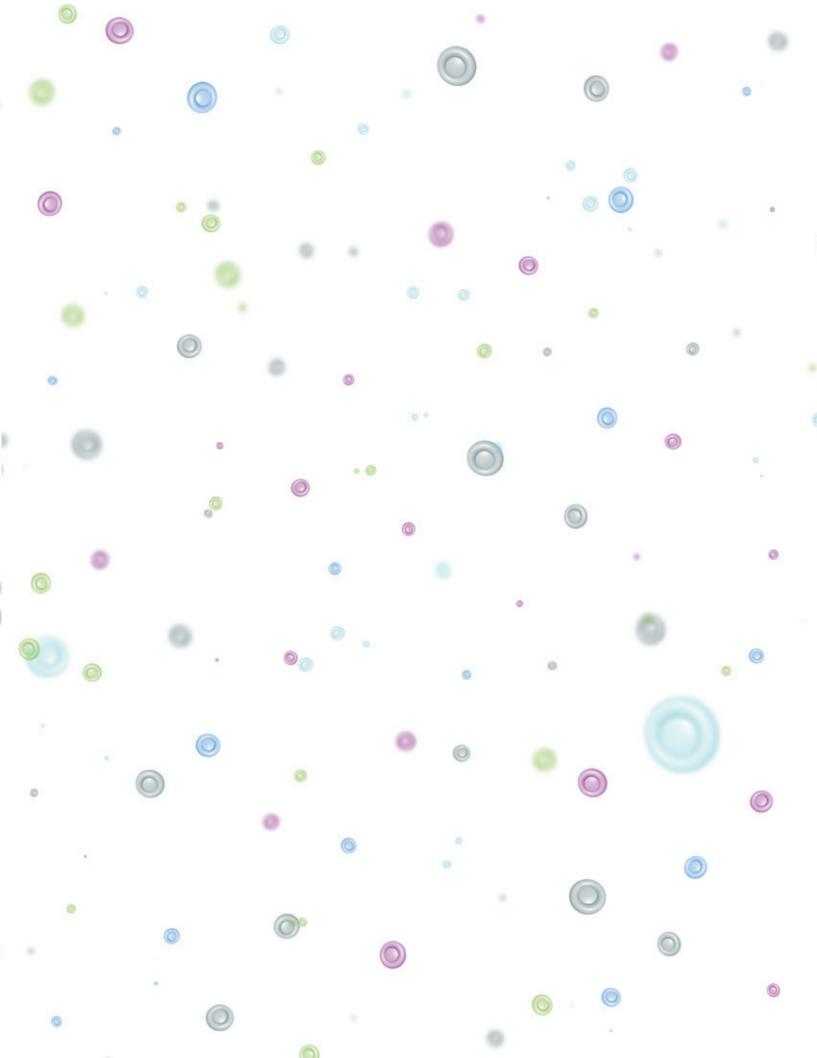
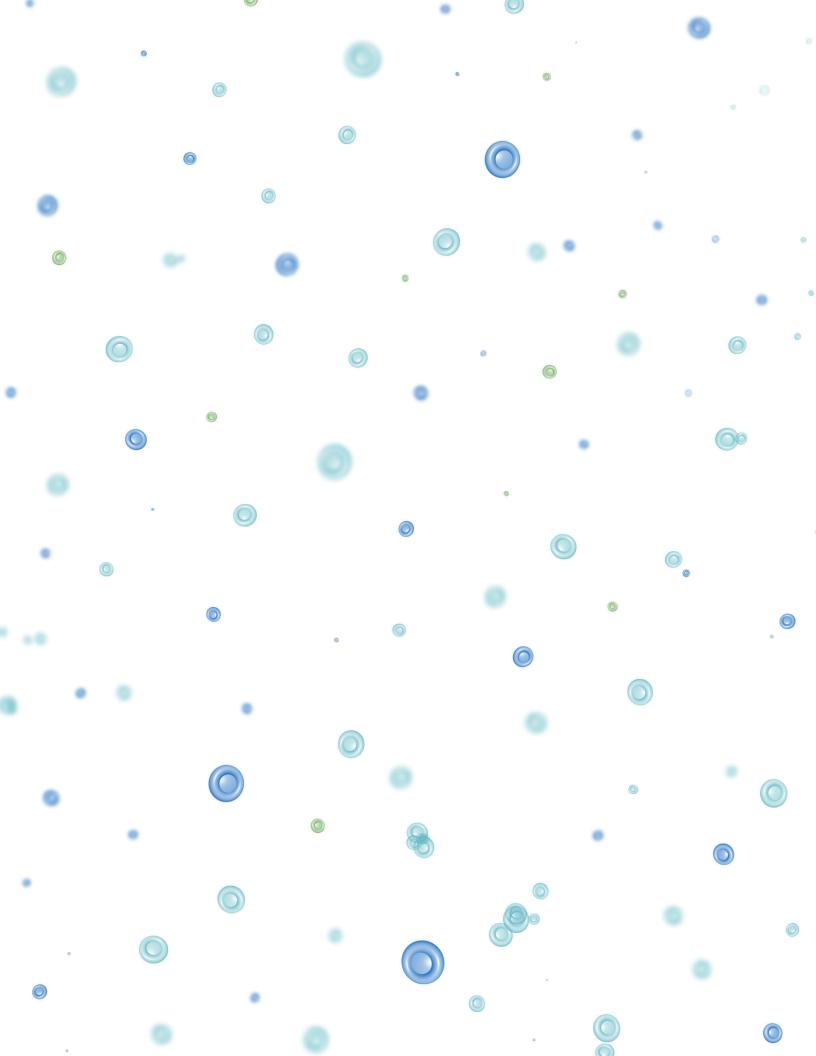


30 Years of Investing in Innovation & Research

Annual Report





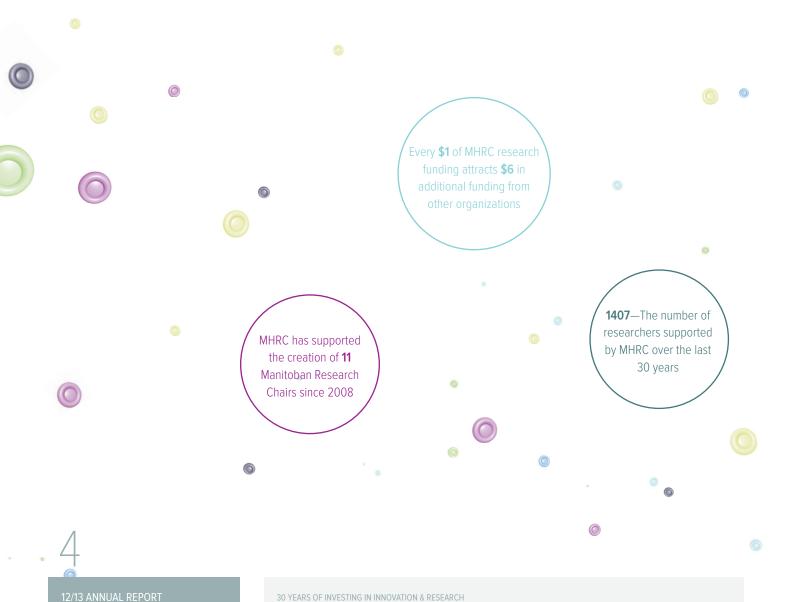


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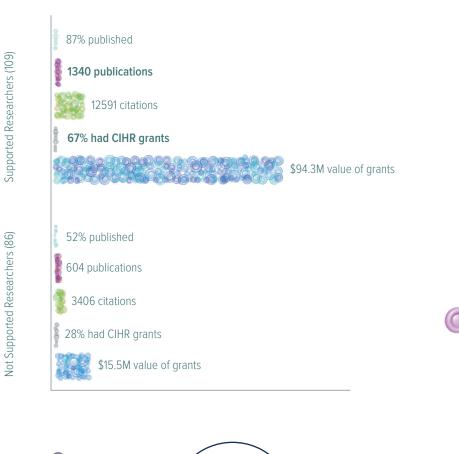
## Researchers & Projects - Growth & Impact

The number of supported researchers and research projects has shown an overall increasing trend from 1982 to 2012. The large funding increases provided to MHRC between 2006 and 2008 reflect a marked increase in the number of supported researchers and projects.

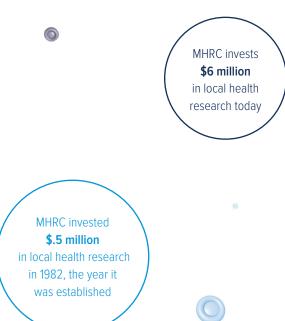




## Researchers & Projects - Growth & Impact



The performance of researchers supported by MHRC's Establishment and Operating Grants Programs have been excellent as illustrated by the number of publications produced, the number of researchers that have successfully secured funding from CIHR, and the amount of funding that has been attracted to the province of Manitoba. On average researchers funded by the MHRC leverage an additional \$6 in national grants for every \$1 spent by the Council.



Dr. Jim Davie, the MHRC's Scientific Director, received funding in 1983 &1982, which helped kick start his career in the province

## Message from the Chair & Executive Director

The MHRC, in partnership with the research community, remains ever attentive to proactively prepare for the changes and react to opportunities which are presented to us.



BRAC

**Dr. Brian Postl**CHAIR
Dean, Faculty of Medicine, University of Manitoba

It has been 30 years since the Manitoba Health Research Council was created by an Act of the Manitoba Legislature, formalizing its place within the health research environment in Manitoba. This noteworthy anniversary prompted reflection on our start as a Council and on all those we have funded over the years. It also encouraged the MHRC to celebrate the successes of Manitoba researchers and trainees, both current and past and reinvigorated a discussion about what we could do to ensure the next 30 years are a success.

The Council got its start when, in the late 1970s, Dr. Arnold Naimark gave a speech in Winnipeg urging the provincial government to follow the lead of other provinces and create its own health research fund. By that time, three of the ten provinces (Quebec, Saskatchewan and Alberta) had, or were developing, organizations to support and promote health research. This spurred the Manitoba government into discussions with Dr. Naimark and other key players including Drs. Henry Friesen and Lyonel Israels leading to the creation of the MHRC.

Initially, the province provided the Council with \$500,000, which grew over the years to \$1.95 million and then to \$6 million annually in 2007. With this funding, we have supported more than 1,400 health researchers over the last 30 years, either as new investigators or as trainees. Throughout this report you will see graphs and charts describing how the MHRC has supported health research in Manitoba since its creation.

These individuals and their research have led to numerous improvements to the delivery of health services in Manitoba and helped sustain Manitoba's reputation as a leader in health research. For example, Dr. Patricia Martens, now Director of the Manitoba Centre for Health Policy, worked alongside members of the Sagkeeng First Nation to promote breast feeding in the 1990s. At that time, it had been established that breastfeeding could reduce respiratory and gastrointestinal infections in infants, but the challenge was to encourage reluctant moms to breastfeed their babies. With a number of resources and a peer counseling support program created through the project, breastfeeding rates jumped from 38 percent to 70 percent, which led the community to permanently fund the peer counselor program. The Sagkeeng materials are now being used in other First Nation communities to boost breastfeeding rates, which has also been found to reduce the risk of early-onset Type 2 diabetes.

