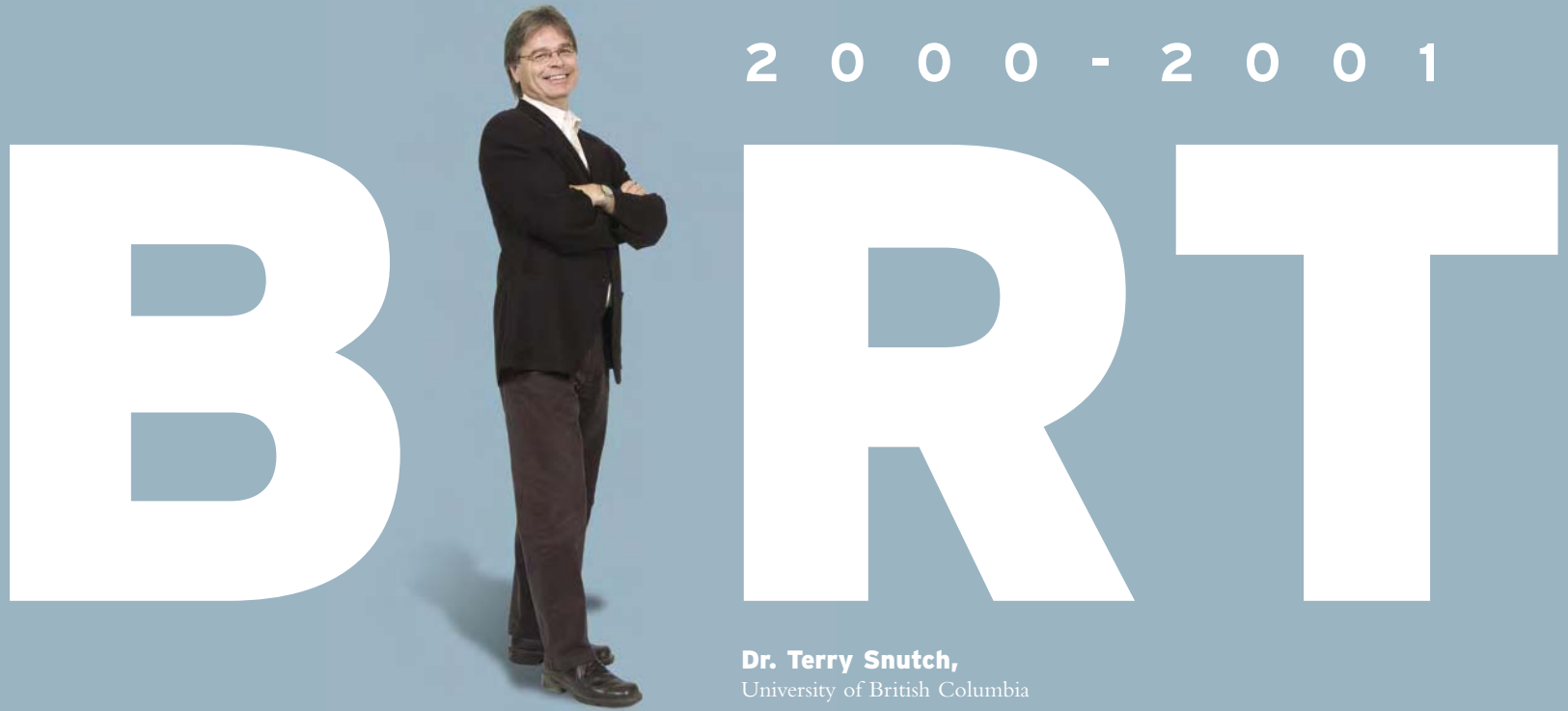
## CIHR Strategic Directions 2003-08

- 1. Strengthen Canada's health research community.**
- 2. Address emerging health challenges and develop national research platforms and initiatives.**
- 3. Develop and support a balanced research agenda that includes research on disease mechanisms, disease prevention and cure and health promotion.**
- 4. Harness research to improve the health of vulnerable populations.**
- 5. Support health innovations that contribute to a more productive health system and prosperous economy.**





**Health research is the foundation of the health, quality of life, productivity and prosperity of Canadians. CIHR is helping build this foundation through leadership and support to over 9,400 health researchers and trainees in every province of Canada.**



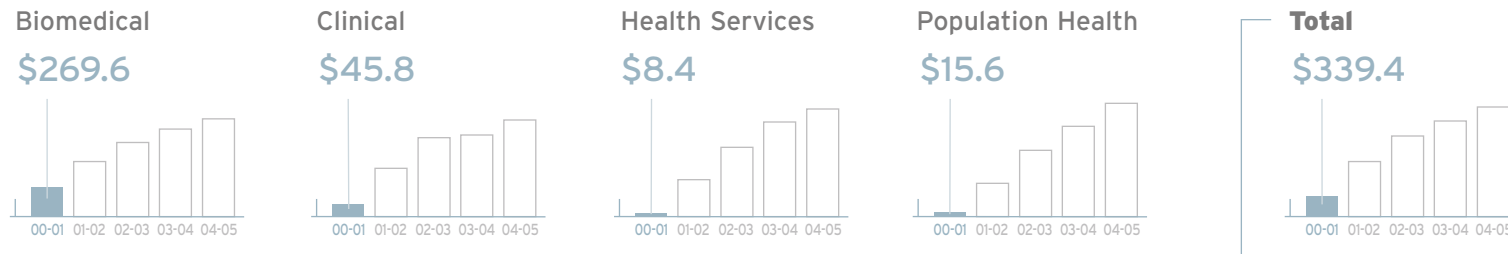
**Dr. Terry Snutch,**  
University of British Columbia

**“During the 2000-2001 fiscal year, CIHR made tremendous strides in establishing itself as the best health research agency in the world. The intense efforts of all who participated in the organization and implementation of CIHR have made it an exciting and invigorating time.”**  
(President’s Message, 2000-2001 Annual Report)

# H

The first year of CIHR's existence revitalized the health research community and rejuvenated Canada's health research enterprise. Researchers, governments, industry, universities, the voluntary sector and the Canadian public were engaged in an unprecedented partnership to develop a national health research agenda. Federal funding for health research, for the first time, embraced the full spectrum of human health, from biomedical and clinical research to health services and systems and population health. CIHR established programs to build capacity, and to ensure that health research remains a key engine for productivity and economic growth in Canada.

## Grants and Awards by Theme (in millions \$)

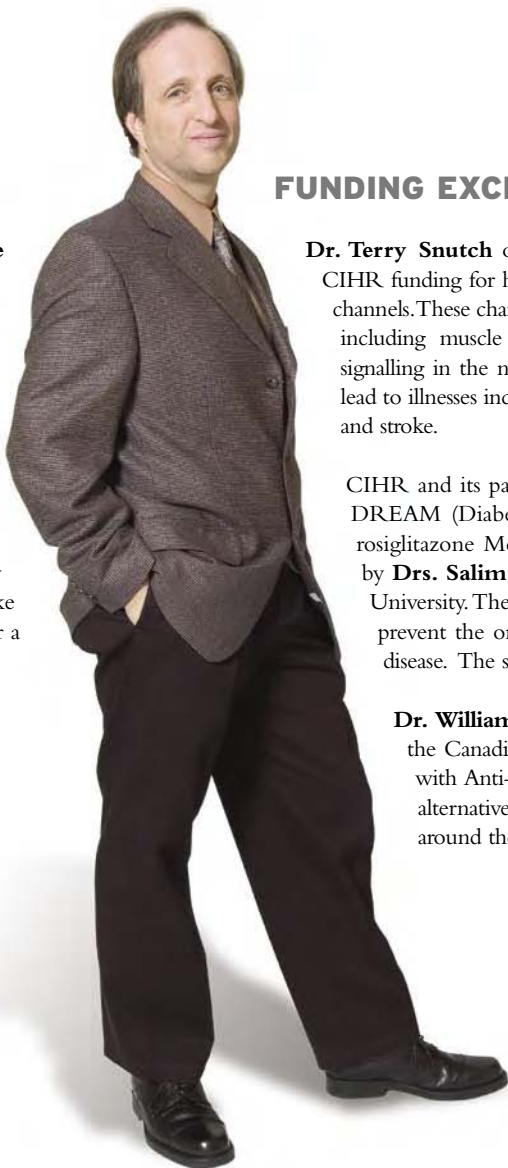


Note: These figures include a proportional distribution of projects where researchers had not selected a primary research theme. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## RESEARCH ADVANCES

A team from the University of Calgary, led by **Dr. Pere Santamaria**, discovers a trigger for type 1 diabetes. The team was investigating the role of certain white blood cells in the process through which inflammation of the pancreas progresses to overt disease. The white blood cells recognize protein markers on the surface of the islet cells that produce insulin, allowing them to bind to and damage the cells.

**Dr. Mickie Bhatia** and his colleagues at London's Robarts Research Institute find a way to make adult stem cells reproduce in the laboratory much as they do in a human embryo. Their discovery could make stem cell research easier, leading to new treatments for a multitude of diseases.



## FUNDING EXCELLENT RESEARCH

**Dr. Terry Snutch** of the University of British Columbia receives CIHR funding for his study of the structure and function of calcium channels. These channels are involved in many physiological processes, including muscle contraction, hormone secretion and electrical signalling in the nervous system. Changes in calcium channels can lead to illnesses including migraine headaches, epilepsy, hypertension and stroke.

CIHR and its partners announce the multi-year funding of the DREAM (Diabetes REduction Approaches with ramipril and rosiglitazone Medication) study, a \$25 million clinical trial led by **Drs. Salim Yusuf** and **Hertzel Gerstein** from McMaster University. The trial is testing whether the two drugs can help prevent the onset of type 2 diabetes in people at risk for the disease. The study will be completed in 2007.

**Dr. William Cameron** of the University of Ottawa heads the Canadian arm of OPTIMA (OPTions In Management with Anti-retrovirals), a tri-national clinical trial looking at alternative drug therapy combinations for AIDS patients around the world. This trial is continuing to enrol patients.

**Dr. Hertz Gerstein,**  
McMaster University

## BUILDING TEAMS

The Community Alliances for Health Research (CAHR) and Interdisciplinary Health Research Teams (IHRT) programs support over 30 projects. They cover issues as varied as healthy child development, diabetes among Aboriginal peoples, community genetics, comparison of the origins and treatment of colon cancer in Newfoundland and Ontario, Maritime work safety and how best to provide health services to the elderly. Among teams being funded are:

- **Dr. Jeanette Holden** of Queen's University, who leads an interdisciplinary team of researchers to identify genes related to autism-spectrum disorders in the hopes that this can lead to earlier diagnosis and treatment; and
- **Dr. Carol Amaratunga** of Dalhousie University, who is leading a team examining the connection between women's work, both paid and unpaid, and their health.

**Dr. Jeanette Holden,**  
Queen's University



## SUPPORTING COMMERCIALIZATION

CIHR's new Proof of Principle Program supports research projects intended to improve the likelihood of an invention or discovery's commercialization.

CIHR provides funding to WestLink Innovation Network to train 20 interns to understand the process of successfully commercializing new inventions. Their experiences will help them take university-based research down the pipeline to commercialization, bringing new products and services to the market to improve the health of Canadians.





## **BUILDING NEW PARTNERSHIPS**

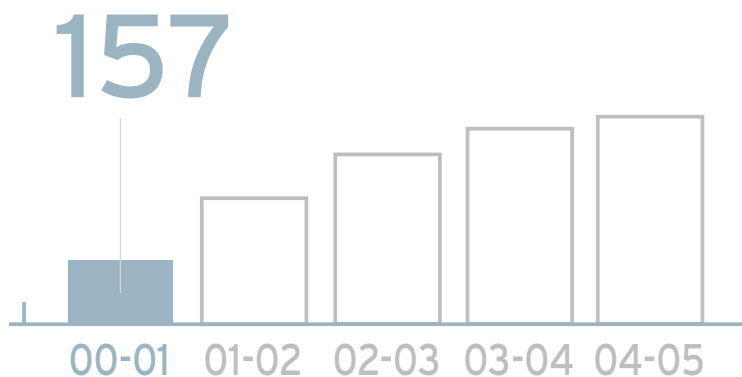
CIHR's Institute of Circulatory and Respiratory Health develops a strategic partnership with the Heart and Stroke Foundation of Canada to address priority areas related to heart disease and stroke. It is the first partnership agreement signed between CIHR and the voluntary health sector.

CIHR's Institute of Cancer Research partners with the Canadian Cancer Society, the National Cancer Institute of Canada, the Canadian Association of Provincial Cancer Agencies and Health Canada to develop a Canadian Strategy for Cancer Control. It is the first time all players collaborate to prioritize research efforts.

## EXPANDING CIHR'S REACH

The CLSC René-Cassin in Quebec, Laurentian University, the University of Guelph and the University of Northern British Columbia receive funding from CIHR for the first time. **Dr. Chow H. Lee** is the first researcher at UNBC to receive funding from CIHR, for his work on liver cancer.

Number of Research Institutions Supported in Canada<sup>1</sup>

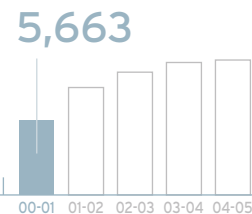


<sup>1</sup> Where applicable, these figures do not include Canada Research Chairs or Networks of Centres of Excellence programs.

