



PSI
FOUNDATION

2012
ANNUAL REPORT

APPLICATION PROCEDURE

In order that proper consideration may be given to each application, applicants for research projects should submit requests **at least six months** prior to requiring funds. For deadline submission dates please visit the Foundation's website.

While independent appraisals are obtained on most applications, the final decision on each application lies with the Grants Committee and the Board of Directors.

Application forms are available on the Foundation's website, and any inquiries about grants and fellowships should be directed to:

PSI Foundation
Suite 1006
5160 Yonge Street
Toronto, Ontario
M2N 6L9

Tel: 416-226-6323
Fax: 416-226-6080
e-mail: psif@psifoundation.org
website: www.psifoundation.org

Although the Foundation does not solicit funds, as a charitable organization it is able to accept donations or bequests and to provide receipts for tax purposes.

MISSION STATEMENT

PSI Foundation is a non-profit physician centred organization dedicated to improving the health of Ontarians through excellence and innovation in clinically relevant research and education.

PSI FOUNDATION

Suite 1006
5160 Yonge Street
Toronto, Ontario
M2N 6L9

OFFICERS

W.D. Hemens, M.D., *President*
W.J. King, M.D., *Vice-President*
S.J. Moore, M.A., *Executive Director*

AUDITORS

KPMG LLP

BANKERS AND CUSTODIANS

Royal Bank of Canada
Royal Trust Corporation of Canada

GENERAL COUNSEL

Fleming, White & Burgess

INVESTMENT COUNSEL

AGF International Advisors Company Ltd.**
Beutel, Goodman & Company Limited
Connor, Clark, & Lunn Investment Management Ltd.†
Magna Vista & Doherty Investment Management
Neuberger Berman, LLC

BOARD OF DIRECTORS

K.J. Armitage*, B.A., M.D., F.R.C.P. (C)
Physical Medicine and Rehabilitation Brampton

A.J. Baker, M.D.
Chief, Department of Critical Care
St. Michael's Hospital Toronto

A.M. Ballard, B.Sc., M.D. C.C.F.P., F.C.F.P.
Family Physician St. Thomas

D. Cook, M.D.‡
Professor of Medicine, Critical Care Medicine,
Epidemiology & Biostatistics
McMaster University Hamilton

J.C. Eby, M.B.A.
Corporate Director
Retired Investment Banker, Scotia Capital Toronto

G. Farquharson
President
Strathcona Mineral Services Ltd Toronto

W.D. Hemens, M.D.
Family Practice: ER and OB Bracebridge

W.J. King, MSc., M.D.
Associate Professor of Pediatrics
University of Ottawa Ottawa

R.Y. McMurtry, C.M., M.D., F.R.C.S.C., F.A.C.S.
Professor Emeritus, former Dean
Western University Picton

A.J. Schumacher, M.D.
President
Schumacher Research and Leadership Group ... Windsor

J. Sharp, C.A.
Partner
Sharp Edmonds Sharp LLP Toronto

J. Toye, M.D.
Plastic Surgeon Orillia

G.A. Vanderburgh, M.D.
Family Physician Eugenia

* retired April 2012

** closed account February 2012

† opened account September 2012

‡ joined 2012

PSI FOUNDATION

EXECUTIVE COMMITTEE

K.J. Armitage, M.D.*
 W.D. Hemens, M.D., *Chairperson*
 A.J. Baker, M.D.
 G. Farquharson, B.Sc.(Min.Eng.), M.B.A.
 W.J. King, M.D.
 G.A. Vanderburgh, M.D.

GOVERNANCE COMMITTEE

A.J. Baker, M.D.
 W.D. Hemens, M.D.
 W.J. King, M.D., *Chairperson*
 R.Y. McMurtry, M.D.
 A.J. Schumacher, M.D.
 G.A. Vanderburgh, M.D.

FINANCE COMMITTEE

G. Farquharson, B.Sc.(Min.Eng.), M.B.A., *Chairperson*
 A.M. Ballard, M.D.
 J.C. Eby, M.B.A.
 J. McGill, M.B.A.* **
 R.Y. McMurtry, M.D.
 J. Sharp, C.A.
 G.A. Vanderburgh, M.D.