There are many other examples of the MHRC-funded research that have had an impact on our health and on the services provided by the health system in Manitoba. Check out our website at www.mhrc.mb.ca under impacts to see these stories and the WAVE magazine articles celebrating local researchers.

On Friday November 9, 2012, the MHRC hosted an event at The Forks Market titled, "Manitoba – Where Health Research Comes to Life!" The intent of the day was to share health research with the public, and increase their interest and engagement in the health research activities in Manitoba. There were eight booths including the U of M's Baby Language Lab, Biomedical Youth Program (BYP), Health, Leisure and Human Performance Research Institute (HLHPRI), the Life Science Association of Manitoba (LSAM), the Manitoba Institute of Cell Biology, the St. Amant Research Centre and the St. Boniface Hospital Research. Throughout the day there was also a series of talks given by researchers, a microscopic art display, and activities led by the U of M's and the U of W's Let's Talk Science groups.

Over the last 30 years, the health research enterprise in Manitoba and in Canada has undergone numerous changes and continues to evolve to ensure research supports the needs of the health system, encourages greater translation and use of the knowledge created, while still supporting investigator-driven discovery research. The MHRC, in partnership with the research community, remains ever attentive to proactively prepare for the changes and react to opportunities which are presented to us.

## Message from the Chair & Executive Director

The Strategy on Patient Oriented Research, led by the Canadian Institutes of Health Research (CIHR), is an opportunity which we actively embraced as a community. National and local funding will create the SUPPORT unit within the George and Fay Yee Centre for Healthcare Innovation (CHI). The Centre aims to be a catalyst for healthcare providers, healthcare decision makers and health researchers in Manitoba to generate and facilitate the use of knowledge to improve the health of Manitobans through its key platforms in data science, knowledge synthesis, knowledge translation, health system performance, clinical trials, and project management.

We are also looking at new ways to build capacity for health research in Manitoba, particularly through facilitating networks, linkages and communication throughout the provincial health research enterprise. A few years ago our strategy noted that the growing complexity of health problems and the need to satisfy greater expectations of research, and its use, necessitate a different way of doing research, one that is characterized by greater collaboration among researchers, practitioners, policy makers and citizens to create a common vision and goals for a research program (a research cluster). In 2012/2013 we began discussions about building a research cluster funding program in Manitoba and this work continues into the coming year.

During the course of the year we were also engaged locally and nationally in discussions on the reforms CIHR is undertaking in its Open Grants Competitions. We have now begun to review the MHRC's current slate of programs in light of these changes and are working with partners to support our researchers as the reforms are implemented.

As always, the work of the Council cannot be accomplished without the efforts of many people. We would like to thank Mr. Robert Gannon, Mr. Ray Hoemsen, Dr. Arnold Naimark and Dr. Ian Smith for their support for and commitment to the MHRC over the last several years. As Council members, they guided us through the transition from a funding organization to a coordinating body for health research in Manitoba, which takes a more active role in charting the course for a stronger and more vibrant health research enterprise in the province and in Canada. To help us continue on this mission, the Council welcomed Mr. Robert Brennan, Ms Jan Currie, Mr. Kevin Kavanagh, Dr. John Langstaff, and Dr. Susan McClement.

We would also like to thank the dedicated staff of the MHRC, who work hard every day to support local researchers in their efforts to make a difference in the health of people in the province and around the world.

In closing, we are proud of the accomplishments of Manitoba's health researchers over the last 30 years and look forward to promoting and supporting their activities in the years to come.

We are proud of the accomplishments of Manitoba's health researchers over the last 30 years and look forward to promoting and supporting their activities in the years to come.



Christina Weisi

Christina Weise

EXECUTIVE DIRECTOR

Manitoba Health Research Council

12/13 ANNUAL REPORT



## Members of the Manitoba Health Research Council



DR. BRIAN POSTL, *Chair Dean*, Faculty of Medicine, University of Manitoba



DR. ARNOLD NAIMARK, *Vice-Chair* (April 2012–October 2012) *Director*, Centre for the Advancement of Medicine, University of Manitoba



DR. DIGVIR JAYAS, *Vice Chair* (Beginning November 2012) *Vice-President (Research and International)*, University of Manitoba



DR. JUDITH BARTLETT

Associate Professor, Adjunct Scientist (Manitoba Centre for Health Policy),
Department of Community Health Sciences, Faculty of Medicine, University of Manitoba



MR. BOB BRENNAN Former President and CEO, Manitoba Hydro (Retired)



MS. JAN CURRIE

Former Vice-President and Chief Nursing Officer, Winnipeg Regional Health Authority (Retired)



MR. GRANT DOAK **Deputy Minister,** Innovation, Energy & Mines, Province of Manitoba *(non-voting member)* 



MR. ROBERT GANNON, **Secretary Treasurer** (April 2012–October 2012) **Past Chair,** St. Boniface General Hospital Board



 $\begin{tabular}{ll} MR. RAY HOEMSEN \\ \emph{\textbf{\textit{Director,}}} Applied Research and Commercialization, Red River College \\ \end{tabular}$ 

## Members of the Manitoba Health Research Council



#### MR. KEVIN KAVANAGH

Past President, Great-West LifeCo



#### DR. JOHN LANGSTAFF

PhD



#### DR. SUSAN MCCLEMENT

**Professor,** Faculty of Nursing, University of Manitoba, Manitoba Palliative Care Research Unit, CancerCare Manitoba



#### DR. PETER NICKERSON

Associate Dean (Research), Faculty of Medicine, University of Manitoba



#### MS. CATHY NIERODA

Vice-President, HP Enterprise Services



#### DR. IAN SMITH, (April 2012–October 2012)

Director General, National Research Council, Institute for Biodiagnostics



#### MR. MILTON SUSSMAN

Deputy Minister, Manitoba Health, Province of Manitoba (non-voting member)



#### DR. BARBARA TRIGGS-RAINE

Professor, Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba



#### MS. ARLENE WILGOSH

President and CEO, Winnipeg Regional Health Authority





## Research Advisory Committee

The Research Advisory Committee (RAC) provides advice and makes recommendations to the Council on all research-related matters including administration of existing programs and opportunities for development of new programs and research initiatives.

Dr. Jim Davie (Chair)

Dr. Judith Bartlett (Council Representative)

Dr. Raj Bhullar

Dr. Tom Blydt-Hansen

Dr. James Bolton

Dr. Peter Cattini

Dr. Gary Glavin

Dr. Xin-Min Li

Dr. James Currie

Dr. Brenda Elias

Dr. Sharon MacDonald

Dr. Yuewen Gong

Dr. Kent Hayglass

Dr. Geoff Hicks

Dr. Harvey Chochinov

Dr. Michael Moffatt

Dr. Michelle Porter

Dr. Renée Robinson

Dr. Carolyn Snider

Dr. Roberta Woodgate

Dr. George Zhanel

### Staff

MS. CHRISTINA WEISE

**Executive Director** 

DR. JIM DAVIE

Scientific Director

MS. SHANNON ROGALSKI

Manager, Funding Programs

MS. LIZ FORD

Administrative Officer

MR. AMBROSIO CATALLA

Evaluations and Policy Analyst

MS. KRISTEN HOOPER

Communications Officer

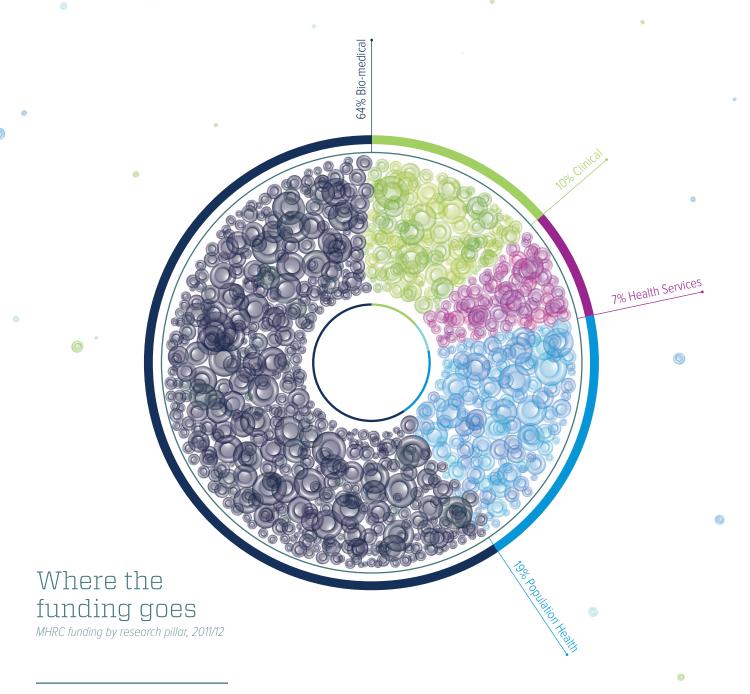
MS. LESLEY MCKENZIE

Administrative Assistant, Funding Programs



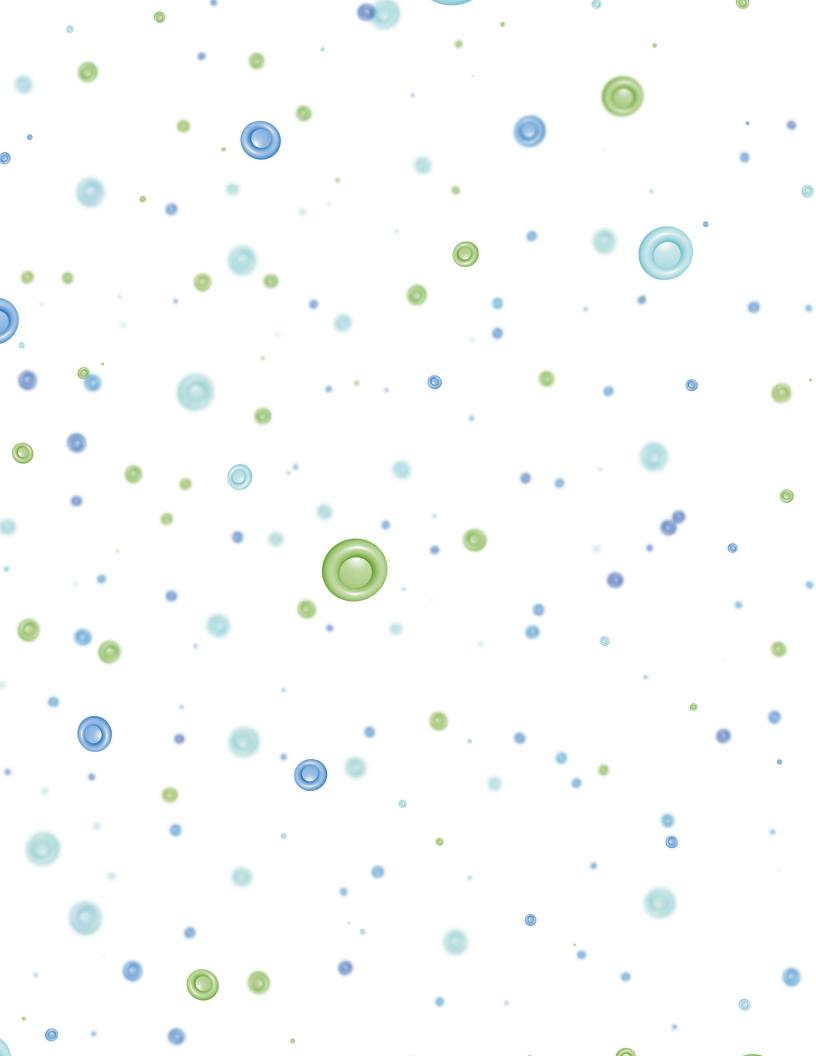
 $\textit{L-R: Ambrosio Catalla, Shannon Rogalski, Christina Weise, Dr. \textit{Jim Davie, Liz Ford, Lesley M$^cKenzie, Kristen Hooper.} \\$ 