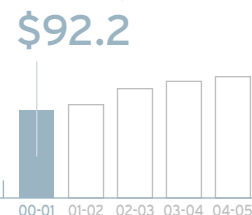
<sup>2</sup> Investigators count is a distinct count and includes all investigator roles. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## INDICATORS

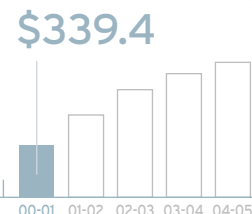
Number of Funded Grants and Awards<sup>1</sup>



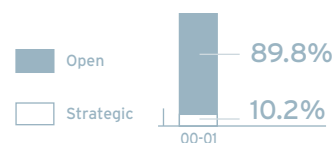
Average Annual Value of a Grant from the CIHR Open Operating Grants Competition (thousands \$)



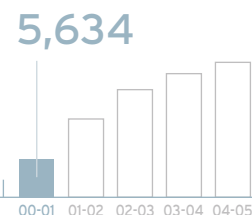
Total Grant and Award Expenditures (millions \$)<sup>1</sup>



Percentage of Grants and Awards Budget Allocated to Open and to Strategic Competitions<sup>1</sup>



Number of Researchers Supported<sup>2</sup>



## ORGANIZATIONAL GROWTH

CIHR begins the process of developing a common electronic CV in conjunction with the Natural Sciences and Engineering Research Council, the Social Sciences and Humanities Research Council and the major health charities. The initiative will contribute to harmonizing funding processes and policies and reduce duplication of effort on the part of researchers.

CIHR creates a Standing Committee on the Oversight of Grants and Awards Competitions to scrutinize the performance and recommendations of peer review panels. In addition, CIHR creates six new peer review committees to ensure that researchers working in the full spectrum of health research, particularly the social sciences as they relate to health, can have their applications reviewed expertly and fairly. The six committees are: Health Ethics, Law and Humanities; Health Information and Promotion Research; Health Policy and Systems Management Research; Health Services Evaluation and Intervention Research; Psychosocial, Sociocultural and Behavioural Determinants of Health; and Public, Community and Population Health.

## RECOGNIZING EXCELLENCE

**Dr. Guy Rouleau** is awarded CIHR's Michael Smith Award for Excellence for his work in mapping and isolating the genes responsible for neurological and psychiatric disorders, including epilepsy, autism and schizophrenia.

CIHR's Institute of Neurosciences, Mental Health and Addiction creates the Brain Star Awards, which recognizes the excellence of research carried out by graduate students, post-doctoral fellows and residents. The biweekly awards recognize work published in a peer-reviewed journal and carry an award of \$1,000 to be used to present the work at a scientific conference.

## SUPPORTING AN EVIDENCE-BASED HEALTH CARE SYSTEM

**Dr. Peter Coyte** of the University of Toronto finds that children hospitalized with ear infections are much less likely to need further surgery if they have their adenoid glands removed at the same time as tubes are inserted into their ears than if they just have tube surgery. His research could save Canada's health care system more than \$300 million each year.



### **Kahnawake Centre for Research and Training in Diabetes Prevention, McGill**

In July 2000, this group, a recognized Community Alliances for Health Research (CAHR), issued an extensive newsletter to community residents explaining the dangers of diabetes and offering some prevention tactics for better health.



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**Moments of Note:**

**April 13**

Act to create CIHR receives Royal Assent.

**June 7**

CIHR officially launched and President and members of Governing Council named.

**July 25**

CIHR creates 13 Institutes.

**August 15**

CIHR announces its first grants and awards, providing more than \$194 million to 647 health researchers across Canada.

**December 5**

13 Scientific Directors appointed to head CIHR Institutes.

**January 15**

Institute Advisory Boards' membership approved.

# GROW

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**“2001-2002 was an historic year for CIHR and Canada - the first full year that we have had national health research Institutes engaging all players involved in health and health research and developing a coherent national health research agenda.”**

(President's Message, 2001-2002 Annual Report)

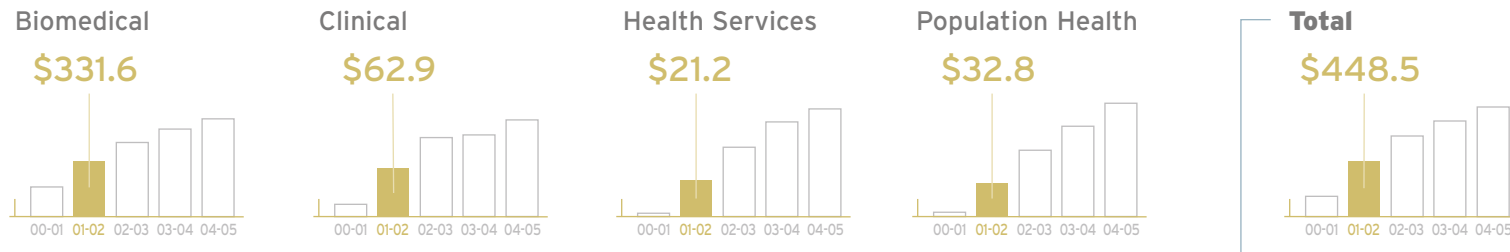


**Dr. Barbara Neis,**  
Memorial University



CIHR's second year was a period of rapid growth, as its 13 Institutes began to implement their mandates. Working in close consultation with their stakeholders, the Institutes developed research priorities that build on Canadian strengths and focus on the most promising areas for advancement. Taken together, these priorities constitute a first for Canada - a national research agenda that responds to the health issues that concern Canadians most.

### Grants and Awards by Theme (in millions \$)



Note: These figures include a proportional distribution of projects where researchers had not selected a primary research theme. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## RESEARCH ADVANCES

**Dr. Julio Montaner** of the B.C. Centre for Excellence in HIV/AIDS leads a team that develops a test that could allow doctors to predict which HIV/AIDS patients are at risk of developing debilitating side effects from the drug cocktails they take and to isolate the responsible drug.

People with high levels of C-reactive protein (CRP) in their blood are at a significantly increased risk of heart disease, according to research by Laval University's **Dr. Benoît Lamarche**. Elevated CRP levels could prove to be a more accurate way to flag people at risk of heart disease than the current method of measuring blood cholesterol levels.

Mixing alternative medicines and prescription heart drugs can have deadly consequences for cardiac patients, yet two-thirds of Nova Scotians with heart disease use at least one form of alternative therapy, finds Dalhousie University's **Dr. Jafna Cox**.

The University of Calgary's **Dr. John Wallace** and his research team identify a pain receptor they believe is linked to inflammatory diseases such as arthritis, Crohn's disease and pancreatitis. Their discovery could help in the development of new drugs to treat people coping with painful chronic health conditions.

**Dr. Freda Miller** of Toronto's Hospital for Sick Children discovers that stem cells reside in adult skin. Her discovery suggests that people undergoing stem cell therapy could be treated with their own stem cells.



## BUILDING TEAMS

The New Emerging Team (NET) program is launched. The program is designed to support the creation or growth of teams of independent investigators undertaking collaborative multi-disciplinary research. The first NET awards go to teams conducting research in areas ranging from asthma to neurodevelopment and early life events, to chronic diseases.

CIHR's Institute of Aboriginal Peoples' Health works with Aboriginal communities and organizations in the Aboriginal Capacity and Developmental Research Environments Program (ACADRE), which creates supportive research environments to facilitate the development of Aboriginal capacity in all areas of health research. The program encourages Aboriginal students to pursue careers in health research while providing scientists with opportunities to conduct research in partnership with Aboriginal communities. Aboriginal communities and organizations have the opportunity to identify research objectives and priorities, while their involvement means that research results are communicated and disseminated to help achieve better health for Aboriginal peoples wherever they live. ACADRE centres are established in Alberta, Saskatchewan, Manitoba and Ontario, with more planned to create a national network.

**Dr. Freda Miller,**  
Hospital for Sick Children

## FUNDING EXCELLENT RESEARCH

CIHR's Institute of Genetics and Institute of Health Services and Policy Research join forces through the Joint Initiative on Health Services and Genetics. The initiative brings together two groups of researchers who have not worked together in the past to consider the impact that advances in genetics and genomics will have for the delivery of health services.

**Dr. Jack Antel** of McGill University leads a team of scientists from the University of Calgary, the University of Toronto, the Mayo Clinic and the University of Rochester in New York in a five-year project focusing on how stem cells could be prompted to produce myelin (the substance that coats the spinal cord), reversing the destructive effects of multiple sclerosis, a disease that attacks the myelin sheath. The \$3.5 million project is funded by CIHR and partners.

## BUILDING NEW PARTNERSHIPS

CIHR's Institute of Musculoskeletal Health and Arthritis partners with the Arthritis Society, the Canadian Arthritis Network and the Cochrane Collaboration to develop a national arthritis research strategy that focuses on causes, prevention, screening, diagnosis, treatment, support systems and palliation, as well as a wide range of conditions associated with arthritis.

CIHR's Institute of Infection and Immunity forms the Canadian Research Coalition for Safe Food and Water with more than 20 partners. The Coalition will support interdisciplinary research to reduce the risk of food- and water-borne disease.

### **Neurophysics: Setting New Frontiers in Neuroscience with Material Sciences and Photonics, Laval University**

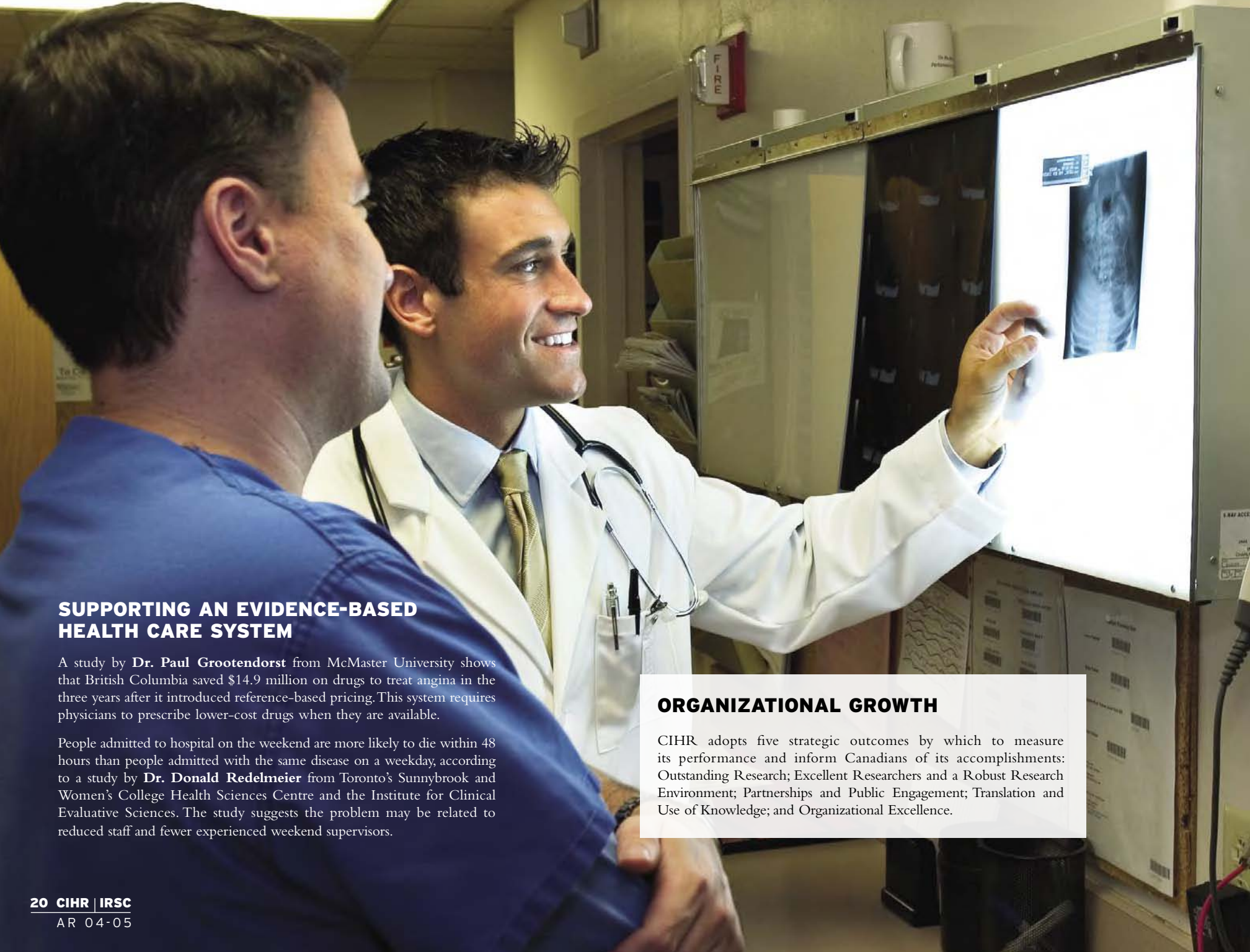
When it was established, this Strategic Training Initiative in Health Research (STIHR) group was the first research program to provide an interface between neurosciences, materials sciences and photonics.

## BUILDING CAPACITY

CIHR's Development Grants provide support to 35 smaller universities to help them develop their health research efforts. Institute Establishment Grants help universities attract top researchers from throughout the world by allowing them to begin their research programs without delay, providing a bridge to longer-term sources of funding. Among the researchers attracted to Canada are **Dr. Prabhat Jha** (University of Toronto), who focuses on research tools to control the spread of HIV and tobacco-related diseases, and **Dr. Jeremy Grimshaw** (Ottawa Health Research Institute), whose focus is on helping health professionals use new knowledge more effectively.

**Dr. Laurence J. Kirmayer** from Mortimer B. Davis Jewish General Hospital in Montreal is named to head the National Network for Aboriginal Health Research. This innovative network, a joint initiative of the Institutes of Aboriginal Peoples' Health and Neurosciences, Mental Health and Addiction, will train new researchers and collaborate with Aboriginal communities.