GRANTS COMMITTEE

A.J. Baker, M.D., *Chairperson*
 M. Bhandari, M.D.* **
 D. Cook, M.D.†
 D.J. McNeely, M.D.* **
 J. Toye, M.D.

MANAGEMENT AND STAFF

Samuel Moore, B.A. (Hon.) M.A., *Executive Director*
 Jessica Park, *Grants Coordinator*
 Shamim Pirani, *Executive Assistant*
 Maureen Rutherford, *Accountant*

* retired April 2012

** special Committee members

† joined 2012

HOUSE OF DELEGATES MEMBERSHIP LIST

MEDICAL SOCIETY REPRESENTATIVES

SOCIETY	NAME
Cambridge Academy of Medicine	V. Cherniak, M.D.
Central Toronto Clinical Society	J.H.C. Chiu, M.D.
Cornwall Academy of Medicine	G.V. Foley, M.D.
Doctor's Hospital Medical Society	R. Frankford, M.D.
Dufferin County Medical Society	G.A. Vanderburgh, M.D.
Eglinton Medical Society	J.J. Lipsitz, M.D.
Essex County Medical Society	A.J. Schumacher, M.D.
Greater Niagara Medical Society	N.S. Huq, M.D.
Grey County Medical Society	K.W. Clark, M.D.
Haldimand County Medical Society	I. McMichen, M.D.
Halton County Medical Society	G.J.M. Maley, M.D.
Hamilton Academy of Medicine	J.G. Purdell-Lewis, M.D.
Hastings & Prince Edward Medical Society	P.A. Scott, M.D.
Hospital for Sick Children Medical Society	Y. Finkelstein, M.D.
Huron County Medical Society	R.G. Lomas, M.D.
Kent County Medical Society	I.J. MacLean, M.D.
Kingston Academy of Medicine	G.N. Smith, M.D.
Kirkland District Medical Society	R. Denton, M.D.
Kitchener-Waterloo Academy of Medicine	J.C. Craig, M.D.
Muskoka Medical Society	W.D. Hemens, M.D.
Norfolk County Medical Society	G.F. Fisher, M.D.
North Bay District Medical Society	H.G. McKercher, M.D.
North Peel Medical Society	K.J. Armitage, M.D.
Northwestern Ontario Medical Society	J.A. Spencer, M.D.
North York General Medical Society	H.C. Palter, M.D.
Ottawa Academy of Medicine	T.T. Dufour, M.D.
Oxford County Medical Society	J. Szasz, M.D.
Peterborough County Medical Society	K. Ranney, M.D.
Renfrew County Medical Society	D. Park, M.D.
St. Michael's Hospital Clinical Society	A.J. Baker, M.D.
St. Thomas & Elgin Medical Society	A.M. Ballard, M.D.
Scarborough Clinical Society	K.H. Ng, M.D.
Simcoe County Medical Society	J.W. Toye, M.D.
Sudbury District Medical Society	S. Nawaz, M.D.
Thunder Bay Medical Society	V. DeSa, M.D.
Toronto East Medical Society	B. Kee, M.D.
Toronto Hospital Clinical Society	D.J. McNeely, M.D.
Winchester-Kemptville Medical Society	G.N. Houze, M.D.
York Central Medical Society	P.C.Y. Woo, M.D.
York-Finch Medical Society	C.H. Baxter, M.D.

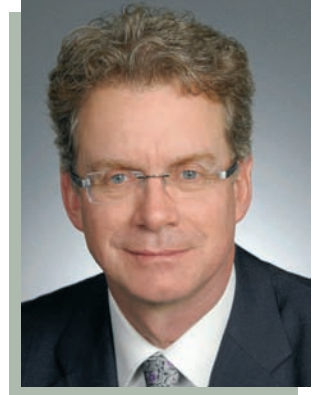
BOARD APPOINTEES

D. Cook, M.D.
 J. Eby, M.B.A.
 G. Farquharson, B.Sc.(Min.Eng.), M.B.A.
 W.J. King, M.D.
 R.Y. McMurtry, M.D.
 J. Sharp, C.A.