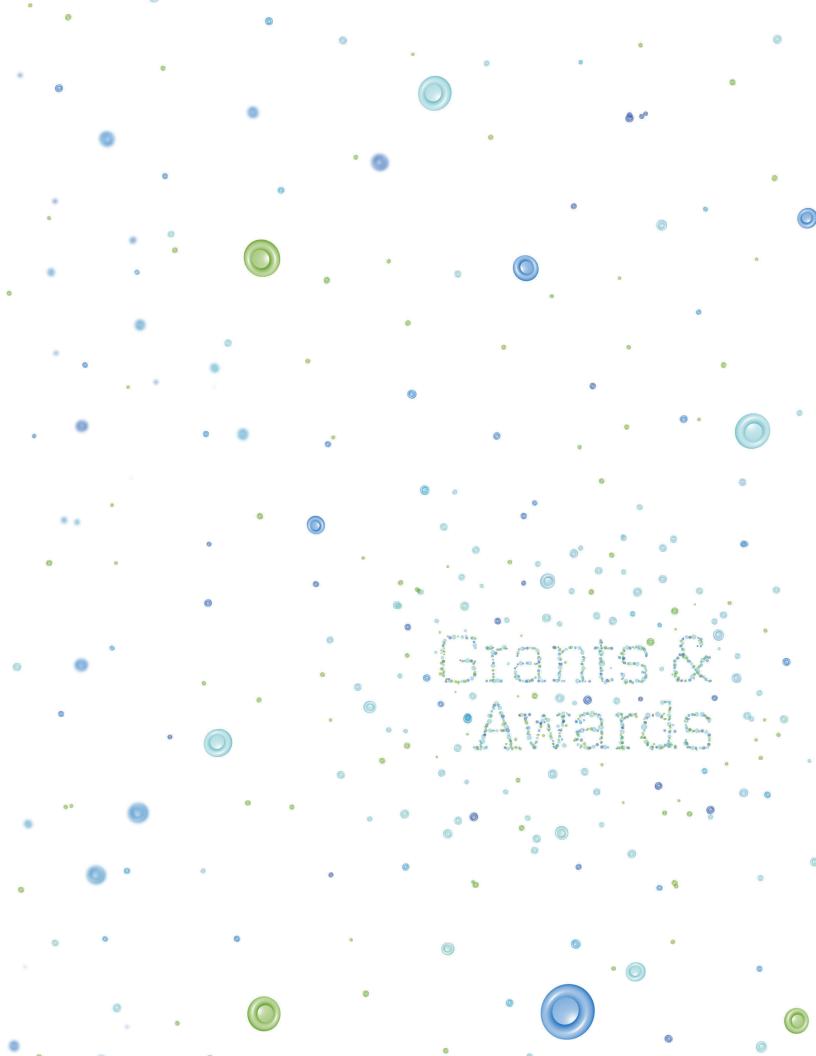




64 percent of MHRC funding supports biomedical research; 19 percent funds social and population health research and the remaining goes to clinical research, and health services and systems research.

- 64% Bio-medical
- 19% Population Health
- 10% Clinical
- 7% Health Services





## **Funding Programs**

#### Our funding partners included:

Canadian Institutes of Health Research

CancerCare Manitoba Foundation

Health Sciences Centre Foundation

Heart and Stroke Foundation of Manitoba

Manitoba Institute of Child Health

St. Boniface Hospital Research Foundation

The Terry Fox Research Institute

University of Manitoba – Faculty of Dentistry

University of Manitoba – Faculty of Graduate Studies

University of Manitoba – Faculty of Pharmacy

The focus of the Manitoba Health Research Council continues to be on building capacity for health research in Manitoba by targeting funding towards new researchers, new recruits to Manitoba and research trainees. In each of our programs we encourage and support a broad range of human health research including basic biomedical, clinical research, health services and health systems research and research into the cultural, social and environmental determinants of health.

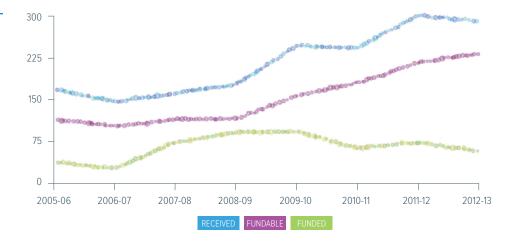
In 2012/13 Council approved approximately \$6 million in research grants, awards and sponsorships. Partnering with various foundations added approximately \$1.68 million to the grants and awards made to the Manitoba Health Research Community.

The following section describes the number of new awards in the General Competition funded by MHRC and offers a total list of new award recipients for this fiscal year.

## NEW APPLICATIONS, FUNDABLE AND FUNDED AWARDS IN THE GENERAL COMPETITION FOR 2012/2013:

Grant Category		Received		Fundable		Approved
	#	\$	#	\$	#	\$
Manitoba Research Chairs	7	700,000	7	700,000	2	200,000
Establishment Grants	32	1,219,364	28	1,039,784	9	372,457
Operating Grants	37	2,411,058	25	1,634,063	6	376,466
Clinical Fellowship Awards	5	182,500	3	109,500	1	36,500
Post-Doctoral Fellowship Awards	38	1,453,500	29	1,109,250	12	407,064
Studentship Awards	164	2,856,000	137	2,374,050	41	821,100
PhD Dissertations	4	20,000	2	10,000	2	10,000

Demand for funding has rapidly grown between 2005 and 2012 and the quality of applications have correspondingly increased since 2008. However the stable funding levels in the past few years has not kept up with the demand for funding from an increasing number of researchers submitting applications to MHRC.



#### Manitoba Research Chairs



Algorithms for Administrative Health Databases

#### LIX, LISA

Department of Community Health Sciences, Faculty of Medicine, *University of Manitoba*  The Manitoba Research Chair Awards program, now in its fifth year, is intended to support the continued growth of successful research programs lead by internationally recognized independent investigators. Valued at \$100,000/yr for five years, these awards enable recipients to develop complex research programs, furthering their research outcomes while mentoring trainees and novice investigators.

## What was the original motivation for your project?

The motivation comes primarily from work that I have been doing with the Public Health Agency of Canada on the Canadian Chronic Disease Surveillance System. I co-chair the Science Committee. There are lots of questions that arise at our meetings about (a) the optimal ways to validate case definitions for chronic diseases such as diabetes, arthritis, and osteoporosis and (b) how to deal with issues of comparability of administrative databases across the provinces and territories.

# What are the factors that encouraged you to pursue your career/conduct your research as an independent researcher in Manitoba?

Manitoba has a very supportive research environment and there are a lot of excellent clinical and methodological investigators with which to work. Also, the Manitoba Centre for Health Policy has the most comprehensive and accessible repository of administrative health databases of any Canadian province; it is recognized worldwide as providing an outstanding research resource. The research environment is really important to remain competitive for national and international grant competitions.

#### What are the real-life applications that may (as a result of your research) impact directly or indirectly on the health of Manitobans?

The work that I am doing with the Public Health Agency of Canada is critical for supporting decision making within Manitoba about the surveillance of chronic diseases. The outputs of my research can benefit the health regions as they prepare health needs assessment reports and plan for the delivery of health care services.

### Manitoba Research Chairs



Development of Multi-Targeting Aminoglycoside Hybrid Antibiotics Designed to Overcome Bacterial Resistance

#### SCHWEIZER, FRANK

Departments of Chemistry/Medical Microbiology, Faculties of Science/Medicine, University of Manitoba

## What was the original motivation for your project?

While pursuing my PhD at the University of Alberta I was working on sugar molecules that prevent the anchoring of bacteria on cell surfaces. Because this anchoring process (adhesion) is a necessary condition in the infection process, I worked to develop synthetic receptor analogs that compete effectively in the binding of the bacterial adhesion to the cell surface, preventing infection. This study opened my eyes and generated my interest in developing novel therapeutic approaches to treat bacterial infections.

# What are the factors that encouraged you to pursue your career/conduct your research as an independent researcher in Manitoba?

After my PhD I was awarded a two-year postdoctoral fellowship by the Japanese Society for the Promotion of Science (JSPS) at the Noguchi Research Institute in Tokyo. This fellowship effectively prepared me for an independent research career. When the U of M was looking for a medicinal chemist in the area of carbohydrate chemistry, I chose to make the move because of their strong Medical Microbiology Department and because the National Microbiology Laboratory is in Winnipeg.

#### What are the real-life applications that may (as a result of your research) impact directly or indirectly on the health of Manitobans?

Very few areas in medicinal chemistry had such a profound impact on our lives as the development of antibiotics, which have led to steady increases in our life expectancy. Most of antibiotics now used were discovered from 1940-1960. Now. bacterial resistance to all known antibacterial agents is increasing at an alarming rate in most parts of the world, creating an urgent demand for new therapeutic approaches to treat bacterial infections. The research in my group focuses on the next generations of antibacterial agents, designed to display multiple modes of action. We hypothesize that compounds of this type will reduce the risk of bacterial resistance development and be effective against multi drug-resistant bacteria.

#### Establishment Grants



Departments of Oral Biology/Medical Microbiology, Faculties of Dentistry/Medicine, University of Manitoba / *Pathogenic Mechanisms in Bacterial Infection – A Target for Development of Novel Antimicrobial Drugs and Strategies*.

#### HO, EMMANUEL

Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Manitoba / **Development** and Characterization of Novel Intravaginal Microbicides and Nanomedicines for the Prevention of HIV Infection.

#### JIANG, DEPENG

Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / *The Person-Oriented Statistical Methods for Longitudinal Data in Health Sciences*.