## SUPPORTING AN EVIDENCE-BASED HEALTH CARE SYSTEM

A study by **Dr. Paul Grootendorst** from McMaster University shows that British Columbia saved \$14.9 million on drugs to treat angina in the three years after it introduced reference-based pricing. This system requires physicians to prescribe lower-cost drugs when they are available.

People admitted to hospital on the weekend are more likely to die within 48 hours than people admitted with the same disease on a weekday, according to a study by **Dr. Donald Redelmeier** from Toronto's Sunnybrook and Women's College Health Sciences Centre and the Institute for Clinical Evaluative Sciences. The study suggests the problem may be related to reduced staff and fewer experienced weekend supervisors.

## ORGANIZATIONAL GROWTH

CIHR adopts five strategic outcomes by which to measure its performance and inform Canadians of its accomplishments: Outstanding Research; Excellent Researchers and a Robust Research Environment; Partnerships and Public Engagement; Translation and Use of Knowledge; and Organizational Excellence.

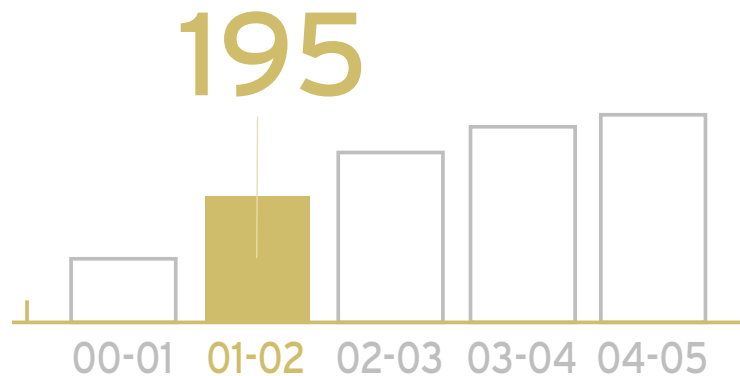


## SUPPORTING KNOWLEDGE TRANSLATION

Dr. Carol Estabrooks from the University of Alberta, leads a unique multidisciplinary team to improve patient care and help the health care system operate more efficiently by developing ways to influence decision-making by health professionals, consumers, administrators and senior policy-makers. Her work could shrink the current 15 to 19 year gap between the creation of new knowledge and its implementation.

CIHR creates Science Writer Scholarships to encourage young people to pursue careers as science writers and journalists. Two annual awards are made at the undergraduate level and up to five graduate level scholarships are awarded each year.

Number of Research Institutions Supported in Canada<sup>1</sup>

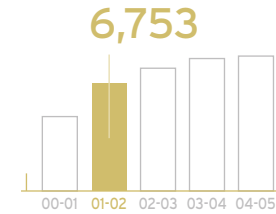


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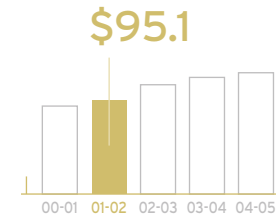
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## INDICATORS

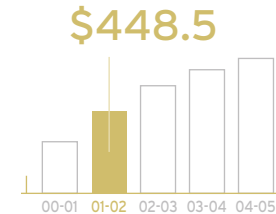
Number of Funded Grants and Awards<sup>1</sup>



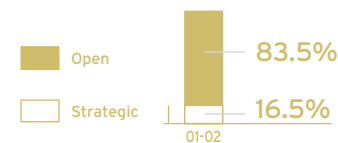
Average Annual Value of a Grant from the CIHR Open Operating Grants Competition (thousands \$)



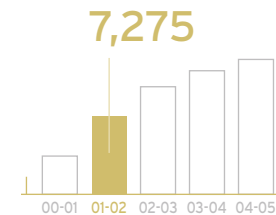
Total Grant and Award Expenditures (millions \$)<sup>1</sup>



Percentage of Grants and Awards Budget Allocated to Open and to Strategic Competitions<sup>1</sup>



Number of Researchers Supported<sup>2</sup>





**Dr. Robin Cohen,**  
McGill University

## INTERNATIONAL PARTNERSHIPS

CIHR, in partnership with the Canadian International Development Agency, the International Development Research Centre and Health Canada, launches the Global Health Research Initiative. The initiative addresses the 10-90 gap, whereby only 10% of the \$73.5 billion (US) invested in health research and development worldwide in 1998 was allocated to 90% of the world's health problems, most of which are concentrated in poor countries. Since its creation, it has attracted new partners and supported more than 70 teams from Canada and developing countries.

CIHR's Institute of Aboriginal Peoples' Health enters into an agreement with the health research agencies of Australia and New Zealand to work together on common health issues facing Aboriginal peoples in all three countries. As a result, one tri-national and two bi-national studies are co-funded in 2005.

## TRAINING THE NEXT GENERATION

The Strategic Training Initiative in Health Research funds 51 innovative transdisciplinary research projects that bring together groups of health mentors and educators to train and support research talent. The program is launched amid predictions that Canada will need 100,000 new researchers and scientists by 2010.

The Heart and Stroke Foundation of Canada and CIHR's Institute of Circulatory and Respiratory Health team up on Tomorrow's Research Cardiovascular Health Professionals (TORCH), a six-year, \$1.5 million training program to combat the severe shortage of cardiovascular health care researchers in Canada.

## ETHICS IN RESEARCH

CIHR releases new *Guidelines for Human Pluripotent Stem Cell Research*, after widespread consultation, led by CIHR's Working Group on Stem Cell Research, with the research community, ethicists and other interested Canadians. The guidelines permit funding for human embryonic stem cell research under specific conditions, prohibit the creation of embryos for research purposes or any kind of cloning and create the Stem Cell Oversight Committee to ensure that research proposals conform to the highest ethical and scientific standards.

CIHR spearheads efforts to help balance privacy rights with the need for access to personal information for research that improves health and health care.

CIHR collaborates with Health Canada on a unique initiative to determine appropriate placebo use in clinical trials. Placebos are often used in clinical trials to assess the efficacy of a new drug, but there are concerns about the ethical implications of their use. A national conference is a first step toward developing a common placebo policy for Canada.

## RECOGNIZING EXCELLENCE

Six top-rated new investigators are awarded the Peter Lougheed/CIHR Scholarships, CIHR's most important career development program. Their research ranges from the role of 'natural killer cells' in autoimmune diseases to early detection of ovarian cancer, keeping patients on ventilators alive longer and emergency department overcrowding.

CIHR-supported researcher **Dr. Robin Cohen** of McGill University receives CIHR's Dorothy J. Lamont Scientist Award for her research focused on improving the quality of life of people with life-threatening illness and their families. The award honours the memory of Dorothy Lamont, former head of both the Canadian Cancer Society and the National Cancer Institute of Canada and Vice-Chair of CIHR's Interim Governing Council.

CIHR President, **Dr. Alan Bernstein**, is awarded the Australia Medal by the Australian Society for Medical Research for his pioneering research in the area of cancer, hematopoiesis and gene therapy.



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## Moments of Note:

**June 7**

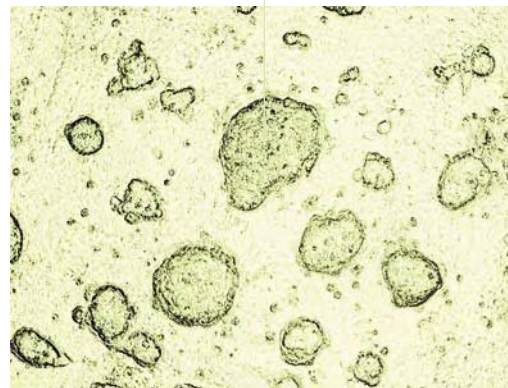
CIHR celebrates its first anniversary.

**November 23**

CIHR's Governing Council approves membership of the Standing Committee on Ethics.

**March 2**

CIHR releases Human Pluripotent Stem Cell Research Guidelines.



# S



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# RE

**Dr. John Bell,**  
Ottawa Regional Cancer Centre

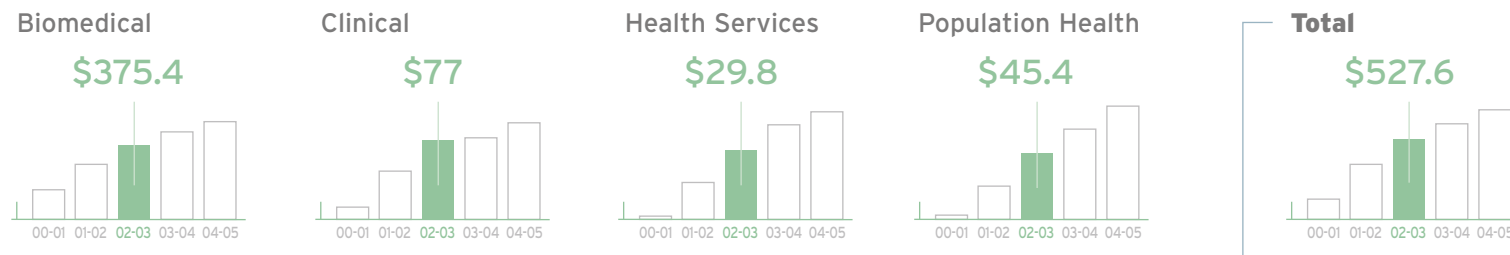
**“In three short years, CIHR has created an environment in which the transformation and translation of health research can continue for the health and well-being of all Canadians.”**

(Annual Report, 2002-2003)

# NGT H

CIHR's third year was characterized by a strengthening of its capabilities to support research discoveries that will improve the health of Canadians and the health care system.

## Grants and Awards by Theme (in millions \$)



Note: These figures include a proportional distribution of projects where researchers had not selected a primary research theme. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## FUNDING EXCELLENT RESEARCH

The Canadian Longitudinal Study on Aging launches the development of its research protocol. This long-term study will follow thousands of Canadians over 20 years to explore the determinants of healthy aging and examine prominent aging-related diseases.

**Dr. Jay Baltz** of the Ottawa Health Research Institute leads a team working to find ways to improve the health of human oocytes, or eggs, produced during infertility treatment. Currently, only one-in-ten eggs retrieved during treatment is healthy enough to produce a pregnancy and birth. The project is part of the strategic initiative on pre- and post-implantation health spearheaded by CIHR's Institute of Human Development, Child and Youth Health.

The CIHR Institute of Nutrition, Metabolism and Diabetes launches a strategic initiative on obesity and healthy body weight, investing \$15 million in research on its number-one – and sole – priority.

**Dr. Barbara Neis** of Memorial University of Newfoundland forms the Eastern Canada Consortium on Workplace Health and Safety with an Interdisciplinary Capacity Enhancement (ICE) grant from CIHR. The consortium builds on her earlier work with **Dr. Stephen Bornstein**, also of Memorial, which focused on the health and safety of workers in marine and coastal work environments.



## BUILDING NEW PARTNERSHIPS

CIHR joins with the Canadian Diabetes Association, the Heart and Stroke Foundation of Canada and the Kidney Foundation of Canada to support a five-year joint chronic disease research initiative to better understand the common aspects of cardiovascular disease, diabetes and kidney disease, in order to improve the quality of life of those with these diseases and reduce the diseases' impact in the future.

A unique partnership among CIHR, the Muscular Dystrophy Association of Canada and the ALS Society of Canada leads to a discovery by **Dr. Jean-Pierre Julien** of the McGill University Health Centre Research Institute that an antibiotic commonly prescribed for acne could slow the development of Amyotrophic lateral sclerosis (ALS) often referred to as Lou Gehrig's disease. ALS is a steadily progressive and ultimately fatal neuromuscular disease that kills two to three Canadians every day.

A national partnership led by the CIHR Institute of Gender and Health and involving other CIHR Institutes, the Social Sciences and Humanities Research Council, Health Canada, the National Secretariat on Homelessness, the Heart and Stroke Foundation of Canada and the Frost Foundation, focuses on health disparities in vulnerable populations, providing \$1.2 million to 12 research projects across Canada.

### Transdisciplinary Understanding and Training on Research - Primary Health Care, University of Western Ontario

As a recognized STIHR program, this group established a national program designed to build a critical mass of skilled, independent researchers, and increase the interdisciplinary and transdisciplinary focus in primary health care research.

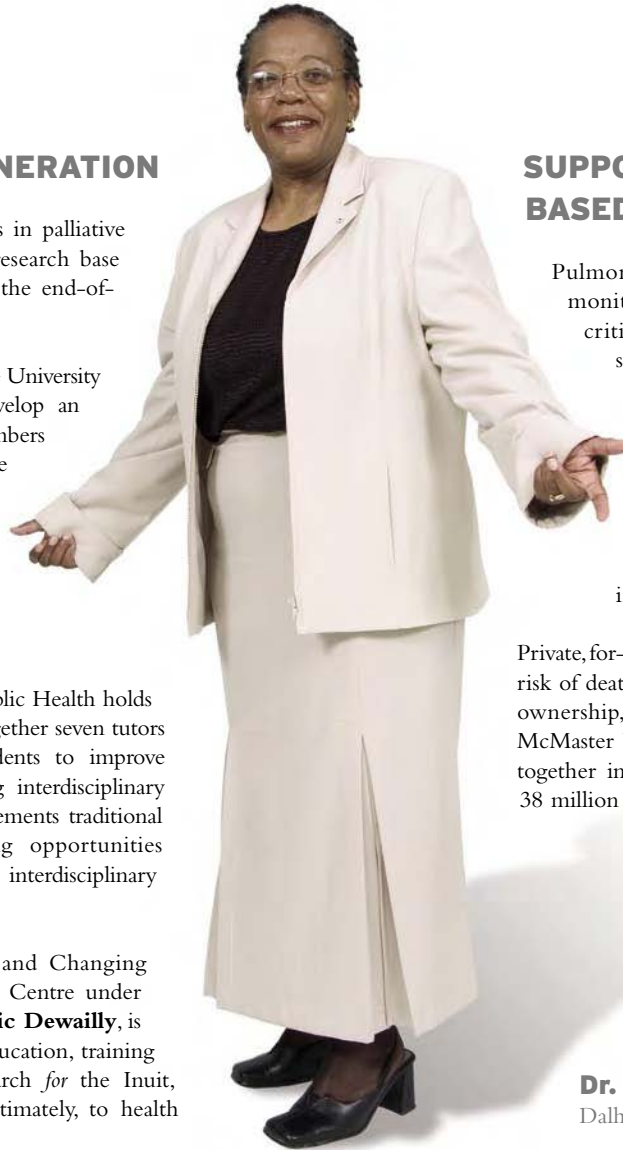
## TRAINING THE NEXT GENERATION

CIHR supports three research fellowships in palliative care. The initiative will help to build a research base for palliative care in Canada, to improve the end-of-life care for Canadians and their families.