ONTARIO MEDICAL ASSOCIATION

A.S. Abdulla, M.D.
 G.M. Beck, M.D.
 K.M. Moore, M.D.

PSI FOUNDATION



PSI Foundation has an extraordinary history! Incorporated as a not for profit foundation in 1969 by the physicians of Ontario with a gift of \$16 million, it has granted more than \$115 million, and has grown its asset base to greater than \$82 million.

Our unique foundation has achieved success in no small measure from its outstanding volunteers including: business men and women who have overseen our investments, peer assessors who help maintain the highest caliber research, delegates, and volunteers to our finance and grants committees, as well as members to the Board.

Our work is ably managed by Sam Moore, our Executive Director, and a small cohort of highly productive, able and affable staff including Jessica Park, Grants Coordinator, Maureen Rutherford, Accountant and Shamim Pirani, Executive Assistant.

Our investment has supported many careers and resulted in many publications which have resulted in better medical care for Ontarians. PSI funding resulted in more than 70 publications this year in high impact journals. The list is found in our report.

Today, translation of this evidence based knowledge (K-T) into clinical practice is a priority. It is with great excitement and pride that the Board launched and granted the first PSI Fellowship for Translational Research this year. The goal of this prestigious Fellowship is to promote K-T and help launch the careers of young researchers. The Board plans on supporting a new Fellow yearly.

Dr. Damon Scales, our first Fellow, works in critical care and focuses his work on evidence based prediction of neurological prognosis in anoxic brain injured patients. PSI is the only private foundation of its kind in Canada. We are working to establishing partnerships with provincial and federal funding agencies. We have joined Health Research Alliance (HRA), an American think tank of granting agencies, with the goal of networking with agencies worldwide.

We believe these activities will maintain our already high standards, ensuring continued pursuit of excellence in medical research funding. We are working at deepening our relationships with the Ontario research institutes with regular face to face meetings, as well as staying current through our website, Facebook and Twitter accounts.

This has been a great year! I sincerely thank all of those currently involved and extend an invitation to all in joining this vibrant Foundation.

Respectfully submitted,

A handwritten signature in blue ink that reads "William Hemens".

William Hemens, *President*

March 07, 2013



2012 PSI FELLOWSHIP FOR TRANSLATIONAL HEALTH RESEARCH

"I am excited at being awarded the Physicians' Services Incorporated first Fellowship in Translational Health Research. This grant provides me with much-needed support to ensure my time is wholly dedicated to conducting research."

"I am seeking to improve the outcomes of patients that have suffered anoxic brain injury. The Fellowship will greatly help me to continue along my chosen career path of becoming a successful Clinician Scientist and Translational Health Researcher."

We are pleased to announce Dr. Damon Scales as the 2012 PSI Foundation Fellow for Translational Health Research. The goal of this prestigious Fellowship- valued at \$150,000 per year for two years- is to guarantee protected research time for a new promising clinician. His field of interest is anoxic brain injury.

This unique Fellowship, one of the most valuable in Canada, is also supported by the University of Toronto's Sunnybrook Health Sciences Centre with matched funding.

The Fellowship will allow Dr. Scales to conduct a stepped-wedge cluster randomized controlled trial (RCT) to improve the application of evidence-based predictions about neurological prognosis for patients that have suffered from anoxic brain injury. This award will also allow Dr. Scales to dedicate time to his existing operating grants from the Canadian Institute of Health Research and Heart & Stroke Foundation of Canada.

Dr. Scales is a graduate of the University of Toronto (1997). Residencies earned Dr. Scales his Royal College Fellowship in Internal Medicine and Critical Care Medicine. He completed his PhD. in Clinical Epidemiology and Health Care Research in 2007 at the University of Toronto.