#### KELLY, DEBBIE

Department of Psychology, Faculty of Arts, University of Manitoba / **Avian Model of Aging: The Effect of Aging on Spatial Cognition and Lateralization of Brain Function.** 

#### LARCOMBE, LINDA

Departments of Internal Medicine/Medical Microbiology, Faculty of Medicine, University of Manitoba / **Northern Aboriginal Health Research: Exploring Gene, Environment and Cultural Interactions.** 

#### NACHTIGAL, MARK

Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba / *Translating Research into Improved Outcomes for Women with Ovarian Cancer.* 

#### TORABI, MAHMOUD

Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / *Disease Mapping in the Province of Manitoba*.

#### WANG, JUN-FENG

Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba / Oxidative Stress, a Potential Therapeutic Target for Treatment of Manic-Depressive Bipolar Disorder.

#### WONG, CHARLES

Department of Chemistry, Faculty of Science, University of Winnipeg / *Elucidating Dynamics of Environmental Contaminant Exposure to the Manitoban Public*.

Establishment Grants can play a crucial role in the development and retention of recently recruited faculty members. Establishment grant funds (up to \$100,000 over a 3 year period) can be used to buy-out teaching time, provide salary for research personnel (other than the applicant's salary) or purchase equipment and supplies. This support enables recipients to develop productive research programs that increase their success in acquiring additional national and international research funding.

## **Operating Grants**

Operating Grants are open to newly recruited faculty members and support specific research projects. These awards are for one or two years and contribute to discoveries and results which can then enable recipients to be more competitive in obtaining national and international funding.

#### DART, ALLISON

Department of Pediatrics and Child Health, Faculty of Medicine, University of Manitoba / *Improving Cardiovascular Outcomes in Adolescents with Type 2 Diabetes through Research 2 (Icare2) Study: The Psychological Determinants of Diabetes Risk, Adherence to Therapy and Microalbuminuria.* 

#### DOLINSKY, VERNON

Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba / *The Role of Adiponectin in Pregnancies Complicated by Obesity and Gestational Diabetes*.

#### FREED, DARREN

Department of Surgery, Faculty of Medicine, University of Manitoba / *The Role of Calcium Overload in Hearts from Donors after Cardiocirculatory Death.* 

#### McKENNA, SEAN

Department of Chemistry, Faculty of Science, University of Manitoba / **Structural and Functional Studies** of the **Evasion of the Innate Immune Response by HIV-1.** 

#### MISHRA, SURESH

Department of Internal Medicine, Faculty of Medicine, University of Manitoba / *The Role of Prohibitin in Adipocyte Differentiation*.

#### RIPAT, JACQUELINE

School of Occupational Therapy, Faculty of Medicine, University of Manitoba / *Exploring Winter Weather Issues Faced by Manitoba Wheeled Mobility Users.* 

### Coordinated Fellowships

Postdoctoral fellowships are a crucial final stage of research training, a bridge from graduate studies to becoming an independent investigator. MHRC fellowship awards support these highly qualified researcher trainees who contribute substantially to their Supervisor's research programs while developing their own niche of expertise.

**BIALA**, **AGNIESZKA** (DR. LORRIE KIRSHENBAUM) • *MHRC/SBRC Postdoctoral Fellowship* Department of Physiology, Faculty of Medicine, University of Manitoba / *Regulation of Cell Death by E2F-1 Proteins in Heart*.

#### $\textbf{GAO, XIAOLING} \ (\texttt{DR. JUDE UZONNA}) \bullet \textit{MHRC/MICH Postdoctoral Fellowship}$

Department of Immunology, Faculty of Medicine, University of Manitoba / **Regulation of Anti-Leishmania Immunity by CD3+CD4-CD8- (Double Negative) T Cells.** 

HLAVACKOVA, MARKETA (DR. GRANT PIERCE) • MHRC Postdoctoral Fellowship
Department of Physiology, Faculty of Medicine, University of Manitoba / Nuclear Protein Import in
Smooth Muscle Cells.

LU, LINGLING (DR. CHRISTOPHER ANDERSON) • MHRC/SBRC Postdoctoral Fellowship
Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba /
Cerebrovascular Effects of Endothelial NMDA Receptors Via Enos-Related Pathway.

SAJESH, BABU (DR. KIRK M<sup>o</sup>MANUS) • CancerCare Manitoba Postdoctoral Fellowship
Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba /
Determinants of Chromosome Stability and Drug Target Discovery.

#### SELIN, CARRIE (DR. SYLVIA CARDONNA) • MHRC Postdoctoral Fellowship

Department of Microbiology, Faculty of Science, University of Manitoba / Identification of Target / Mechanism of Action of Molecules with Antibacterial Properties for Treatment against Burkholderia Cepacia Complex (Bcc).

SENECHAL, MARTIN (DR. JON MCGAVOCK) • MHRC/MICH Postdoctoral Fellowship
Department of Pediatrics and Child Health, Faculty of Medicine, University of Manitoba / Muscle Strength
and Myokines as Determinants of Cardiometabolic Risk among Overweight Youth.

SILVESTER, JOCELYN (DR. DONALD DUERKSEN) • MHRC Postdoctoral Fellowship
Department of Internal Medicine, Faculty of Medicine, University of Manitoba / Improving Patient
Self-Management of Celiac Disease.

SUN, WANPENG (DR. MICHAEL MOWAT) • MHRC/CancerCare Manitoba Postdoctoral Fellowship Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba / Role of Dic2 in Tumor Progress and Drug Response.

SURENDIRAN, GANGADARAN (DR. MOHAMMED MOGHADASIAN) • MHRC Postdoctoral Fellowship Department of Human Nutritional Sciences, Faculty of Human Ecology, University of Manitoba / Mechanisms of Cholesterol Lowering and Antiatherogenic Properties of Manitoba Wild Rice (Zizania Palustris L.) in Experimental Animals.

THIESSEN, JONATHAN (DR. ANDREW GOERTZEN) • The Terry Fox Fellowship Supported by MHRC and The Terry Fox Research Institute Department of Radiology, Faculty of Medicine, University of Manitoba / Development of Novel Positron Emission Tomography (PET) Systems for Simultaneous Preclinical PET and Magnetic Resonance Imaging.

#### YANG, BIN (DR. ZHIKANG PENG) • MHRC/MICH Postdoctoral Fellowship

Department of Pediatrics and Child Health, Faculty of Medicine, University of Manitoba / *Myeloid Derived Suppressor Cells Inhibit Allergic Airway Inflammation*.

The 2012/13 year marked the 5th year of cooperation between MHRC and other local research foundations and institutions. This partnership has resulted in trainee funding efficiencies in the health research community through a shared review process and shared funding of awards.

# Partners for the 2012/13 Coordinated Fellowship Competition:

- Manitoba Health Research Council
- CancerCare Manitoba Foundation
- Manitoba Institute of Child Health
- St. Boniface Hospital Research Foundation
- The Terry Fox Research Institute











## Clinical Fellowships

These research fellowships are provided for highly qualified professionally accredited clinicians, who choose to develop research skills and programs concurrent to their clinical practices. These investigators have the potential to translate research into practice and improve health outcomes in new and concrete ways. MHRC first began offering these fellowships in the 2008/09 Competition year.

SKRABEK, PAMELA (DR. DONNA TURNER) • MHRC Clinical Fellowship Award (Matched by CancerCare Manitoba) Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / Examining the Pathway to Diagnosis and Treatment of Lymphoma in Manitoba: Patient and System Related Factors Resulting in Delay.

## PhD Dissertation Awards

MHRC offers these awards to students enrolled in PhD programs in population health or health-related social sciences in Manitoba. The awards, for up to \$5,000, are to be used to cover costs incurred in the conduct of the students' dissertation research.

#### PARSONS, JOANNE (DR. MICHELLE PORTER)

PhD in Applied Health Sciences Program, Faculty of Kinesiology and Recreation Management, University of Manitoba / *Effect of Power and Strength Training Programs on the Jump Landing Biomechanics of Girls Aged 10-14.* 

#### THIESSEN, KELLIE (DR. MAUREEN HEAMAN)

PhD in Applied Health Sciences Program, Faculty of Kinesiology and Recreation Management, University of Manitoba / *A Case Study of the Implementation of Regulated Midwifery in Manitoba*.

Studentship Awards are offered to excellent students studying full-time in Masters and PhD programs in Manitoba. These awards provide salary support, enabling students to focus on their coursework and research projects while adding to the productivity of the investigators who mentor them.

BAGCHI, RUSHITA ADHIKARI (DR. MICHAEL CZUBRYT) • MHRC/SBRC Graduate Studentship Department of Physiology, Faculty of Medicine, University of Manitoba / The Regulatory Role of Scleraxis and Effect of its Gene Deletion in Cardiac Fibrosis.

CHAKRABORTY, RAJA (DR. PRASHEN CHELIKANI) • MICH/University of Manitoba – Faculty of Dentistry Graduate Studentship Department of Oral Biology, Faculty of Dentistry, University of Manitoba / Structural Insights into the Activation Mechanisms of Prostanoid Receptors.

CHEN, YUFI (DR. EMMANUAL HO) • University of Manitoba — Faculty of Pharmacy Graduate

Studentship University of Manitoba, Faculty of Pharmacy / Intravaginal Ring — An innovative Drug Delivery

Strategy for the Prevention of HIV-1 Infection.

CHOI, KA-YEE GRACE (DR. NEELOFFER MOOKHERJEE) • MHRC Graduate Studentship Department of Immunology, Faculty of Medicine, University of Manitoba / Modulation of Immune-Mediated Inflammation by Cationic Innate Defence Regulator Peptides.

COOPER, ELIZABETH (DR. S. MICHELLE DRIEDGER) • University of Manitoba Graduate Fellowship/MHRC Graduate Studentship Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / "What's Sex Gotta Do With It?" Sexual Health Knowledge and Decision-Making amongst Metis Youth in Manitoba.

DU PLESSIS, ELSABÉ (DR. ROBERT LORWAY) • University of Manitoba Graduate Fellowship/ MHRC Graduate Studentship Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / HIV Vaccine Acceptability among Vulnerable Populations in Kenya.

FINDLAY, BRANDON (DR. FRANK SCHWEIZER) • MHRC Graduate Studentship

Department of Chemistry, Faculty of Medicine, University of Manitoba / Synthesis of Ne

Department of Chemistry, Faculty of Medicine, University of Manitoba / **Synthesis of Neamine-Nucleobase Conjugates with Activity in the Presence of 16S rRNA Methylases.** 

GANGULY, RIYA (DR. GRANT PIERCE) • MHRC Graduate Studentship

Department of Physiology, Faculty of Medicine, University of Manitoba / *Fatty Acids and Cardiac Ischemia-Reperfusion Injury.* 

**GUPPY, BRENT** (DR. KIRK Momanus) • University of Manitoba Graduate Fellowship/CancerCare Manitoba Graduate Studentship Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba / Characterizing the Spatial and Temporal Dynamics of RNF20 in Colorectal Cancer.