**Dr. Wanda Thomas Bernard** of Dalhousie University leads a national project to train and develop an African-Canadian research team whose members live in the communities they study. The team is examining the impact of violence on the health and well-being of Black communities in Halifax, Toronto and Calgary. Their work will result in the creation of Afrocentric health education materials.

The CIHR Institute of Population and Public Health holds its inaugural Summer Institute, bringing together seven tutors with 25 doctoral and post-doctoral students to improve their understanding and skills in building interdisciplinary partnerships. The Summer Institute complements traditional academic training by offering learning opportunities that address the challenges inherent in interdisciplinary collaborative research.

The Nasivvik Centre for Inuit Health and Changing Environments, a Quebec City ACADRE Centre under the leadership of Laval University's **Dr. Éric Dewailly**, is launched. It has a mandate to conduct education, training and research, evolving from health research *for* the Inuit, to health research *with* the Inuit and, ultimately, to health research *by* the Inuit.



## SUPPORTING AN EVIDENCE-BASED HEALTH CARE SYSTEM

Pulmonary artery catheterization, used to monitor heart function during surgery in critically ill patients, does not help their survival rate and may actually increase the likelihood of blood clots in the lung. The research, by **Dr. J. Dean Sandham** of the University of Calgary, is the first to evaluate the effectiveness of the procedure, despite exponential increases in its use since it was introduced in the 1970s.

Private, for-profit hospital ownership presents a higher risk of death for patients than private, not-for-profit ownership, according to **Dr. P.J. Devereaux** of McMaster University, who analyzed 15 studies that together involved more than 26,000 hospitals and 38 million patients.

**Dr. Wanda Thomas Bernard,**  
Dalhousie University

## ORGANIZATIONAL GROWTH

CIHR launches the first phase of the Canadian Research Information System, featuring a CIHR grants and awards database. Future versions will include additional information from key health charity partners, including the Heart and Stroke Foundation of Canada, the Arthritis Society and the National Cancer Institute of Canada.

CIHR works with NSERC and SSHRC to negotiate a memorandum of understanding on the roles and responsibilities of granting councils, funding recipients and host institutions. The move will ensure greater accountability for public funding delivered through federal grants and awards.

The CIHR Institute of Aboriginal Peoples' Health works with the CIHR Ethics Office to develop national Aboriginal health research guidelines. The guidelines will contribute to the Panel on Research Ethics' Aboriginal Ethics Initiative.



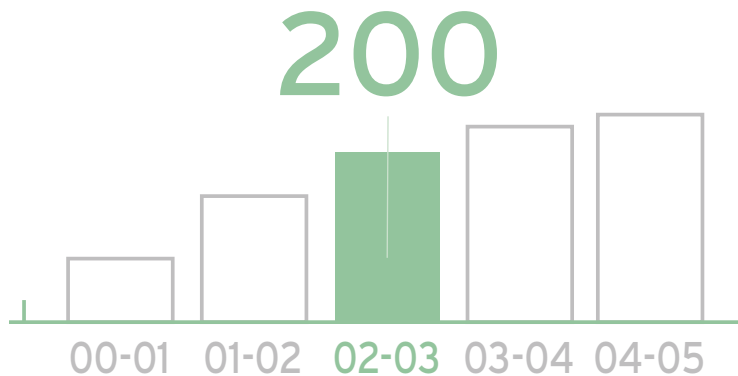


## SUPPORTING KNOWLEDGE TRANSLATION

CIHR invests more than \$1 million in 22 grants for research focused specifically on the study of knowledge translation. Research areas include factors that affect the adoption, transfer, adaptation, and retention of clinical practice guidelines in long-term care facilities; knowledge translation in post-graduate medical trainees; and strategies for the critical appraisal of child-health web resources.

CIHR also invests more than \$33 million in 22 randomized controlled trials. These trials are a critical step in translating discoveries in the laboratory into new products and services to improve health. For instance, a trial led by **Dr. Paul Hébert** of the Ottawa Health Research Institute found that a national universal program to filter out white blood cells from the blood supply (a process called leukoreduction) can reduce fever, antibiotic use and even death among post-operative patients. His work could help to reduce the length of hospital stays and, therefore, overall health care costs.

### Number of Research Institutions Supported in Canada<sup>1</sup>

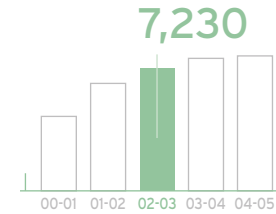


<sup>1</sup> Where applicable, these figures do not include Canada Research Chairs or Networks of Centres of Excellence programs.

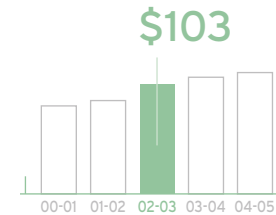
<sup>2</sup> Investigators count is a distinct count and includes all investigator roles. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## INDICATORS

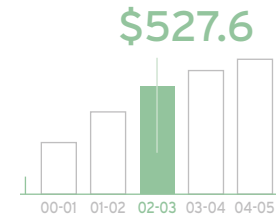
### Number of Funded Grants and Awards<sup>1</sup>



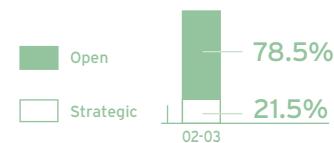
### Average Annual Value of a Grant from the CIHR Open Operating Grants Competition (thousands \$)



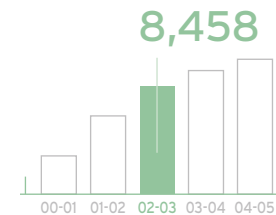
### Total Grant and Award Expenditures (millions \$)<sup>1</sup>



### Percentage of Grants and Awards Budget Allocated to Open and to Strategic Competitions<sup>1</sup>



### Number of Researchers Supported<sup>2</sup>



## RESEARCH ADVANCES

**Dr. Natalie Strynadka** of the University of British Columbia discovers a protein that helps Methicillin-Resistant *Staphylococcus Aureus*, one of the worst superbugs, resist antibiotics. Her finding could help scientists develop a drug to combat the protein.

An international research team led by **Drs. Berge Minassian** and **Stephen Scherer** of Toronto's Hospital for Sick Children identify a gene responsible for Lafora disease, the most severe form of early adolescent epilepsy. Their discovery may lead to new treatments for this debilitating disease.

**Dr. Natalie Strynadka,**  
University of British Columbia



## RECOGNIZING EXCELLENCE

CIHR's first Celebration of Excellence in Canadian Health Research ceremony recognizes some of Canada's finest researchers for their contributions to improving the health of Canadians. **Dr. Sammy Suissa** (McGill University) was named a CIHR Distinguished Investigator for his work on the risks and benefits of drugs prescribed to treat common chronic diseases.

**Dr. Janet Rossant** (Samuel Lunenfeld Research Institute, Mount Sinai Hospital) was also named a CIHR Distinguished Investigator for her work on stem cell research and developing mouse models of human diseases. **Dr. Anthony Pawson** (Samuel Lunenfeld Research Institute, Mount Sinai Hospital) was awarded the Michael Smith Prize in Health Research for his contributions to the burgeoning field of proteomics research.

**Dr. David Kaplan** of the Hospital for Sick Children in Toronto is awarded the Barbara Turnbull Award. The award, which goes to Canada's top-ranked spinal cord researcher in CIHR's open grants competition, is sponsored by the CIHR Institute of Neurosciences, Mental Health and Addiction, Montreal-based NeuroScience Canada and the Toronto-based Barbara Turnbull Foundation. **Dr. Kaplan** has identified proteins in cells that stimulate their survival, inhibit their death and promote their growth and regeneration. His research could lead to better treatments for neurodegenerative diseases and nerve injuries.

**Dr. Alan Bernstein**, President of CIHR, is named an Officer of the Order of Canada, together with CIHR researchers **Drs. Bartha Maria Knoppers** (University of Montreal), **Patrick McGrath** (University of Toronto) and **Lorne Tyrell** (University of Alberta).



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## Moments of Note:

### May 2

Three Clinical Research Chairs in Transplantation created, in a partnership with Wyeth-Ayerst Canada Inc.

### July 7

CIHR turns two and unveils a new organizational structure.

### November 20

CIHR holds its first Celebration of Excellence in Canadian Health Research ceremony.



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**Dr. Marilynne Hebert,**  
University of Calgary

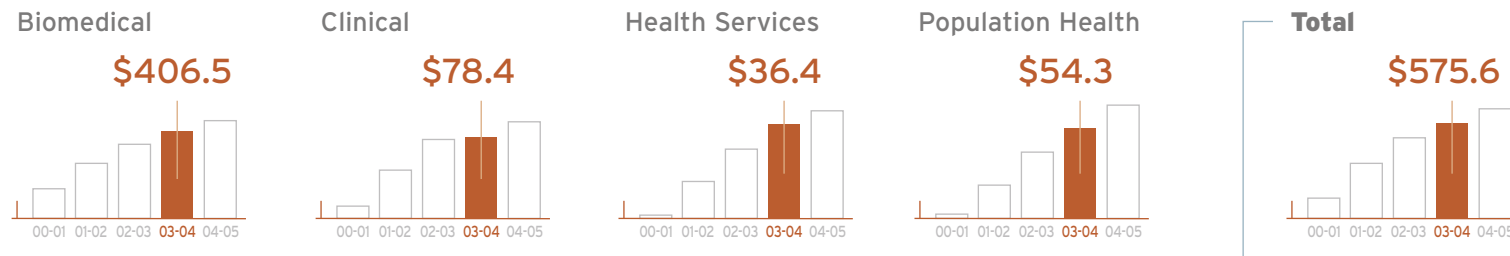
**“The exceptional value of health research is found not only in better health and a stronger health care system tomorrow, but also in a growing knowledge-based economy today.”**

(President’s Message, 2003-2004 Annual Report)

# E

In 2003-04, Canadians witnessed the exceptional value that health research offers, as CIHR prepared to move to its second stage of evolution, setting strategic directions for the coming years through the adoption of *Blueprint*.

## Grants and Awards by Theme (in millions \$)



Note: These figures include a proportional distribution of projects where researchers had not selected a primary research theme. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## RESEARCH ADVANCES

**Drs. Brett Finlay** of the University of British Columbia and **Andy Potter** of the University of Saskatchewan develop a vaccine that significantly reduces the level of *E. coli* in cattle. Their discovery will help to reduce the economic and health care costs associated with *E. coli* 0157, the toxic microbe responsible for contaminated meat and water, including the Walkerton water crisis in May 2000.

**Dr. Eleanor Fish** of Toronto's University Health Network leads a team that finds that a combination of interferon and steroids successfully treats SARS.

**Dr. Sam David** of the McGill University Health Centre identifies an enzyme that may control the onset and progression of multiple sclerosis in mice. Blocking the enzyme could be a target for the development of new drugs to treat the disease in humans.

**Dr. Aziz Ghahary** from the University of Alberta discovers that by cloning a cell-to-cell messenger, he may be able to develop new treatments that lessen or even prevent the disfiguring scars caused by serious burns and other major wounds.

**Dr. John Bell** of the Ottawa Regional Cancer Centre develops a genetically engineered version of a virus that kills cancer cells in mice while leaving healthy cells alone. Clinical trials in humans are the next step.

**Drs. Rusung Tan** and **Bruce Verchere** of the B.C. Research Institute for Children's and Women's Health identify a protein in the pancreas that is attacked by white blood cells in children with type 1 diabetes.

The discovery could lead to the development of a blood test that determines who is at risk of developing type 1 diabetes.

**Dr. Jennifer O'Loughlin** from McGill University finds that nicotine addiction can occur among young people almost immediately after they have smoked their first cigarette. Her finding has implications for the design of smoking prevention and cessation programs.

**Dr. Wee Yong** of the University of Calgary finds that a drug commonly used to treat acne decreases tissue damage and significantly improves movement in mice with spinal cord injuries.

**Dr. Philippe Gros** of the McGill University Health Centre and a member of CIHR's Governing Council discovers a gene in mice that regulates susceptibility to tuberculosis.



**Dr. Andy Potter,**  
University of Saskatchewan

## FUNDING EXCELLENT RESEARCH

CIHR's Institute of Nutrition, Metabolism and Diabetes launches *Canada on the Move*, a national initiative that asks Canadians to donate their steps to research. By recording the number of steps they take each day, Canadians will help researchers determine what motivates Canadians to be active and design programs to increase activity and reduce obesity.

The First Joint Meeting of the Canadian Lifelong Health Initiative brings together participants in the Canadian National Birth Cohort and the Canadian Longitudinal Study on Aging to explore common design issues and areas of joint interest.