JAHAN, SANZIDA (DR. JAMES DAVIE) • MICH/CancerCare Manitoba Graduate Studentship
Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba /
Characterization of Transcriptionally Active Avian Erythrocyte Chromatin.

JHA, ARUNI (DR. ANDREW HALAYKO) • University of Manitoba Graduate Fellowship/MICH Graduate Studentship Department of Physiology, Faculty of Medicine, University of Manitoba / Effects of Statins and Rho Kinase Inhibitors on Airway Inflammation, Responsiveness and Remodeling in Murine Model of Allergic Asthma.

JUNO, JENNIFER (DR. KEITH FOWKE) • MHRC Graduate Studentship

Department of Medical Microbiology, Faculty of Medicine, University of Manitoba / *Investigating the Functional Impact of LAG-3 on Invariant NKT Cells during Chronic HIV Infection.* 

KEHLER, DUSTIN (DR. TODD DUHAMEL) • MHRC Graduate Studentship

Faculty of Kinesiology and Recreation Management, University of Manitoba / *Early Detection of Cardiovascular Disease and Testing a Novel Physical Activity Intervention to Restore Cardiovascular Health.* 

Like the coordinated fellowship program, this program has resulted in trainee funding efficiencies in the heath research community through the partnering of health research funders and institutions with MHRC. All submitted applications are adjudicated by the same peer review process coordinated by MHRC.

## 2012/13 Coordinated Studentship Partners

- Manitoba Health Research Council
- CancerCare Manitoba Foundation
- Health Sciences Centre Foundation
- Manitoba Institute of Child Health
- St. Boniface Hospital Research Foundation
- The Terry Fox Research Institute
- University of Manitoba Faculty of Dentistry
- University of Manitoba –
   Faculty of Graduate Studies
- University of Manitoba Faculty of Pharmacy

















#### KENT, DAVID (DR. TODD DUHAMEL) • MHRC/SBRC Graduate Studentship

Faculty of Kinesiology and Recreation Management, University of Manitoba / **Developing the Referral Processes to Help Cardiac Rehabilitation Patients Maintain their Active Lifestyles after they Graduate from the Program.** 

#### KHOSHGOO, NAGHMEH (DR. RICHARD KEIJZER) • MHRC/MICH Graduate Studentship

Departments of Surgery/Physiology, Faculty of Medicine, University of Manitoba / Exploring the Role of Microrna in Normal and Abnormal Pulmonary Development Due to Congenital Diaphragmatic Hernia.

#### LIEBEN LOUIS, XAVIER (DR. THOMAS NETTICADAN) • MHRC Graduate Studentship

Department of Physiology, Faculty of Medicine, University of Manitoba / *Effect of Resveratrol Treatment on Cardiac Dysfunction in High Fat Fed Rats.* 

LU, YAN (DR. HOPE ANDERSON) • The University of Manitoba-Faculty of Pharmacy/SBRC Graduate Studentship Faculty of Pharmacy, University of Manitoba / Suppression of Cardiac Myocyte Hypertrophy by CB2 Cannabinoid Receptors: Role of AMP-Activated Kinase (AMPK).

#### LYTWYN, MATTHEW (DR. GRANT PIERCE) • MHRC/SBRC Graduate Studentship

Department of Physiology, Faculty of Medicine, University of Manitoba / *The Effect of Dietary Flaxseed in a Model of Experimental Myocardial Infarction in Mice*.

#### MARSHALL, CATHERINE (DR. CHRISTINA LENGYEL) • MHRC Graduate Studentship

Department of Human Nutritional Sciences, Faculty of Human Ecology, University of Manitoba / *Influence of Body Image on Food Choices of Baby Boomers and Older Women.* 

M°CLARTY, LEIGH (DR. MARISSA BECKER) • University of Manitoba Graduate Fellowship/MHRC Graduate Studentship Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / Sociocultural Acceptability of a Future HIV Vaccine: Perspectives of Frontline Health Care Workers in Karnataka, India.

#### MCCLINTON, KATHLEEN (DR. MIYOUNG SUH) • MHRC Graduate Studentship

Department of Human Nutritional Sciences, Faculty of Human Ecology, University of Manitoba / *The Effects of Carrot Powder on Diabetic Retinopathy in Type 1 Diabetes.* 

**DKEKE**, **EMEKA** (DR. JUDE UZONNA) • *University of Manitoba Graduate Fellowship/MICH Graduate Studentship* Department of Immunology, Faculty of Medicine, University of Manitoba / *Regulation of Sepsis and Septic Shock by Regulatory T Cells*.

OPANUBI, KOLAWOLE (DR. KEVIN COOMBS) • University of Manitoba Graduate Fellowship/MHRC Graduate Studentship Department of Medical Microbiology, Faculty of Medicine, University of Manitoba / Investigation of the Mammalian Reovirus (MRV) Sigma 3 Protein Cleavage Requirements for Virion Infectivity and the Role of P53 in MRV-Induced Apoptosis of Transformed Host Cells.

#### OTHMAN, RGIA (DR. SEMONE MYRIE) • MHRC Graduate Studentship

Department of Human Nutritional Sciences, Faculty of Human Ecology, University of Manitoba / Assessment of Sterol Metabolism in Heterozygous and Homozygous Sitosterolemia.

#### RIEDIGER, NATALIE (DR. SHARON BRUCE) • MHRC Graduate Studentship

Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / Characterizing Cardiovascular Risk in a Manitoba First Nation.

#### RYU, MIN HYUNG (DR. ANDREW HALAYKO) • MICH Graduate Studentship

Department of Physiology, Faculty of Medicine, University of Manitoba / **Bio-Engineering Functional Artificial Airways: Nano-Fibrous Scaffolds for Airway Smooth Muscle Cells.** 

#### SHEKHAR, SUDHANSHU (DR. XI YANG) • MHRC/MICH Graduate Studentship

Department of Medical Microbiology, Faculty of Medicine, University of Manitoba / *The Mechanistic Study on the Role of Natural Killer T Cells in Modulating the Function of Lung Dendritic Cells to Induce Protective and Pathological Immune Responses in Chlamydia Pneumoniae Infection.* 

#### SHI, RUOYANG (DR. JIMING KONG) • MHRC/MICH Graduate Studentship

Department of Human Anatomy and Cell Science, Faculty of Medicine, University of Manitoba / *A Mechanistic Study of Delayed Neuronal Death in Neonatal Stroke*.

#### SIEMENS, LINDA (DR. CARLA TAYLOR) • MHRC/MICH Graduate Studentship

Department of Human Nutritional Science, Faculty of Human Ecology, University of Manitoba /
Does A Plant-based High n-3 PUFA Diet Attenuate Hepatic Steatosis and Improve Insulin Sensitivity
and Mitochondrial Function via Changes in the Endocannabinoid System?

SPIWAK, RAE (DR. BRENDA ELIAS) • University of Manitoba Graduate Fellowship/MHRC Graduate Studentship Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / Risk and Resilience: An Examination of the Consequences of Spousal Suicide Bereavement.

#### $\textbf{THANDAPILLY, SIJO JOSEPH (DR. THOMAS NETTICADAN)} \bullet \textit{MHRC/SBRC Graduate}$

Studentship Department of Physiology, Faculty of Medicine, University of Manitoba /

Mechanisms Underlying the Effect of Resveratrol in Preventing Contractile Dysfunction in SHR.

**THOMPSON, LAURA** (DR. KIRK M<sup>c</sup>MANUS) • *The Terry Fox Graduate Studentship supported by CancerCare Manitoba and The Terry Fox Research Institute* Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba / *Identifying and Characterizing Novel Chromosome Stability Genes in Humans.* 

THOMPSON, LAURA (DR. JAMES BLANCHARD) • University of Manitoba Graduate Fellowship/ MHRC Graduate Studentship Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / HIV Epidemic Diversity among High Risk Populations in Pakistan.

#### TURNBULL, DANIELLE (DR. BRIAN COX) • MHRC/HSCF Graduate Studentship

Department of Psychology, Faculty of Arts, University of Manitoba / *Prevalence and Correlates of Psycho-Stimulant Medication Use in the Absence of Attention Deficit Hyperactivity Disorder: Results from a Nationally Representative Mental Health Youth Survey.* 

VILLAFRANCA, ALEXANDER (DR. MALCOLM DOUPE) • University of Manitoba Graduate Fellowship/MHRC Graduate Studentship Interdisciplinary Studies Program, Faculty of Graduate Studies, University of Manitoba / Clinical Trials Promising to "C.U.R.E." and "H.E.A.L."? Quantifying the Biasing Effects of Clinical Trial Names.

WARK, LANDON (DR. SABINE MAI) • CancerCare Manitoba Graduate Studentship
Department of Human Anatomy and Cell Science, Faculty of Medicine, University of Manitoba /
Nuclear Position Change of Mouse Chromosome 11 E2 Band in Plasmacytoma Alters Gene
Transcription Frequency.

#### WOROBEC, LYDIA (DR. BRIAN COX) • HSCF Graduate Studentship

Department of Psychology, Faculty of Arts, University of Manitoba / *The Rising Rate of Prenatal Alcohol Exposure among Women of Higher Socioeconomic Status: Finding from a Nationally Representative Canadian Mental Health Survey.* 

#### WU, JIANDONG (DR. FRANCIS LIN) • MHRC Graduate Studentship

Department of Biosystems Engineering, Faculty of Engineering, University of Manitoba / *Microfluidic Assessment of Neutrophil Chemotaxis for Rapid COPD Diagnosis*.

ZACHARIAH, ROBBY (DR. MOJGAN RASTEGAR) • University of Manitoba Graduate Fellowship / MICH Graduate Studentship Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba / Investigating the Neuronal Targets of Mecp2e1.

#### **ZEGLINSKI, MATHEW** (DR. IAN DIXON) • MHRC Graduate Studentship

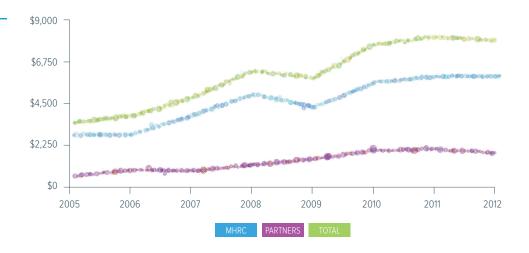
Department of Physiology, Faculty of Medicine, University of Manitoba / **Ski Modulates Cardiac Fibrosis** in **Mouse Pressure Overload Hypertrophy.** 

#### ZHENG, YINGFENG (DR. XIAOJIAN YAO) • MHRC/MICH Graduate Studentship

Department of Medical Microbiology, Faculty of Medicine, University of Manitoba / *Investigation of HIV-1 Integrase Sumo-Interacting Motif (Sim) in its Cellular Cofactor Binding and its Role in Viral Replication.* 

Total MHRC and partner funds, 2005-2012	(\$000)		
	MHRC	Partners	Total
2005	\$2,827	\$632	\$3,459
2006	\$2,868	\$981	\$3,849
2007	\$3,880	\$940	\$4,820
2008	\$4,990	\$1,237	\$6,227
2009	\$4,304	\$1,570	\$5,874
2010	\$5,597	\$2,013	\$7,609
2011	\$5,927	\$2,092	\$8,019
2012	\$5,956	\$1,883	\$7,839

MHRC's and partners' funding of the health research enterprise in Manitoba has steadily increased since 2005. Since 2010 however, the total funding has remained stable at around \$8 million per year.