**Dr. Robyn Tamblyn** of McGill University receives CIHR support to investigate how information technologies can be used to provide innovative and effective models for chronic disease management. She and her team focus on asthma and stroke in evaluating different uses of technology, including computer-based decision-support; sharing of clinical information among health professionals; and innovative web-based approaches for addressing the emotional aspects of self-management decision-making.

### **Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas, University of Saskatchewan**

During the first six months of operation, members of this NET held consultation meetings with care providers in all 14 rural and remote telehealth sites in Saskatchewan, with the hopes of developing the best clinic to treat dementia.

©Debra Marshall - Courtesy of University of Saskatchewan

## RESPONDING TO EMERGING DISEASES

The outbreak of Severe Acute Respiratory Syndrome (SARS) takes Canada by surprise. CIHR responds with three different rapid research initiatives: \$1.7 million to address the causes and control of SARS; \$1 million to analyze the public health and health care systems' response to SARS; and, with partners, the creation of the Canadian SARS Research Consortium to answer questions about the causes, control and consequences of SARS. Canadian researchers sequence the SARS genome in just 11 weeks, setting records for the rapidity of their response and, by December 2003, have developed three vaccines ready for testing in animals. At the same time, other researchers develop a treatment for SARS based on a combination of steroids and interferon.







## **BUILDING NEW PARTNERSHIPS**

CIHR's Institute of Musculoskeletal Health and Arthritis partners with the Canadian Space Agency in a study to shed light on the physiological changes, such as loss of bone and muscle mass, that occur during long-term bed rest.

CIHR's Institute of Human Development, Child and Youth Health initiates a partnership with the Hospital for Sick Children Foundation to provide support to new investigators carrying out research relevant to the health of Canada's children and significant in terms of its potential impact on health outcomes. The program will fund 10-20 new investigators each year.

## **ETHICS IN RESEARCH**

CIHR holds public consultations on draft Privacy Best Practice Guidelines. These guidelines are intended to strike a balance between the right of individuals to privacy and the need for researchers to have access to data.

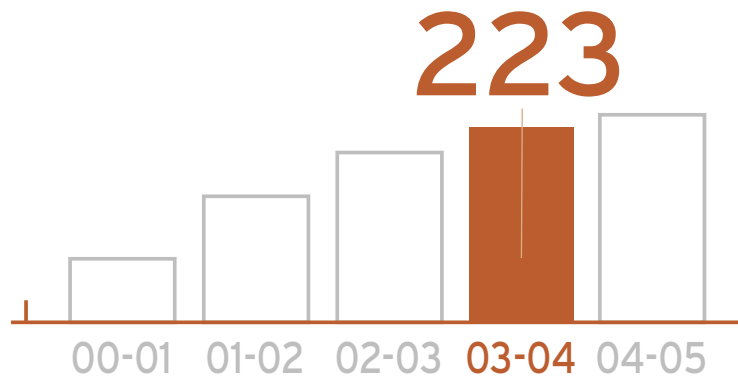
CIHR and Health Canada consult with Canadians about the appropriate use of placebos in clinical trials.

## INTERNATIONAL REACH

Canadian scientist **Dr. Aled Edwards** of the University of Toronto is named as head of the Structural Genomics Consortium (SGC), an international partnership that brings together Canadian and British researchers. The SGC, which takes the Human Genome Project the next step forward, is a three-year initiative to focus on the structure of more than 350 human proteins. The consortium will encourage the development of new and improved drugs and other health care benefits. CIHR is funding the consortium, along with the UK-based Wellcome Trust, Genome Canada, GlaxoSmithKline, the Ontario Research and Development Challenge Fund, the Ontario Innovation Trust, and the Canada Foundation for Innovation.

The Japan-Canada Joint Health Research Program promotes the development of Japanese-Canadian scientific cooperation by supporting collaborative research projects among universities or affiliated research institutes in the two countries. The initiative focuses on neurosciences, mental health, child and youth health and aging.

Number of Research Institutions Supported in Canada<sup>1</sup>

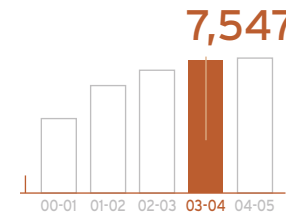


<sup>1</sup> Where applicable, these figures do not include Canada Research Chairs or Networks of Centres of Excellence programs.

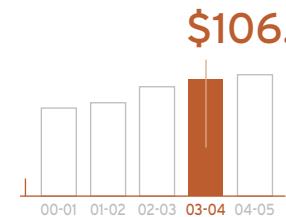
<sup>2</sup> Investigators count is a distinct count and includes all investigator roles. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## INDICATORS

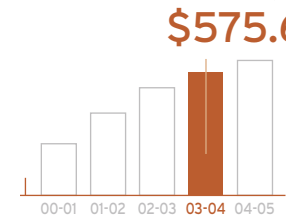
Number of Funded Grants and Awards<sup>1</sup>



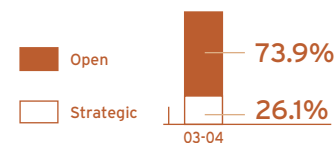
Average Annual Value of a Grant from the CIHR Open Operating Grants Competition (thousands \$)



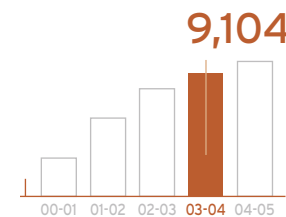
Total Grant and Award Expenditures (millions \$)<sup>1</sup>



Percentage of Grants and Awards Budget Allocated to Open and to Strategic Competitions<sup>1</sup>



Number of Researchers Supported<sup>2</sup>





## SUPPORTING AN EVIDENCE-BASED HEALTH CARE SYSTEM

Up to 400 lives per year could be saved if more heart attack and heart failure patients received needed medications before leaving hospital, according to research conducted in Ontario by the Canadian Cardiovascular Outcomes Research Team, led by **Dr. Jack Tu** of Toronto's Institute for Clinical Evaluative Sciences.

**Dr. Marilynne Hebert** of the University of Calgary finds that videophones help to deliver effective face-to-face home care to patients who are bedridden or unable to leave their homes.

**Dr. Gideon Koren** from Toronto's Hospital for Sick Children finds that there are strong variations in how men and women process common drugs such as painkillers, antibiotics and antihistamines.

There is a strong link between direct-to-consumer advertising, which is banned in Canada, and increased drug prescriptions, according to research by **Dr. Barbara Mintzes** of B.C.'s Centre for Health Services and Policy Research.

**Dr. Anthony Pawson,**  
Samuel Lunenfeld Research Institute,  
Mount Sinai Hospital and University of Toronto



## RECOGNIZING EXCELLENCE

CIHR's second Celebration of Excellence in Canadian Health Research ceremony honours researchers across Canada for their achievements. **Drs. Anthony Pawson** (Samuel Lunenfeld Research Institute, Mount Sinai Hospital and University of Toronto) and **Peter Singer** (University of Toronto) receive CIHR Distinguished Investigator Awards, **Dr. Jeremy Grimshaw** (University of Ottawa) and B.C.'s Occupational Health and Safety Agency for Healthcare (headed by **Dr. Annalee Yassi**) receive the Knowledge Translation Award and **Dr. Henry Friesen** is recipient of the CIHR Distinguished Leadership Award.

**Dr. Min Zhuo** is awarded the first EJLB-CIHR Michael Smith Chair in Neurosciences and Mental Health. Thanks in large part to this major award, Dr. Zhuo left Washington University to pursue his research on cellular and molecular mechanisms of pain at the University of Toronto.

**Drs. Heather Munroe-Blum**, Vice-Chancellor and Principal of McGill University, and **Martha Piper**, President of the University of British Columbia, are named Officers of the Order of Canada. Both were instrumental in the creation of CIHR.



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## Moments of Note:

### April 25

*Putting the Gee! in Genome*, Canada's first travelling national exhibit on genomics and a partnership among CIHR, Genome Canada and the Canadian Museum of Nature, opens at the Canadian Museum of Nature in Ottawa.

### June 2

Health Minister Anne McLellan announces \$54 million in funding through the Strategic Training Initiative in Health Research.

### December 18

CIHR's Governing Council approves CIHR's Commercialization Strategy in principle.

### January 20

CIHR releases *Investing in Canada's Future: CIHR's Blueprint for Health Research and Innovation*, setting strategic directions for CIHR's evolution.





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# MPA

**Dr. Sergio Grinstein,**  
Hospital for Sick Children

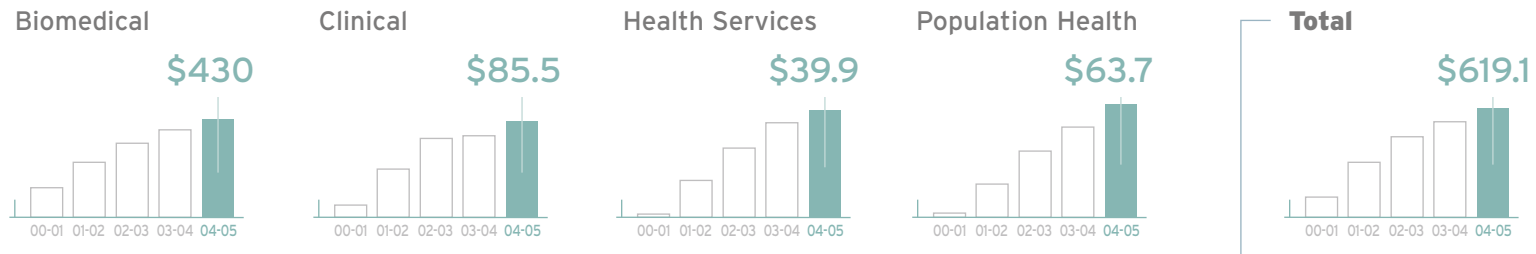
**“Our virtual Institute structure and our inclusive, multidisciplinary and outcome-driven approach to health, disease and Canada’s health care system itself are transforming health research in Canada, accelerating the way to improved health for Canadians.”**

(President’s Message, *Catalyst*, 2005)

# CT

CIHR's fifth year was a period of taking stock of the impact it has had on the health research community and on the health of Canadians, as researchers continued to report advances in our understanding of how to promote health and prevent, diagnose and treat disease. It was also a period of looking forward, with CIHR devoting resources to areas of strategic importance to the future development of health research, including global health, and regenerative medicine and nanomedicine.

## Grants and Awards by Theme (in millions \$)



Note: These figures include a proportional distribution of projects where researchers had not selected a primary research theme. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## RESEARCH ADVANCES

McMaster University's **Dr. Salim Yusuf** finds that, no matter where in the world you live, the same nine risk factors, including tobacco use, cholesterol and high blood pressure, appear to be responsible for 90% of all heart disease. Gender, genetics and ethnicity don't play the role it was once thought they do. His findings underscore the importance of prevention programs that focus on these risk factors. The paper reporting Dr. Yusuf's findings was named runner-up for scientific paper of the year by the British medical journal *The Lancet*.

**Dr. Michael Hayden** of the University of British Columbia discovers an enzyme called HIP14 that helps in the normal functioning of the nervous system. His discovery could lead to a better understanding of neurons and new approaches to treating neurodegenerative diseases such as Alzheimer's and Huntington's disease.

**Dr. Salim Yusuf,**  
McMaster University

The Need to Know Team, led by **Dr. Patricia Martens** of the Manitoba Centre for Health Policy, finds that one in four Manitobans had at least one mental illness diagnosis between 1997 and 2002.

Dr. Martens' team develops a guide, based on their research for regional health authorities, particularly in rural and remote areas, to help them plan health care services to meet the need for mental health services.

**Dr. Frédéric Calon** of Laval University discovers that a diet high in the Omega 3 fatty acid DHA helps to protect the brain against memory loss and cell damage caused by Alzheimer's disease. DHA is found in cold-water fish such as salmon and halibut.

**Dr. Patricia Martens,**  
University of Manitoba

## FUNDING EXCELLENT RESEARCH

CIHR announces investments worth \$16.5 million in innovative research on palliative and end-of-life care. CIHR's Institute of Cancer Research launches the initiative after identifying palliative and end-of-life care as its number-one priority. The initiative promises to change the face of palliative care in Canada.

CIHR invests more than \$12 million in research on regenerative medicine and nanomedicine, two of the most promising areas of research for changing the way we approach maintaining health and diagnosing and treating disease. The funded research focuses on using stem cells to repair and regenerate tissue damaged by disease, including heart disease, as well as ways to use nanostructures to diagnose cancer at an earlier stage. The initiative involves collaboration among leading research organizations who share this common strategic priority.

CIHR publishes *Where Innovation Takes Flight*, highlighting CIHR's dynamic and innovative commercialization strategy, with a coherent suite of programs to take ideas and innovations "out of our minds and into the marketplace."



## RECOGNIZING EXCELLENCE

CIHR's third Celebration of Excellence in Canadian Health Research ceremony honours top researchers from across the country. **Dr. Sergio Grinstein** (Hospital for Sick Children) receives the Michael Smith Prize in Health Research, while **Dr. John Evans** (Chairman, Torstar Corporation and the Canada Foundation for Innovation) is the recipient of the CIHR Distinguished Leadership Award.

CIHR, together with the Stem Cell Network, recognize the contribution to stem cell research made by **Drs. James Till, Ernest McCulloch and Charles Philippe Leblond** by naming an international symposium day in their honour.

A CIHR Strategic Training Program in healthy aging wins the American Psychological Association Award for Innovative Practices in Graduate Education. The awards committee was particularly impressed with the interdisciplinary training offered by the program and its emphasis on knowledge translation.

**Dr. Jeffery Coull**, a Queen's University graduate, receives the Brain Star of the Year Award, sponsored by CIHR's Institute of Neurosciences, Mental Health and Addiction. The award recognizes a publication by a graduate student, post-doctoral fellow or resident in all fields and disciplines within the Institute's mandate.