## Regional Partnerships Program Research Grants



Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / The Epidemiology of Resilience Following Child Maltreatment: An Examination of Protective Factors across the Lifespan.

#### CATTINI, PETER

Department of Physiology, Faculty of Medicine, University of Manitoba / Obesity and Development of a Diabetes Mellitus-Like State in Pregnancy: Investigating a Role for Regulation of the Human Placental Growth Hormone Genes.

#### CZUBRYT. MICHAEL

Department of Physiology, Faculty of Medicine, University of Manitoba / *Role Of AKAP121 in Cardiac Hypertrophy and Metabolism*.

#### DUERKSEN. DONALD

Department of Internal Medicine, Faculty of Medicine, University of Manitoba / Living Well with Celiac Disease: Improving Medical Monitoring and Self-Management of Celiac Disease.

#### FERNYHOUGH, PAUL

Departments of Pharmacology and Therapeutics/Physiology, Faculty of Medicine, University of Manitoba / *Muscarinic Receptor Antagonism as a Novel Mechanism for Sensory Nerve Repair.* 

#### JONES, PETER

Department of Food Science, Faculty of Agricultural and Food Sciences, University of Manitoba / Assessment of Sterol Metabolism in Heterozygous and Homozygous Sitosterolemia.

#### LI, XINMIN

Department of Psychiatry, Faculty of Medicine, University of Manitoba / *Oligodendrocyte Dysfunction in Schizophrenia: Mechanism and Target of Treatment.* 

#### LIX, LISA

Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / *The Analysis of Patient-Reported Outcome Measures: Statistical Methods for Response Shift (PROM-RS).* 

#### MAI, SABINE

Departments of Human Anatomy and Cell Science/Physiology, Faculty of Medicine, University of Manitoba / *The Impact of 3D Nuclear Chromosome and Gene Positions on Cancer.* 

#### MIZUNO, TOORU

Department of Physiology, Faculty of Medicine, University of Manitoba / *Regulation of Lipid Metabolism by Xenin*.

#### SAREEN, JITENDER

Department of Psychiatry, Faculty of Medicine, University of Manitoba / *Culturally Grounded Suicide Intervention in Cree Nation Communities*.

#### TARGOWNIK, LAURA

Department of Internal Medicine, Faculty of Medicine, University of Manitoba / Skeletal Safety of Chronic Proton Pump Inhibitor Use: Evaluating Bone Density, Structure and Strength.

#### YANG. XI

Department of Immunology, Faculty of Medicine, University of Manitoba / *Linkage between Innate and Adaptive Immunity in Chlamydial Infection.* 

Through this program, investigators and trainees who quality for, but are just of the funding cut off for a CIHR Grant, are provided with matched funding awards from the Canadian Institutes of Health Research Regional Partnership Program (CIHR-RPP).

## Regional Partnerships Program Personnel Awards

#### BAGCHI, RUSHITA • Doctoral Award

Department of Physiology, Faculty of Medicine, University of Manitoba

GAO, XIAOLING • Fellowship Research Award

Department of Immunology, Faculty of Medicine, University of Manitoba

## Bridge Funding Awards

Bridge funding awards are one-year awards designed to allow experienced, productive investigators, who have lost funding from a major national agency, to maintain their research operation while they attempt to regain national funding.

#### MARTIN, MELANIE

Department of Physics, Faculty of Science, University of Winnipeg / Magnetic Resonance Microscopy

### MS Research

#### DRIEDGER, MICHELLE

Department of Community Health Sciences, Faculty of Medicine, University of Manitoba / Improving Health Policy Decision Making in the Face of Uncertainty: A Case Study of Endovascular Treatment for Multiple Sclerosis.

#### VOSOUGHI, REZA

Department of Neurology, Faculty of Medicine, University of Manitoba, Health Sciences Centre / *Phase I/II Interventional Clinical Trial for CCSVI in Multiple Sclerosis Patients*.

## Research Connections: Event Sponsorship

STAR CHILD HEALTH SUMMIT 2012 — MANITOBA INSTITUTE OF CHILD HEALTH May 7th and 8th, 2012

10TH ANNUAL COCHRANE CANADA SYMPOSIUM, HEALTH EVIDENCE FOR ALL May 9th and 10th, 2012

CANADIAN NATIONAL MEDICAL STUDENT RESEARCH SYMPOSIUM June 12-14, 2012

CANADIAN STUDENT HEALTH RESEARCH FORUM 2012 June 12-14, 2012

PRAIRIE INFECTIOUS IMMUNOLOGY NETWORK MEETING September 19-21, 2012

2012 TD DISCOVERY DAYS IN HEALTH SCIENCES (MANITOBA) — THE CANADIAN MEDICAL HALL OF FAME

November 2, 2012

8TH ANNUAL CHILD HEALTH RESEARCH DAY-"DEVELOPMICH — A CELEBRATION OF CHILD HEALTH RESEARCH IN MANITOBA" / MANITOBA INSTITUTE OF CHILD HEALTH October 4, 2012

PRIMARY PREVENTION WORKSHOP IN MANITOBA: OPPORTUNITIES AND PRIORITIES — HEART & STROKE FOUNDATION OF MANITOBA

March 4. 2013

SPINAL CORD RESEARCH SYMPOSIUM 2013 May 12-14, 2013

43RD ANNUAL WINNIPEG SCHOOLS SCIENCE FAIR April 17, 2013

This program provides matching funds to support Manitoba health research conferences, workshops, research days and like events. Its purpose is to promote the advancement and exchange of health research knowledge by encouraging linkages among researchers and between researchers and other stakeholder and interest groups. During 2012/13, Council sponsored ten events which are intended to build research and knowledge collaborations.

## Summer Stipends

In 2012/13 MHRC contributed \$20,000 to the University of Manitoba's B.Sc. Medicine Program to support the summer research projects of four students. The work done by these students allows them to develop as physicians and broadens their scientific understanding and foundations in research.

#### **Review Committees**

#### 2012/13 Manitoba Research Chair Review Committee

DR. JIM DAVIE (CHAIR) Manitoba Health Research Council

DR. GRANT HATCH (SCIENTIFIC OFFICER) Departments of Pharmacology and Therapeutics / Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba

DR. BHAGIRATH SINGH Centre for Human Immunology, Department of Microbiology and Immunology, Schulich School of Medicine and Dentistry, University of Western Ontario

DR. RANJANA BIRD Cancer and Nutrition Researcher, University of Windsor

DR. PHILIP JACOBS Institute of Health Economics, Department of Health Economics, University of Alberta

DR. ANDREW BRAUN Department of Physiology and Pharmacology, Faculty of Medicine, University of Calgary

One of the most vital components of any successfully run competition is the quality of its review committees.

Year after year, the MHRC has the great fortune to have committees filled with very enthusiastic and diligent reviewers, as well as very skilled Chairs and

#### 2012/13 Operating and Establishment Grants Review Committee

DR. ELISSAVET KARDAMI (CHAIR) Department of Human Anatomy and Cell Science, Faculty of Medicine, University of Manitoba

DR. FRANK BURCZYNSKI (SCIENTIFIC OFFICER) Faculty of Pharmacy, University of Manitoba

DR. RATNA BOSE Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba

DR. PRASHEN CHELIKANI Department of Oral Biology, Faculty of Dentistry, University of Manitoba

**DR. MICHAEL CARPENTER** Department of Medical Microbiology, Faculty of Medicine, University of Manitoba

DR. ALLAN GARLAND Department of Internal Medicine, Faculty of Medicine, University of Manitoba

**DR. PETER ECK** Department of Human Nutritional Sciences, Faculty of Human Ecology, University of Manitoba, Richardson Centre for Functional Foods and Nutraceuticals

DR. ALBERTO CIVETTA Department of Biology, Faculty of Science, University of Winnipeg

**DR. JIMING KONG** Department of Human Anatomy and Cell Science, Faculty of Medicine, University of Manitoba

DR. STEVEN WHYARD Department of Biological Sciences, Faculty of Science, University of Manitoba

DR. ANDREW HALAYKO Departments of Physiology/Internal Medicine, Faculty of Medicine, University of Manitoba

DR. AFSHIN RADUF Departments of Human Anatomy and Cell Science/Immunology, Faculty of Medicine, University of Manitoba



#### **Review Committees**

#### 2012/13 Social Population Health Review Committee

DR. DEAN KRIELLAARS (CHAIR) School of Medical Rehabilitation, Faculty of Medicine, University of Manitoba

**DR. STEVEN PASSMORE** (SCIENTIFIC OFFICER/REVIEWER) School of Medical Rehabilitation, Faculty of Medicine, University of Manitoba

**DR. J. RENÉE ROBINSON** Department of Psychiatric Nursing, Faculty of Health Studies, Brandon University

DR. BEVERLY TEMPLE Faculty of Nursing, University of Manitoba

DR. PATRICIA CAETANO Health Information Management, Manitoba Health,
Department of Community Health Sciences, Faculty of Medicine, University of Manitoba

**DR. MALCOM DOUPE** Department of Community Health Sciences, Faculty of Medicine, University of Manitoba

DR. JAMES BOLTON Department of Psychiatry, Faculty of Medicine, University of Manitoba

DR. COREY MACKENZIE Department of Psychology, Faculty of Arts, University of Manitoba

DR. BRIAN J. MACNEIL School of Medical Rehabilitation, Faculty of Medicine, University of Manitoba

#### 2012/13 Fellowship Review Committee

DR. MARK NACHTIGAL (CHAIR) Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba

DR. SHANTANU BANERJI (SCIENTIFIC OFFICER) Department of Internal Medicine, Faculty of Medicine, University of Manitoba

**DR. TAMRA WERBOWETSKI-OGILVIE** Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba

DR. FRANCIS LIN Department of Physics and Astronomy, Faculty of Science, University of Manitoba

DR. MOJGAN RASTEGAR Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba

DR. MARYANNE CROCKETT Departments of Child and Pediatric Health/Medical Microbiology, Faculty of Medicine, University of Manitoba

**DR. LORRIE KIRSHENBAUM** Department of Physiology, Faculty of Medicine, University of Manitoba, Institute of Cardiovascular Sciences, St. Boniface Research

DR. SARI HANNILA Department of Human Anatomy and Cell Science, Faculty of Medicine, University of Manitoba

**DR. NEELOFFER MOOKHERJEE** Departments of Internal Medicine/Immunology, Faculty of Medicine, University of Manitoba



#### **Review Committees**

#### 2012/13 Studentship Review Committee - Masters

DR. MICHAEL CZUBRYT (CHAIR) Department of Physiology, Faculty of Medicine, University of Manitoba, Institute of Cardiovascular Sciences, St. Boniface Hospital Research

DR. MIYOUNG SUH Department of Human Nutritional Sciences, Faculty of Human Ecology University of Manitoba

DR. SEAN MCKENNA Department of Chemistry, Faculty of Science, University of Manitoba

DR. KIRK M<sup>c</sup>MANUS Department of Biochemistry and Medical Genetics, Faculty of Medicine, University of Manitoba

**DR. EMMANUEL HO** Department of Immunology, Faculties of Pharmacy/Medicine, University of Manitoba

DR. LARRY HRYSHKO Department of Physiology, Faculty of Medicine, University of Manitoba

DR. ABDELILAH SOUSSI GOUNNI Department of Immunology, Faculty of Medicine, University of Manitoba

DR. GARY SHEN Department of Internal Medicine, Faculty of Medicine, University of Manitoba

DR. MICHEL ALIANI Department of Human Nutritional Sciences, Faculty of Human Ecology, University of Manitoba

DR. GILLES ROBICHAUD Départment de chimie et biochimie, Université de Moncton

DR. JUDE UZONNA Department of Immunology, Faculty of Medicine, University of Manitoba

DR. VERN DOLINSKY Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba

#### 2012/13 Studentship Review Committee - PhD

DR. MICHAEL CZUBRYT (CHAIR) Department of Physiology, Faculty of Medicine, University of Manitoba, Institute of Cardiovascular Sciences, St. Boniface Hospital Research

**DR. OLEG KROKHIN** Department of Internal Medicine, Faculty of Medicine, University of Manitoba, Manitoba Centre for Proteomics and Systems Biology

DR. SHYAMALA DAKSHINAMURTI Departments of Pediatrics and Child Health/Physiology, Faculty of Medicine, University of Manitoba

**DR. TODD DUHAMEL** Faculty of Kinesiology and Recreation Management, University of Manitoba, Institute of Cardiovascular Sciences, St. Boniface Hospital Research

DR. JEAN-ERIC GHIA Department of Immunology, Faculty of Medicine, University of Manitoba

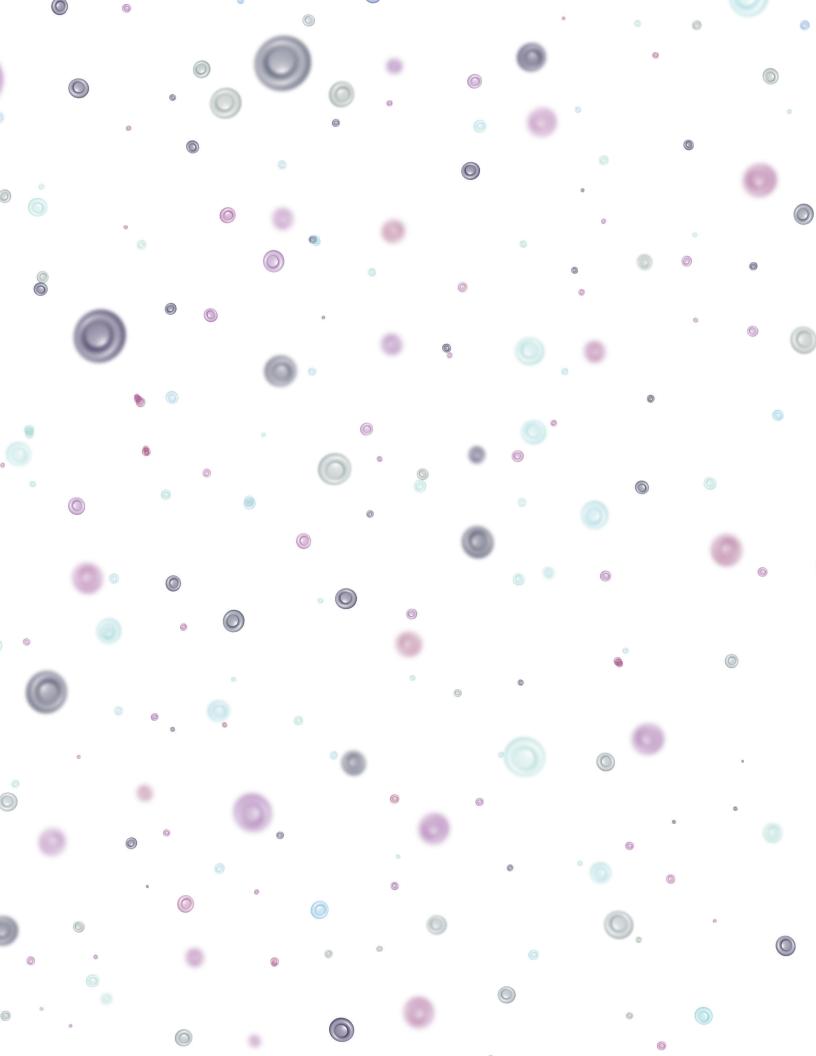
**DR. SERGIO FANELLA** Department of Medical Microbiology, Faculty of Medicine, University of Manitoba

**DR. XI YANG** Departments of Immunology/Medical Microbiology, Faculty of Medicine, University of Manitoba

DR. TABITHA WOOD Department of Chemistry, Faculty of Science, University of Winnipeg

DR. RENÉE DOUVILLE Department of Biology, Faculty of Science, University of Winnipeg

DR. RON GEYER Department of Biochemistry, College of Medicine, University of Saskatchewan





# Management's Responsibility for Financial Reporting

The accompanying financial statements are the responsibility of the management of MANITOBA HEALTH RESEARCH COUNCIL and have been prepared in accordance with Public sector accounting standards. In management's opinion, the financial statements have been properly prepared within reasonable limits of materiality, incorporating management's best judgment regarding all necessary estimates and all other data available to June 6, 2013.

Management maintains internal controls to properly safeguard the assets and to provide reasonable assurance that the books and records from which the financial statements are derived accurately reflect all transactions and that established policies and procedures are followed.

The responsibility of the external audit is to express an independent opinion on whether the financial statements of MANITOBA HEALTH RESEARCH COUNCIL are fairly represented in accordance with Public sector accounting standards. The Independent Auditor's Report outlines the scope of the audit examination and provides the audit opinion.

On behalf of Management,
MANITOBA HEALTH RESEARCH COUNCIL

Christina Weise EXECUTIVE DIRECTOR

Christina Weisi

June 6, 2013

# Independent Auditor's Report

## TO THE MEMBERS OF THE COUNCIL OF THE MANITOBA HEALTH RESEARCH COUNCIL

We have audited the accompanying financial statements of MANITOBA HEALTH RESEARCH COUNCIL, which comprise the statement of financial position as at March 31, 2013, March 31, 2012 and April 1, 2011, and the statement of operations and fund balances and statement of cash flows for the years ended March 31, 2013 and March 31, 2012, and a summary of significant accounting policies and other explanatory information.

#### MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

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

#### AUDITOR'S RESPONSIBILITY

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

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

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### OPINION

In our opinion, the financial statements present fairly, in all material respects, the financial position of MANITOBA HEALTH RESEARCH COUNCIL as at March 31, 2013, March 31, 2012 and April 1, 2011 and the results of its operations and its cash flows for the years ended March 31, 2013 and March 31, 2012 in accordance with Canadian public sector accounting standards.

**Chartered Accountants** 

BDD Canada us

WINNIPEG, MANITOBA

June 6, 2013



# Statement of Financial Position

		March 31		March 31		April 1
		2013		2012		2011
Assets						
Current Assets						
Cash and bank	\$	209,546	\$	253,321	\$	74,020
Short-term investments (Note 3)		6,053,319		6,438,086		6,870,416
Accounts receivable (Note 6)		17,692		9,930		9,665
Accrued interest receivable		36,695		46,829		32,745
Prepaid expenses		2,129		11,629		2,158
Deposits		500		500		500
		6,319,881		6,760,295		6,989,504
Capital assets (Note 5)		31,038		37,501		14,955
	\$	6,350,919	\$	6,797,796	\$	7,004,459
Liabilities and Fund Balances						
Community Library						
Current Liabilities  Accounts payable and accrued liabilities	\$	52,129	\$	21,103	\$	46,968
Deferred revenue (Note 4)	Ψ	4,823,679	Ψ	5,000,000	Ψ	5,000,000
Research grants payable		393,195		289,227		52,263
3		,		,		, , , , ,
Commitments (Note 8)		5,269,003		5,310,330		5,099,231
Fund Balances						
General Research Fund (Page 4)		1,081,916		1,487,466		1,905,228
	\$	6,350,919		6,797,796		7,004,459

Approved on behalf of the Board:

Director

# Statement of Operations and Fund Balances

For the years ended March 31				2013			2012
	Rese	neral earch Fund	Regional Partnership Fund	Total	General Research Fund	Regional Partnership Fund	Total
Revenue		unu	Tuna	iotai	Tuna	Tuna	Total
Province of Manitoba grants	\$ 5,002	,600	\$ 1,000,000	\$ 6,002,600	\$ 5,002,600	\$ 1,000,000	\$ 6,002,600
Regional Health Authorities of Manitoba		-	-	-	50,000		50,000
Grants returned/rescinded	163	,759	-	163,759	96,305	-	96,305
Investment income	155	,219	-	155,219	164,241	-	164,241
	5,321	,578	1,000,000	6,321,578	5,313,146	1,000,000	6,313,146
Add deferred revenue, beginning of year	5,000	,000	-	5,000,000	5,000,000	-	5,000,000
Less deferred revenue, end the year	4,823	3,679	_	4,823,679	5,000,000	-	5,000,000
•	5,497	,899	1,000,000	6,497,899	5,313,146	1,000,000	6,313,146
Expenditures							
Administration (Page 12)	946	,859	-	946,859	804,193	_	804,193
Personnel awards	1,466	,458	32,100	1,498,558	1,512,349	20,188	1,532,537
Research grants	3,326	,566	955,145	4,281,711	3,428,687	965,491	4,394,178
MS grants and awards	176	,321	-	176,321	-	-	-
	5,916	,204	987,245	6,903,449	5,745,229	985,679	6,730,908
Excess (deficiency) of revenue over expenditures for the year	(418,	305)	12,755	(405,550)	(432,083)	14,321	(417,762)
Fund balances, beginning of year	1,487	,466	-	1,487,466	1,905,228	_	1,905,228
Transfer Regional Partnership Fund to General Research Fund	12	2,755	(12,755)	-	14,321	(14,321)	-
Fund balances, end of year (Page 3)	\$ 1,08°	1,916	\$ -	\$ 1,081,916	\$ 1,487,466	\$ -	\$ 1,487,466

The notes are an integral part of these financial statements.