CIHR-funded researcher **Dr. John J.M. Bergeron** of McGill University is awarded the McLaughlin Medal by the Royal Society of Canada for his discoveries in protein maturation, trafficking and function.

### **Anti-microbial use and resistance in seniors, McMaster University**

As a mandate, this NET is helping healthcare providers from different sectors to work together to reduce the impact of microbes capable of resisting medications and/or therapies. Such microbes are harmful to vulnerable populations such as the elderly, and generally increase health care costs.



## ETHICS IN RESEARCH

CIHR requires that all clinical trials it funds must register with an international registry of trials, ensuring that such trials are transparent and accessible, whatever their results.

## INTERNATIONAL REACH

CIHR announces the CANADA-HOPE Scholarship Program, in partnership with Aventis Pharma Inc. Through the program, promising researchers from low- and middle-income countries will be mentored by prominent Canadian researchers, building capacity in the researchers' home countries.

Working with the International Brain Research Organization, CIHR's Institute of Neurosciences, Mental Health and Addiction holds Neuroscience School Programs in Africa and Latin America. The programs are intended to encourage recent graduates to take up careers in neuroscience.



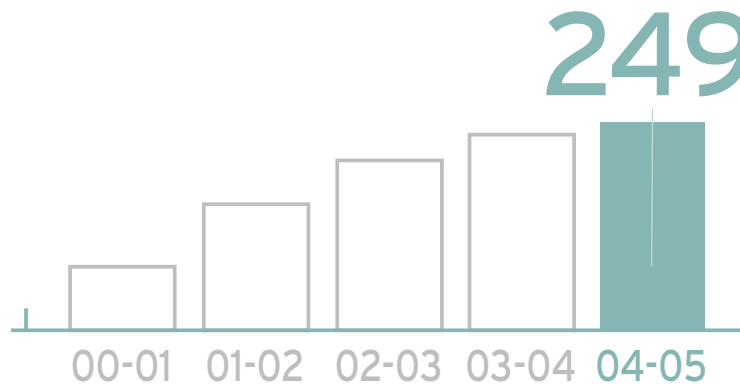
## ORGANIZATIONAL GROWTH

CIHR undertakes to measure the impact of health research in Canada, hosting an international panel of experts to synthesize and review state-of-the-art approaches to measure return on investment and make recommendations on developing a framework for Canada.

CIHR undertakes a wide-ranging public engagement initiative to make Canadians aware of the importance of health research and of the contribution of CIHR-funded researchers to maintaining and improving the health of Canadians and strengthening Canada's health care system. A youth engagement strategy is developed to focus particularly on science and technology literacy among Canada's youth.

The CIHR Aboriginal Peoples' Health Peer Review Committee begins its work.

Number of Research Institutions Supported in Canada<sup>1</sup>

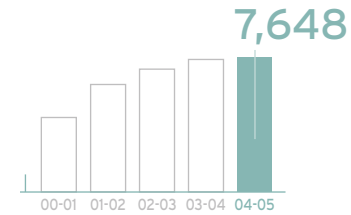


<sup>1</sup> Where applicable, these figures do not include Canada Research Chairs or Networks of Centres of Excellence programs.

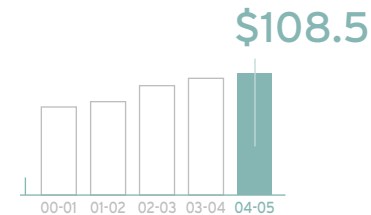
<sup>2</sup> Investigators count is a distinct count and includes all investigator roles. These figures do not include Canada Research Chairs, donations for health research, endowments of health research, refunds from previous years' expenses, or Networks of Centres of Excellence programs.

## INDICATORS

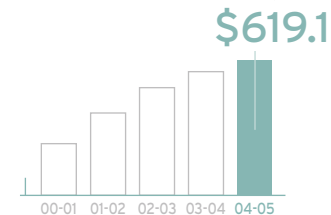
Number of Funded Grants and Awards<sup>1</sup>



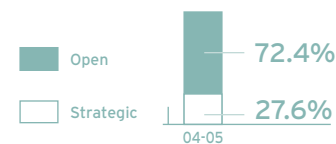
Average Annual Value of a Grant from the CIHR Open Operating Grants Competition (thousands \$)



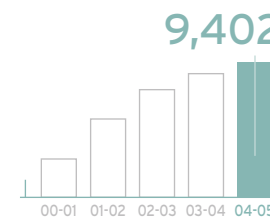
Total Grant and Award Expenditures (millions \$)<sup>1</sup>



Percentage of Grants and Awards Budget Allocated to Open and to Strategic Competitions<sup>1</sup>



Number of Researchers Supported<sup>2</sup>



## SUPPORTING AN EVIDENCE-BASED HEALTH CARE SYSTEM

The first national study of patient safety in Canadian hospitals estimates that 7.5 per cent of people hospitalized in Canada have experienced an adverse event as a result of their care, concluding that care in Canadian hospitals is safe for the vast majority of patients. The study, carried out by **Drs. Ross Baker** of the University of Toronto and **Peter Norton** of the University of Calgary and co-funded by CIHR, reviewed 3,745 adult patient charts randomly selected from 20 acute care hospitals in five provinces. Its results provide hospitals with a clearer picture of the scope and nature of the issue, permitting them to develop strategies to reduce adverse events.

**Dr. P.J. Devereaux** from McMaster University discovers that costs associated with Canadian hospital care would be driven up to \$45.6 billion if investor-owned, for-profit hospitals were permitted.

**Dr. Paula Rochon** of Toronto's Baycrest Centre for Geriatric Care determines that nursing home residents are half as likely to receive an inappropriate drug than older adults living in the community. She also discovers that seniors are prescribed too many anti-psychotic drugs within a short period of being admitted to long-term care facilities. The practice could be used to calm the anxiety levels of new residents suffering from dementia.

## BUILDING NEW PARTNERSHIPS

CIHR's Institute of Aboriginal Peoples' Health launches a partnership with the United States to support collaborative research projects aimed at improving the health and well-being of indigenous peoples. The partnership builds on an earlier partnership with Australia and New Zealand that is intended to address common areas of concern in Aboriginal peoples' health.

CIHR launches Partnerships for Health System Improvement, an initiative undertaken with the Canadian Health Services Research Foundation to support teams of researchers and decision-makers interested in conducting applied health research useful to health system managers and/or policy-makers. Researchers will focus on thematic areas identified as high priority in national consultations undertaken by CIHR's Institute of Health Services and Policy Research.

CIHR and the National Heart, Lung and Blood Institute of the National Institutes of Health co-sponsor an international workshop on research opportunities focusing on the health of Arctic peoples.

CIHR's Institute of Neurosciences, Mental Health and Addiction, together with CIHR's Institute of Human Development, Child and Youth Health and Institute of Genetics, joins with partners in the United States and Ireland to support research focusing on the genetic basis of autism.

CIHR's Institute of Aging holds five regional seniors' workshops on aging, in Regina, Halifax, Vancouver, Toronto and Montreal, to engage seniors in understanding and participating in the research process and to showcase regional research on aging.

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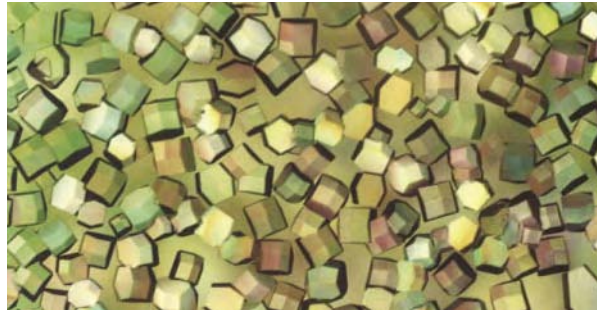
## Moments of Note:

### July 26

CIHR joins in the international registration of randomized controlled trials, ensuring clinicians, researchers, patients and the public have access to information about CIHR-funded trials.

### October 22

The Canadian Light Source in Saskatoon, Saskatchewan, opens. This unique synchrotron facility will enable a broad range of health research, such as the study of protein structures.



### February 23

CIHR receives an increase in its annual budget of \$32 million in the Government of Canada's Budget 2005.

## THE WAY AHEAD

The first five years of CIHR's existence was a period of phenomenal growth and achievement within Canada's health research community. The Government of Canada's commitment to health research, demonstrated through five consecutive increases to CIHR's budget, meant that more researchers in more disciplines in more institutions were receiving increased levels of funding. The result has been, and will continue to be, new discoveries that improve the health of Canadians and strengthen our health care system, together with a stronger focus on ensuring that these new discoveries are translated faster and more effectively into policies, programs and practices. It will also help build a thriving health sector of the economy, creating jobs and growth based on the made-in-Canada commercialization of Canadian discoveries.

As part of its fifth anniversary, CIHR has set in motion an international external review process to determine whether it has delivered on its transformative vision and whether it has added value to the health research agenda in Canada.

The results of this review will help chart CIHR's path over the coming years. Health research is undergoing profound changes, rapidly moving from single-investigator-initiated grants to increasingly large, multidisciplinary teams tackling larger questions with the aid of sophisticated technologies. Supporting researchers whose ideas meet the rigorous standards of CIHR's peer review process, while continuing to grow the portfolio of team grants, will be the key to innovation for the foreseeable future.

CIHR also has a mission to be strategic, and to direct research funding to promising areas of future development. Over the coming years, CIHR will focus on four key areas:

- **Global health:** For Canada, addressing the health disparities that exist among the countries of the developed and developing worlds is a matter both of national security and future economic opportunity, as well as of morality and fairness. CIHR will continue to focus on addressing these disparities and building health research capacity in developing countries through its Global Health Research Initiative. This multi-partner initiative will develop practical solutions for the health and health care problems of the developing world, while at the same time provide valuable information on how to address these issues in Canada.
  - **Clinical research:** Health research has made profound and potentially revolutionary strides over the past 30 years. There are, however, widening gaps between research discoveries and the realization of the health and economic benefits of their application. Clinical research is a critical step in determining which health discoveries actually work in humans and are safe. Canada lacks the capacity, however, to carry out the increasingly sophisticated and expensive clinical research of the 21st century. The Canadian Clinical Research Initiative will bring together partners to strengthen Canadian clinical research capacity and enhance the translation of knowledge into practice, training and sustaining the next generation of clinician-researchers and creating nationally networked clinical research centres.
  - **Regenerative medicine and nanomedicine:** Regenerative medicine and nanomedicine are truly the new frontiers of health research. These emerging technologies have the potential to improve the health of Canadians and change the way our health care system protects, maintains and restores health. They also have potential for economic growth arising from the commercialization of the results of Canadian research. Canada is already world-renowned for its focus on multi-disciplinarity in advancing knowledge. Now, through its strategic initiative in regenerative medicine and nanomedicine, CIHR and its partners are helping to build on Canada's strengths and support the growth of a critical mass of talent to take these new and exciting areas of research the next step forward.
  - **Lifelong health:** Valuable insights and knowledge come from following people over long periods of time. The Canadian Lifelong Health Initiative will do exactly that, to analyze the roles and interaction of different genetic and environmental exposures involved in human development and aging. The Canadian Longitudinal Study on Aging will follow some 50,000 Canadians aged 40 and over for at least 20 years. This novel and unique study will distinguish the Canadian Lifelong Health Initiative throughout the world.
- Whether supporting the brilliant ideas of a talented researcher or focusing strategically on an intractable health problem, CIHR will continue, over the coming years, to support and facilitate the creation of new knowledge and its translation into, in the words of its mandate, "improved health for Canadians, more effective health services and products and a strengthened Canadian health care system."





**In 2004-2005, a broad group of staff from across CIHR gathered to discuss future priorities for the organization and develop a road map for getting there.**

## PROVIDING STEWARDSHIP AND ACCOUNTABILITY

CIHR reports to Parliament through the Minister of Health. Its Governing Council is chaired by CIHR's President and 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.

## Governing Council 2004-05

### **Dr. Alan Bernstein**

*(Chair)*  
*President*  
Canadian Institutes of Health Research

### **Dr. Stephanie Atkinson**

*Professor*  
Department of Pediatrics  
McMaster University

### **Dr. Françoise Baylis**

*Professor*  
Faculty of Medicine  
Dalhousie University

### **Dr. Michel Bureau**

*Director General*  
Ministère de la Santé et des  
Services sociaux du Québec

### **Dr. Alastair Cribb**

*Professor*  
Clinical Pharmacology  
University of Prince Edward Island

### **Dr. Nancy Edwards**

*Professor*  
School of Nursing  
Department of Epidemiology and  
Community Medicine  
University of Ottawa

### **Dr. Hubert Gauthier**

*President and CEO*  
St. Boniface General Hospital

### **Dr. Philippe Gros**

*Professor*  
Department of Biochemistry  
McGill University

### **Ian Green** (ex officio)

*Deputy Minister* (former)  
Health Canada

### **Dr. Malcom King**

*Professor*  
Division of Pulmonary Medicine  
University of Alberta

### **Dr. Kevin Keough**

*President and CEO*  
Alberta Heritage Foundation  
for Medical Research

### **Steven Lewis**

*Partner*  
Access Consulting Ltd.

### **Dr. Victor Ling**

*(Associate Vice-Chair)*  
*Vice President*  
BC Cancer Agency

### **Dr. Louise Nadeau**

*(Vice-Chair)*  
*Professor*  
Department of Psychology  
University of Montreal

### **Dr. David Naylor**

*Dean of Medicine*  
University of Toronto

### **Dr. Rodney Ouellette**

*Director*  
Molecular Pathology Laboratory  
and *Head of Research*  
Dr. Georges-L.-Dumont Hospital

### **Dr. Sarah Prichard**

*Professor*  
Department of Medicine  
McGill University

### **Dr. Carol Richards**

*Director*  
CIRRIIS Research Centre  
Laval University

### **Joseph Rotman**

*Chairman and CEO*  
Roy L. Capital Corporation

### **Dr. Robert Sheldon**

*Professor*  
Cardiovascular Research Group  
University of Calgary



## INSTITUTES OF EXCELLENCE

*Missing from photo:*

**Gender and Health (IGH)**  
Dr. Miriam Stewart  
*University of Alberta*

CIHR's innovative 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.

**Musculoskeletal Health and Arthritis (IMHA)**  
Dr. Cyril B. Frank  
*University of Calgary*

**Aboriginal Peoples' Health (IAPH)**  
Dr. Jeff Reading  
*University of Victoria*

**Human Development, Child and Youth Health (IHDCYH)**  
Dr. Michael Kramer  
*McGill University*

**Dr. Alan Bernstein**  
*President*  
CIHR

**Population and Public Health (IPPH)**  
Dr. John Frank  
*University of Toronto*

**Institute for Aging (IA)**  
Dr. Anne Martin-Matthews  
*University of British Columbia*

**Circulatory and Respiratory Health (ICRH)**  
Dr. Bruce McManus  
*University of British Columbia*



**Nutrition, Metabolism and Diabetes (INMD)**  
Dr. Diane T. Finegood  
*Simon Fraser University*

**Neurosciences, Mental Health and Addiction (INMHA)**  
Dr. Rémi Quirion  
*Douglas Hospital Research Centre,  
McGill University*

**Infection and Immunity (III)**  
Dr. Bhagirath Singh  
*University of Western Ontario*

**Cancer Research (ICR)**  
Dr. Philip Branton  
*McGill University*

**Health Services and Policy Research (IHSPR)**  
Dr. Morris Barer  
*University of British Columbia*

**Genetics (IG)**  
Dr. Roderick R. McInnes  
*Hospital for Sick Children  
University of Toronto*

## PEER REVIEW

The peer review process is the backbone of CIHR's reputation for excellence. Peer reviewers help to ensure that CIHR funding is allocated only to the very best research proposals, providing accountability, not only to the Government of Canada, the source of CIHR funding, but also to the research community at large.

The peer review system ensures that CIHR's funding process is fair and open, that taxpayers' money is spent wisely and that only the best and the brightest researchers are funded.

Each year, CIHR receives almost ten thousand funding applications. Volunteer reviewers on peer review committees read these applications and write detailed reports on their strengths and weaknesses. Through a process of consensus, the committee arrives at a numerical rating for each proposal, funding only those that are relevant to CIHR's mission and meet international standards of excellence.

CIHR recognizes the dedication of the more than 2,300 expert reviewers who volunteered their time on one of CIHR's peer review committees during 2004-05 and thanks them for their continuing commitment to improving the lives of Canadians. CIHR also thanks the thousands of external referees who submitted written reports for consideration by the peer review committees.

## MANAGEMENT DISCUSSION AND ANALYSIS

### HIGHLIGHTS

- The overall growth in CIHR's budget was 8 percent over 2003-04.
- CIHR's expenditures in research increased from \$576 million in 2003-04 to \$619 million in 2004-2005.
- CIHR and its Institutes have over 70 established partnerships. CIHR contributed approximately \$26.5M to the funding of research with partners.
- The number of grants and awards increased to 7,648 in 2004-05, from 7,547 in 2003-04.
- CIHR invested approximately 72% of its base budget for grants and awards to support non-targeted, peer-reviewed investigator-initiated research projects through open competitions. The remainder was invested in targeted, strategic health research initiatives. This is approaching CIHR's 30% objective for investments in strategic health research.
- The ratio of operating expenditure to total budget has been maintained at 6.3%.
- CIHR did not spend all available and planned funding in 2004-2005, incurring a surplus of \$10.8 million in its budget.
- The lapsed funding in Grants and Awards was the result of difficulties experienced by universities in filling Canada Research Chairs at the anticipated rate. Because of the financial arrangements in place for this program, there will be no impact on the capacity to fund health-related Chairs in coming years.
- Factors contributing to the operating surplus include: staff not being hired at the rate expected thereby underutilizing the salary budget, projects being cancelled or not starting as quickly as planned and efficiencies identified in the peer review process.
- As part of the government expenditure reduction initiative, the CIHR reduced its Grants and Awards Budget for the 2004-2005 fiscal year by \$36 million pertaining to reduced anticipated expenditures in the Canada Research Chairs program.

CIHR has been in operation for five years since being created by legislation in June 2000. Since June 2000, the CIHR base budget has been increased by \$356.6 million through 2004-05. The total CIHR budget for 2004-05, as appropriated by Parliament, has reached \$758.8M.

Since its creation, the number of CIHR-funded researchers has climbed steadily from over 5,600 to over 9,400. CIHR's expenditures for grants and awards have virtually doubled from \$339 million in 2000-2001, to \$619 million in 2004-2005. In addition, CIHR has contributed \$25M in funding Networks of Centres of Excellence and approximately \$61M in funding for Canada Research Chairs in 2004-05.

CIHR's operating expenditures in 2004-05 totalled \$47.6M. Operating expenditures were comprised of \$27.5 M in salary and employee benefits (58%) and \$20.1M in non-salary expenditures (42%).

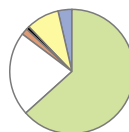
### 2004-05 Expenditures Total Expenditures<sup>1</sup>



**\$752.3 MILLION**

- OPERATING EXPENDITURES (6.3%)
- GRANTS AND AWARDS EXPENDITURES (93.7%)

### Grants and Awards Expenditures<sup>1</sup>



**\$704.7 MILLION**

- OPEN COMPETITIONS (63.6%)
- STRATEGIC INITIATIVES (21.9%)
- INSTITUTE SUPPORT GRANTS (1.8%)
- KNOWLEDGE TRANSLATION (0.5%)
- CANADA RESEARCH CHAIRS (8.6%)
- NETWORKS OF CENTRES OF EXCELLENCE (3.6%)

### Operating Expenditures



**\$47.6 MILLION**

- OTHER OPERATING EXPENDITURES (42.2%)
- SALARIES AND EMPLOYEE BENEFITS (57.8%)

Note 1: Figures do not include Donations for health research, Endowments for health research, and Refunds of previous years' expenses.

## Key Financial Results (Year 2004-05)

<b>Operating Expenses</b>	(in thousands of dollars)
• Capital Asset Additions	1,978
• Salaries and Employee Benefits	27,499
• Other Operating Expenses	20,090
• Number of FTEs	282
• Percentage of Operating Expenses to Total	6.0%
<b>Grants and Awards</b>	(in thousands of dollars)
• Open Competitions	448,391
• Strategic Initiatives	154,256
• Institute Support Grants	13,000
• Knowledge Translation	3,439
• Canada Research Chairs	60,603
• Networks of Centres of Excellence	25,000

## Affiliation of Grants and Awards to Institutes (2004-05)

<b>Institute</b>	<b>No. of Grants and Awards</b>	<b>Total Funded</b> (in thousands of dollars)	<b>Percent of Total</b>
Aboriginal Peoples' Health	86	11,582	1.9%
Aging	259	19,189	3.1%
Cancer	659	52,914	8.5%
Circulatory and Respiratory Health	856	73,221	11.8%
Gender and Health	109	11,463	1.9%
Genetics	675	59,944	9.7%
Health Services and Policy Research	336	24,170	3.9%
Human Development, Child and Youth Health	425	42,159	6.8%
Infection and Immunity	766	69,324	11.2%
Musculoskeletal Health and Arthritis	419	34,127	5.5%
Neurosciences, Mental Health and Addiction	1,179	92,347	14.9%
Nutrition, Metabolism and Diabetes	538	42,502	6.9%
Population and Public Health	278	22,101	3.6%
Unable to allocate	1,056	64,043	10.3%

Note: Applicants are asked to select up to 4 CIHR Institutes by matching their project research areas and objectives to Institute research mandates. This table represents the researcher's first choice of Institute related to their project. The "Unable to allocate" represents the applicants which have not identified a CIHR Institute. Networks of Centres of Excellence, Canada Research Chairs, endowments for health research and donations for research are not included in these figures.

## OUTLOOK 2005-06

CIHR continues to focus on achieving an appropriate balance between open competitions and strategic initiatives. CIHR has a mission to be strategic and to direct research funding to promising areas of future development. In 2005-06 and over the coming years, CIHR will focus on four key areas: Global Health, Clinical Research, Regenerative Medicine and Nanomedicine and Lifelong Health. The goal is to ensure that CIHR funding programs are well positioned in the future to address specific health research priorities and opportunities.

Health research is a long-term endeavor that requires multi-year financial commitments. Thorough financial planning is required to manage risk associated with potential differentials between long term financial commitments to grants and awards and the funding expected from Parliament.

In its February 2005 Federal Budget, the government announced an additional \$32M in annual funding for CIHR in fiscal year 2005-06 and beyond. This will enable CIHR to continue to support and facilitate the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and strengthened Canadian health care system.

## 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 for the year ended March 31, 2005 and all information contained in this report rests with CIHR's management.

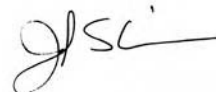
These financial statements have been prepared in accordance with Canadian generally accepted accounting principles for the public sector. Where appropriate, the financial statements include amounts that have been estimated according to management's best judgement. These statements should be read within the context of the significant accounting policies set out in Note 2 of the financial statements.

To fulfil these accounting and reporting responsibilities, CIHR maintains a set of accounts which provides a centralized record of CIHR's financial transactions. Financial information contained in the ministerial statements and elsewhere in the *Public Accounts of Canada* is consistent with these financial statements.

Management has developed and maintains books of accounts, records, financial and management controls and practices, and information systems. They are designed to provide reasonable assurance that CIHR's assets are safeguarded and controlled, that resources are managed economically and efficiently in the attainment of corporate objectives, and that transactions are in accordance with the *Financial Administration Act* and regulations as well as CIHR policies and statutory requirements. Financial management and internal control systems are augmented by the maintenance of internal audit programs. Management also seeks to assure the objectivity and integrity of the information in the financial statements by the careful selection, training and development of qualified staff, by organizational arrangements that provide adequate divisions of responsibility and by communications programs aimed at ensuring regulations, policies, standards and managerial authorities are understood throughout the organization.

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

Approved by:



**John Klimczak**  
Director, Finance & Administration



**Guy D'Aloisio, CMA**  
Vice-President, Services & Operations

May 27, 2005



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, 2005 and the statements of operations and net assets 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, 2005 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

**Sheila Fraser**, FCA  
Auditor General of Canada

Ottawa, Canada  
May 27, 2005



**STATEMENT OF  
FINANCIAL POSITION  
AS AT MARCH 31**

(in thousands of dollars)

**ASSETS**

**Financial Assets**

Due from the Consolidated Revenue Fund  
Accounts receivable:  
    Other Government departments  
    External parties  
Advances

**Total financial assets**

**Non-financial assets**

Prepaid expenses  
Capital assets (Note 3)

**Total non-financial assets**

**TOTAL ASSETS**

**LIABILITIES**

Accounts payables and accrued liabilities  
    Other Government departments  
    External parties  
Employee vacation and compensatory benefits liability  
Deferred revenue (Note 4)  
Employee severance benefits liability (Note 10)

**TOTAL LIABILITIES**

**NET ASSETS (Note 5)**

**TOTAL LIABILITIES AND NET ASSETS**

Contingencies (Note 6)

Commitments (Note 7)

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

Approved by Governing Council:



**Dr. Alan Bernstein, O.C., FRSC**  
Chair

Approved by Management:



**Guy D'Aloisio, CMA**  
Vice-President, Services & Operations

	2005	2004
<b>ASSETS</b>		
<b>Financial Assets</b>		
Due from the Consolidated Revenue Fund	12,417	7,185
Accounts receivable:		
Other Government departments	648	344
External parties	195	213
Advances	192	168
<b>Total financial assets</b>	<b>13,452</b>	<b>7,910</b>
<b>Non-financial assets</b>		
Prepaid expenses	200	550
Capital assets (Note 3)	3,948	3,396
<b>Total non-financial assets</b>	<b>4,148</b>	<b>3,946</b>
<b>TOTAL ASSETS</b>	<b>17,600</b>	<b>11,856</b>
<b>LIABILITIES</b>		
Accounts payables and accrued liabilities		
Other Government departments	378	290
External parties	2,940	5,192
Employee vacation and compensatory benefits liability	1,084	788
Deferred revenue (Note 4)	9,099	1,703
Employee severance benefits liability (Note 10)	3,826	3,154
<b>TOTAL LIABILITIES</b>	<b>17,327</b>	<b>11,127</b>
<b>NET ASSETS (Note 5)</b>	<b>273</b>	<b>729</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>17,600</b>	<b>11,856</b>

## STATEMENT OF OPERATIONS AND NET ASSETS

FOR THE YEAR ENDED MARCH 31

(in thousands of dollars)

### REVENUES

Donations for health research (Note 4)  
Endowments for health research (Note 4)  
Other

### TOTAL REVENUES

### EXPENSES

Grants and awards  
    Open competitions  
    Strategic initiatives  
    Institute support grants  
    Knowledge translation  
    Canada research chairs  
    Networks of centres of excellence  
    Donations for health research (Note 4)  
    Endowments for health research (Note 4)

Less: Refunds of previous years' expenses

Total grants and awards

### Operations and administration

    Salaries and employee benefits  
    Professional and special services  
    Travel  
    Accommodation  
    Furniture, equipment and software  
    Amortization  
    Information services - communications  
    Other expenses