# Statement of Cash Flows

For the years ended March 31	2013	2012
Cash Flows from Operating Activities		
Deficiency of revenue over expenditures for the year	\$ (405,550)	\$ (417,762)
Adjustments for		
Amortization of capital assets	6,048	10,432
	(399,502)	(407,330)
Changes in non-cash working capital balances		
Short-term investments	384,767	432,330
Accounts receivable	(7,762)	(265)
Accrued interest receivable	10,134	(14,084)
Prepaid expenses	9,500	(9,471)
Accounts payable and accrued liabilities	31,026	(25,865)
Deferred revenue	(176,321)	-
Research grants payable	103,968	236,964
	(44,190)	212,279
Cash Flows from Investing Activities		
Purchase of capital assets	(1,985)	(32,978)
Lease revenue from computers	2,400	
	415	(32,978)
Increase (decrease) in cash and cash equivalents		470.004
during the year	(43,775)	179,301
Cash, beginning of year	253,321	74,020
Cash, end of year	\$ 209,546	\$ 253,321

The notes are an integral part of these financial statements.

#### For the years ended March 31, 2013 and 2012

#### 1. Nature of the Organization and Summary of Significant Accounting Policies

#### a. Nature of the Organization

The Manitoba Health Research Council was established by The Manitoba Health Research Council Act to promote and assist basic, clinical and applied research in the health sciences in Manitoba. The Manitoba Health Research Council is a registered charity and is exempt from tax under the Income Tax Act.

#### b. Basis of Accounting

The financial statements have been prepared using the Canadian public sector accounting standards for not-for-profit organizations as established by the Public Sector Accounting Board.

#### c. Revenue Recognition

Grant revenue is reflected in income in the period in which the grant is received or becomes receivable. Interest income is recognized as revenue when earned and is allocated to the General Fund.

#### d. Fund Accounting

The Manitoba Health Research Council ("MHRC") follows the restricted fund method of accounting for contributions.

The General Research Fund reports only restricted resources that are used for research purposes. General research grants are charged to expenditures in the year the funding is committed for, by the Council. Research grants returned to or rescinded by the Council are recorded as revenues when received or rescinded.

Regional Partnership awards are charged to expenditures when funding is received from the Province of Manitoba. Regional partnership awards returned to or rescinded by the Council are recorded as revenues when received or rescinded.

#### e. Capital Assets

Capital assets are stated at cost less accumulated amortization. Amortization, based on the estimated useful life of the asset, is calculated as follows:

Office equipment 20% diminishing balance basis Computer equipment 20% diminishing balance basis

Computer equipment for

review committees 33.3% diminishing balance basis

#### f. Financial Instruments

Financial instruments are recorded at fair value when acquired or issued. Cash has been designated to be in the fair value category. All other financial instruments are reported at cost or amortized cost less impairment, if applicable. Financial assets are tested for impairment when changes in circumstances indicate the asset could be impaired. Transaction costs on the acquisition, sale or issue of financial instruments are expensed for those items remeasured at fair value at each balance sheet date and charged to the financial instrument for those measured at amortized cost. Due to the nature of the financial instruments held by Manitoba Health Research Council, there are no unrealized gains or losses, and therefore a statement of remeasurement gains and losses are not required for these financial statements.

#### q.Grants and Awards

All grants and awards and their renewals are charged to expenditures when funding is approved by Council.

#### h. Administrative Expenditures

Administration expenses are allocated 100% to the General Research Fund.

#### i. Use of Estimates

The preparation of financial statements in accordance with Canadian public sector accounting standards for not-for-profit organizations requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from management's best estimates as additional information becomes available in the future.



#### For the years ended March 31, 2013 and 2012

#### 2. First Time Adoption

Effective April 1, 2012, the organization adopted the requirements of the new accounting framework, Canadian Public Sector Accounting Standards for Not-for Profit Organizations (PSAB for NPOs). These are the organization's first financial statements prepared in accordance with this framework and the transitional provisions of Section 2125, First-time Adoption by Government Organizations have been applied. Section 2125 requires retrospective application of the accounting standards with certain elective exemptions and mandatory exceptions. The accounting policies set out in the Summary of Significant Accounting Policies, with the exception of financial instruments, have been applied in preparing the financial statements for the year ended March 31, 2013, the comparative information presented in these financial statements for the year ended March 31, 2012, and in the preparation of an opening PSAB for NPOs statement of financial position at the date of transition of April 1, 2011.

No exemptions were used at the date of transition to PSAB for NPOs.

The organization issued financial statements for the year ended March 31, 2012 using generally accepted accounting principles prescribed by the CICA Handbook - Accounting Part V - Pre-changeover Accounting Standards.

#### **Financial Instruments**

On April 1, 2012, the Council early adopted the Public Sector Accounting Handbook Section 3450 - Financial Instruments, and 1201 - Financial Statement Presentation. The new standards address the classification, recognition and measurement of financial instruments and is effective for years beginning on or after January 1, 2012, however, early adoption is permitted. The accounting change did not result in any adjustments. These sections have been applied prospectively; as a result, comparative amounts are presented in accordance with the accounting policies applied by the NPO immediately preceding its adoption of PSAB for NPOs.

#### 3. Short-term Investments

	2013	2012
Steinbach Credit Union, charity regular savings account, 1.90%, no maturity date.	\$ 6,053,319	\$ 6,339,363
National Bank Financial, Manitoba Savings Bond, 4.65%, matures on June 15, 2012.	-	98,723
	\$ 6,053,319	\$ 6,438,086

The fair value of the short-term investment approximates the carrying value.

#### For the years ended March 31, 2013 and 2012

#### 4. Accounts Receivable

	 2013	2012
Trade receivables Goods and Services Tax receivable	\$ 9,122 8,570	\$ 9,930
	\$ 17,692	\$ 9,930

#### 5. Capital Assets

		2013	20					
	Cost	Accumulated Amortization	Cost		Accumulated Amortization			
Office equipment	\$ 21,059	\$ 17,007	\$ 21,059	\$	10,285			
Computer equipment	47,824	20,838	45,839		19,112			
	\$ 68,883	\$ 37,845	\$ 66,898	\$	29,397			
Cost less accumulated amortization		\$ 31,038		\$	37,501			

#### 6. Deferred Revenue

Deferred revenue of \$5,000,000, received from the Province of Manitoba, Department of Health at the end of March 2011, is intended to fund clinical research into whether the chronic cerebrospinal venous insufficiency treatment is a safe, effective treatment for Multiple Sclerosis patients. A research team in Manitoba to undertake clinical trials in partnership with the Canadian Institutes of Health Research will utilize up to \$740,000 of this funding. Further use of this funding is being explored. During 2013, \$176,321 of these funds were used.

#### 7. Pension Benefits

Employees of the MHRC are eligible for pension benefits in accordance with the provisions of the Civil Service Superannuation Act (CSSA), administered by the Civil Service Superannuation Board (CSSB). The CSSA established a defined benefit plan to provide benefits to employees of the Manitoba Civil Service and to participating agencies of the Government, including The Property Registry, through the Civil Service Superannuation Fund (CSSF). Effective March 31, 2001, pursuant to an agreement with the Province of Manitoba, The Property Registry transferred to the Province the pension liability for its employees.

Commencing April 1, 2012, the MHRC was required to pay to the Province an amount equal to its employees' current pension contributions. The amount paid for 2013 was \$20,303 (2012 - \$-). Under this agreement, the organization has no further pension liability.

#### For the years ended March 31, 2013 and 2012

#### 8. Commitments

The MHRC has committed grants and awards under the General Research Fund and the Regional Partnership Fund as follows:

Year	General Research Fund	Regional Partnership Fund	Total
2014	\$ 2,611,111	\$ 663,020	\$ 3,274,131
2015	1,190,144	248,753	1,438,897
2016	575,000	-	575,000
2017	325,000	-	325,000
	\$ 4,701,255	\$ 911,773	\$ 5,613,028

Commitments of future years of the General Research Fund and Regional Partnership Fund are not recorded as an expenditure in the year of commitment, they are recorded as an expenditure in the year they are committed for. These commitments will be funded as follows:

Current General Research Fund Balance	\$ 1,081,916
Future Province of Manitoba grants	4,531,112
	\$ 5,613,028

#### 9. Related Party Transactions

The MHRC is related to all Province of Manitoba departments and agencies. During the year, the MHRC had the following transactions with related organizations:

	2013	2012
\$	6,002,600	\$ 6,002,600

These transactions are in the normal course of operations and are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

#### 10. Economic Dependence

The MHRC relies almost entirely on grants from the Province of Manitoba.

#### For the years ended March 31, 2013 and 2012

#### 11. Financial Instrument Risks

General Objectives, Policies, and Processes

The Board of Directors has overall responsibility for the determination of the organization's risk management objectives and policies and, whilst retaining ultimate responsibility for them, it has delegated the authority for designing and operating processes that ensure effective implementation of the objectives and policies to the organization's Executive Director. The Board of Directors receives quarterly reports from the organization's Executive Director through which it reviews the effectiveness of the processes put in place and the appropriateness of the objectives and policies it sets.

The organization's financial instruments are exposed to certain financial risks, including credit risk, interest rate risk and liquidity risk.

There have been no significant changes from the previous year in the exposure to risk, policies or procedures used to manage financial instrument risks.

#### Interest Rate Risk

The organization is exposed to interest rate risk arising from the possibility that changes in interest rates will affect the cash flows related to its investments. The organization's objective is to minimize interest rate risk by locking in fixed rates on its investments when possible.

At March 31, 2013, a 1% move in interest rates, with all other variables held constant, could impact the interest revenue of the investments by \$60,000 (2012 - \$63,000). These changes would be recognized in the statement of operations.

#### Credit Risk

The organization is exposed to credit risk through the possibility of non-collection of its accounts receivable. The majority of the organization's receivables are from government entities which minimizes the risk of non-collection. The organization also makes sure it meets all the eligibility criteria for the amounts to ensure they will collect the amounts outstanding.

#### Liquidity Risk

Liquidity risk is the risk that the organization will not be able to meet its financial obligations as they fall due. The organization has a planning and budgeting process in place to help determine the funds required to support the organization's normal operating requirements on an ongoing basis. The organization ensures that there are sufficient funds to meet its short-term requirements, taking into account its anticipated cash flows from operations and its holdings of cash and cash equivalents.

# Schedule of Administrative Expenses

For the years ended March 31	2013	2012
Accounting and audit	\$ 5,315	\$ 4,787
Amortization	6,048	10,432
Bank charges and interest	1,190	1,253
Communications and information technology	112,095	37,583
Conferences, meetings and travel	33,032	18,921
Consulting and professional fees	11,353	17,000
Council and committee expenses	3,459	4,502
Delivery	1,440	1,411
Insurance	4,586	4,529
Marketing	75,982	65,196
Office space	42,372	51,427
Parking	2,690	3,462
Printing, stationery and office supplies	9,647	16,206
Repairs and maintenance	2,850	5,807
Reviewer's expenses	19,312	31,166
Salaries and benefits	612,005	515,724
Workshops and training	 3,483	14,787
	\$ 946,859	\$ 804,193