Total operations and administration

### TOTAL EXPENSES

### NET COST OF OPERATIONS

### NET ASSETS, BEGINNING OF THE YEAR

Net cash provided by Government  
Change in due from Consolidated Revenue Fund  
Services provided without charge by other Government departments (Note 8)

### NET ASSETS, END OF THE YEAR (Note 5)

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

	2005	2004
	5,595	5,730
	3	8
	10	2
	<u>5,608</u>	<u>5,740</u>
	448,391	426,042
	154,256	133,745
	13,000	13,578
	3,439	2,222
	60,603	46,268
	25,000	25,000
	5,595	5,730
	3	8
	<u>710,287</u>	<u>652,593</u>
	<u>(3,377)</u>	<u>(2,797)</u>
	<u>706,910</u>	<u>649,796</u>
	27,499	23,470
	10,098	7,623
	3,087	4,135
	2,351	873
	1,476	1,940
	1,426	1,064
	1,351	1,370
	301	794
	<u>47,589</u>	<u>41,269</u>
	<u>754,499</u>	<u>691,065</u>
	<u>748,891</u>	<u>685,325</u>
	729	335
	739,093	680,968
	5,232	2,424
	<u>4,110</u>	<u>2,327</u>
	<u>273</u>	<u>729</u>

**STATEMENT OF  
CASH FLOW  
FOR THE YEAR ENDED MARCH 31**

(in thousands of dollars)

**OPERATING ACTIVITIES**

Net cost of operations

**Non-cash items included in net results**

Amortization of capital assets

Services provided without charge by other Government departments

**Increase (decrease) in non-cash working capital items**

Accounts receivable

Prepaid expenses

Accounts payable and accrued liabilities

Employee vacation and compensatory benefits liability

Deferred revenue

Employee severance benefits liability

**Cash Used in Operating Activities**

**INVESTING ACTIVITIES**

Acquisitions of capital assets

Increase in advances

**Cash Used in Investing Activities**

**NET CASH PROVIDED BY GOVERNMENT**

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

	2005	2004
	748,891	685,325
	(1,426)	(1,064)
	(4,110)	(2,327)
	(5,536)	(3,391)
	286	175
	(350)	381
	2,164	(1,654)
	(296)	(87)
	(7,396)	(770)
	(672)	(504)
	(6,264)	(2,459)
	737,091	679,475
	1,978	1,491
	24	2
	2,002	1,493
	739,093	680,968

**NOTES TO THE  
FINANCIAL STATEMENTS  
FOR THE YEAR ENDED MARCH 31, 2005**

## **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 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 13 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 lapsing authorities. Employee benefits are funded by statutory authorities.

## **2. Significant Accounting Policies**

These financial statements have been prepared in accordance 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. They are based in large part on cash flow requirements. Consequently, items recognized in the statement of operations and net assets and the statement of financial position are not necessarily the same as those provided through appropriations from Parliament. Note 9 provides a high-level reconciliation between the two bases of reporting.

**(b) Net cash provided by government** - is the difference between all cash receipts and all cash disbursements including transactions between departments.

(c) **Due from the Consolidated Revenue Fund** - all departments including agencies and departmental corporations operate within the Consolidated Revenue Fund (CRF). The CRF is administered by the Receiver General for Canada. All cash receipts are deposited to the CRF and all cash disbursements made by departments are paid from the CRF. Due from the CRF 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** - these are accounted for in the period in which the underlying transaction or event occurred that gave rise to the revenues.

(e) **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 that they are disbursed in accordance with agreements between the contributor and CIHR or in accordance with the terms of the endowments.

(f) **Expenses** - these are recorded when the underlying transaction or expense occurred as follows:

- Grants and awards are recognized in the year in which the entitlement has been established, when the recipient has met the eligibility criteria, the commitment has been approved and the payment is due before the end of the fiscal year.
- Employee severance benefits are accrued as earned and are calculated using information derived from the results of the actuarially determined liability for employee severance benefits for the Government as a whole. Employee severance benefits on cessation of employment represent obligations of CIHR that are normally funded by appropriation when the benefits are paid.
- Employee vacation pay and compensatory benefits are expensed in the year that the entitlement occurs.
- Contributions to superannuation plans are recognized in the period that the contributions are made. Actuarial surpluses or deficiencies are not recorded in CIHR's accounts but are recognized in the consolidated financial statements of the Government of Canada.
- Services provided without charge by other government departments and agencies are recorded as operations and administration expenses at their estimated cost.

(g) **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.

(h) **Capital assets** - all tangible assets having an individual initial cost of \$5,000 or more are recorded at their acquisition cost. Amortization of capital assets is done on a straight-line basis over the estimated useful life of the capital asset as follows:

Asset	Useful life
Informatics hardware	3-5 years
Informatics software	3 years
Office equipment	10 years
Motor vehicles	5 years

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

(i) **Pension benefits** - all eligible employees participate in the Public Service Pension Plan administered by the Government of Canada. CIHR's contributions reflect the full cost as employer. This amount is currently based on a multiple of an employee's required contributions and may change over time depending on the experience of the Plan. CIHR's contributions are expensed during the year in which the services are rendered and represent the total pension obligation of the Corporation. CIHR is not currently required to make contributions with respect to any actuarial deficiencies of the Public Service Pension Plan.

(j) **Refunds of previous years' expenses** - these relate to grants and awards which have been cancelled in subsequent years and are recorded as a reduction in expenses. These funds are remitted to the Receiver General for Canada.

(k) **Measurement uncertainty** - the preparation of financial statements in accordance with Canadian generally accepted accounting principles 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 the employee vacation and compensatory benefits liability, employee severance benefits liability and amortization of capital assets.

### 3. Capital Assets

Capital asset class	2005				2004
	Opening Balance	Additions / (Transfers) for the Year	Accumulated Amortization	Net Book Value	Net Book Value
(in thousands of dollars)					
Informatics hardware	1,614	44	995	663	953
Informatics software	3,389	1,843	2,282	2,950	2,166
Office equipment	238	107	54	291	214
Motor vehicle	23	-	17	6	9
Work-in-progress	54	(16)	-	38	54
<b>Total</b>	<b>5,318</b>	<b>1,978</b>	<b>3,348</b>	<b>3,948</b>	<b>3,396</b>

Amortization expense for the year ended March 31, 2005 is \$ 1,426,000 (2004 - \$1,064,000).

### 4. Deferred Revenue

Included in deferred revenue are donations from various organizations and individuals for health research as well as interest on endowments. The transactions relating to these accounts are as follows:

	2005	2004
<b>Donations for health research</b>		
(in thousands of dollars)		
Balance, beginning of the year	1,700	926
<i>Add:</i>		
Donations received	12,833	6,420
Interest earned	159	84
<i>Less:</i>		
Grants expensed	5,595	5,730
<b>Balance, end of the year</b>	<b>9,097</b>	<b>1,700</b>
<b>Interest on endowments for health research</b>		
Balance, beginning of the year	3	7
<i>Add:</i>		
Interest earned	2	4
<i>Less:</i>		
Grants expensed	3	8
<b>Balance, end of the year</b>	<b>2</b>	<b>3</b>
<b>Total Deferred Revenue</b>	<b>9,099</b>	<b>1,703</b>



## 5. Net Assets

Included in Net Assets are two endowments for health research. These endowments are restricted assets that cannot be spent. The interest on these accounts is credited to deferred revenue.

	2005	2004
	(in thousands of dollars)	
Endowments for health research	140	140
Unrestricted net assets	133	589
<b>Net Assets</b>	<b>273</b>	<b>729</b>

## 6. Contingencies

A legal suit for employment equity was initiated by the Public Service Alliance of Canada against Her Majesty the Queen naming certain separate employer organizations of the Government of Canada, including the Canadian Institutes of Health Research (CIHR), as defendants. The amount of this claim, as it relates to CIHR, is estimated to be \$750,000. In management's opinion, the outcome of this litigation is not presently determinable.

One other legal suit launched by an individual alleging damage from participation in projects funded by grants from the Medical Research Council of Canada is pending. The amount of this claim is estimated at \$25,000. In management's opinion, the outcome of this litigation is not presently determinable.

## 7. Commitments

CIHR is committed to disburse grants and awards in future years subject to the appropriation of funds by Parliament. Future year commitments are as follows:

### Years ended March 31

(in thousands of dollars)

2006	663,613
2007	492,860
2008	323,897
2009	167,441
2010	68,950
2011-2013	21,699
<b>Total Grants and Awards Commitments</b>	<b>1,738,460</b>

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. Operating commitments that can be reasonably estimated are as follows:

### Years ended March 31

(in thousands of dollars)

2006	2,306
2007	753
2008	648
2009	75
2010	75
<b>Total Operating Commitments</b>	<b>3,857</b>

## 8. Services provided without charge by other Government departments

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 and on normal trade terms applicable to all individuals and enterprises except that certain services, as shown below, are provided without charge.

	2005	2004
	(in thousands of dollars)	
Accommodation services provided by Public Works and Government Services Canada	2,351	873
Contributions covering employer's share of employees' insurance premiums and costs paid by Treasury Board Secretariat	1,699	1,394
Audit services provided by the Office of the Auditor General of Canada	60	60
<b>Total Services Provided Without Charge</b>	<b>4,110</b>	<b>2,327</b>

## 9. Parliamentary Appropriations

### (a) Reconciliation of net cost of operations to total Parliamentary appropriations used

	2005	2004
	(in thousands of dollars)	
<b>Net cost of operations</b>	<b>748,891</b>	<b>685,325</b>
Adjustments for items not affecting appropriations		
Less: Items recorded as expenses but not affecting appropriations		
Change in vacation pay and compensatory benefits	296	87
Change in employee severance benefits	672	504
Grants funded from donations	5,595	5,730
Grants funded from endowments	3	8
Refunds of previous years' expenses – grants and awards	(3,377)	(2,797)
Refunds of previous years' expenses – operating	(69)	-
Amortization	1,426	1,064
Services provided without charge	4,110	2,327
Adjustments of previous year's payables	(496)	(224)
Other	(5)	19
	8,155	6,718
Add: Items recorded as revenue but not affecting appropriations		
Donations for health research	5,595	5,730
Endowments for health research	3	8
Other	10	2
	5,608	5,740
Adjustments for items affecting appropriations		
Add: Acquisitions of capital assets	1,978	1,491
Change in prepaid expenses	(350)	381
	1,628	1,872
<b>Total Parliamentary appropriations used</b>	<b>747,972</b>	<b>686,219</b>

(b) Reconciliation of Parliamentary appropriations voted to total Parliamentary appropriations used

	2005	2004
	(in thousands of dollars)	
Parliamentary appropriations voted:		
Vote 10 – Operating expenditures	36,162	32,106
Supplementary Vote 10a	5,588	7,837
Supplementary Vote 10b	-	1,109
Transfer from Treasury Board Vote 10	-	1,185
Transfer from Treasury Board Vote 15	125	-
Transfer from Vote 15	295	-
Transfer to Vote 15	(140)	-
	<u>42,030</u>	<u>42,237</u>
Less: Lapsed appropriation	(2,601)	(5,987)
	<u>39,429</u>	<u>36,250</u>
Vote 15 – Grants	711,274	633,896
Supplementary Vote 15a	-	48,650
Supplementary Vote 15b	914	1,000
Transfer to Vote 10	(295)	-
Transfer from Vote 10	140	-
	<u>712,033</u>	<u>683,546</u>
Less: Lapsed appropriation	(7,344)	(4,691)
Lapse as a result of expenditure reduction	-	(32,000)
Total lapsed appropriation - Vote 15	<u>(7,344)</u>	<u>(36,691)</u>
	<u>704,689</u>	<u>646,855</u>
Statutory contributions to employee benefit plans	3,854	3,114
<b>Total Parliamentary appropriations used</b>	<u><u>747,972</u></u>	<u><u>686,219</u></u>

The majority of lapse in Vote 15 – Grants (\$7.0 Million) is attributable to the Canada Research Chairs (CRC) Program. The lapse in funds does not have an impact on CIHR's capacity to fund CRCs in subsequent years.

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

	2005	2004
	(in thousands of dollars)	
Net cash provided by Government	739,093	679,982
Refunds of previous years' expenses	3,377	2,797
Change in accounts receivable	(286)	(175)
Change in advances	(24)	(2)
Change in accounts payable and accrued liabilities	(2,164)	1,654
Change in deferred revenue	7,396	770
Other adjustments	580	1,193
	<u>747,972</u>	<u>686,219</u>
<b>Total Parliamentary appropriations used</b>	<u><u>747,972</u></u>	<u><u>686,219</u></u>

## 10. Employee future 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 and all eligible employees contribute to the Public Service Pension Plan. This pension plan provides benefits based on years of service and average earnings at retirement. The benefits are fully indexed to the increase in the Consumer Price Index. CIHR's and employees' contributions to the Public Service Pension Plan for the year were as follows:

	2005	2004
	(in thousands of dollars)	
CIHR's contributions	3,141	2,803
Employees' contributions	1,026	810
	<u>4,167</u>	<u>3,613</u>

### (b) Severance benefits

CIHR provides severance benefits to its employees. This benefit plan is not pre-funded and therefore has no assets, resulting in a plan deficit equal to the employee severance benefits liability. Information about the plan is as follows:

	2005	2004
	(in thousands of dollars)	
Employee severance benefits liability, beginning of the year	3,154	2,650
Expense for the year	792	567
Benefits paid during the year	(120)	(63)
<b>Employee severance benefits liability, end of the year</b>	<u>3,826</u>	<u>3,154</u>

## 11. Financial instruments

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

## 12. Comparative Figures

Certain comparative figures have been reclassified to conform to the presentation adopted in the current year.