Dr. Scales' current professional appointments include: Assistant Professor of Medicine at the University of Toronto, Staff Intensivist at the Sunnybrook Health Sciences Centre, Scientist at the Sunnybrook Research Institute, and Adjunct Scientist at the Institute for Clinical Evaluative Sciences. He is also the Program Director of the University of Toronto Adult Critical Care Medicine residency program.

Dr. Scales' translational health research seeks to improve outcomes for the critically ill. He has conducted and published several large cluster RCT of translational health research interventions, including the 'ICU Clinical Best Practices Project'.

Dr. Scales also conducted a stepped-wedge cluster RCT to improve the use of therapeutic hypothermia in cardiac arrest survivors (The Strategies for Post Arrest Care trial, funded by CIHR and HSFC).

ORGANIZATION

PSI Foundation was incorporated on June 4th, 1970 under the laws of the Province of Ontario and is registered with the Canada Revenue Agency as a public charitable foundation under the Federal Income Tax Act.

PSI's membership is composed of physicians representing each of the Ontario Medical Association's branch societies and six other persons appointed by the Board of Directors for their interest in the Foundation's activities. These six members and eight physician representatives of the medical societies form the Board of Directors. The management of the Foundation is vested in this Board. An Executive Committee acts for the Board when required between meetings of the Board.

Finance and Grants Committees make recommendations to the Board of Directors on investment policy and granting programs respectively. Both Committees are largely composed of members of the Board of Directors.

An Executive Director, who is responsible to the Board, administers PSI's programs, as approved by the Board.

SOURCE OF FUNDS

The original capital of the Foundation came from the remaining funds of Physicians' Services Incorporated, the doctor-sponsored prepaid medical care plan.

HISTORICAL BACKGROUND

Physicians' Services Incorporated (P.S.I.) commenced operation in November 1947 and soon became the largest prepaid medical care plan in Canada. P.S.I. was sponsored by the Ontario Medical Association and supported by about 8,000 practising physicians in the Province of Ontario. These participating physicians agreed to allow the Corporation to prorate their medical fees in order to meet administrative expenses and provide the reserves required by law.

In September 1969, P.S.I. ceased operation due to the implementation by the Ontario Government of what is now the Ontario Health Insurance Plan. The Board of P.S.I. and the participating physicians decided that the funds remaining in the general reserve, after meeting all obligations to subscribers and physicians, should be used to establish a foundation, the income of which would be applied to charitable activities within the health field.

GRANTING POLICY AND PROGRAM

PSI Foundation is a granting agency and does not normally engage directly in charitable activities other than awarding medical fellowships. In accordance with the Federal Income Tax Act, PSI must award grants to other registered charities as defined by the Income Tax Act. Hospitals and medical schools come within this definition for the purposes of the Foundation's granting activities. Organizations seeking funds must provide the organization's charitable registration number issued by the Canada Revenue Agency. It is a policy of the Foundation to devote its funds to charitable endeavours in the health field within the Province of Ontario only.

PSI's granting interests focus on two areas - education of practising physicians and health research with emphasis on research relevant to patient care.

EDUCATION OF PRACTISING PHYSICIANS

This program is directed at physicians in established practice in Ontario, residing outside of the teaching centres, who wish to take a period of training to bring a needed clinical skill or knowledge to the community or to undertake training in research methodology.

The fellowships are provided to cover course fees, if any, transportation, room and board costs. Funds are not provided to replace income lost while undertaking a training program and the program is not designed to assist physicians taking refresher courses.

FELLOWSHIP FOR TRANSLATIONAL HEALTH RESEARCH

Translational research aims at transitioning research discoveries to the real world to improve health outcomes. This prestigious Fellowship protects research time of a new, promising clinician, thereby allowing the Fellow the opportunity to pursue their research interests.

HEALTH RESEARCH

Within this broad category, PSI's preference is to support research into any clinical problem (other than cancer, heart and stroke, mental health, drug and alcohol abuse, pharmaceutical drug studies or where there is substantial funding available through other agencies) that is of direct relevance to the care of patients.

PSI offers funding in the following funding streams:

- Clinical Research
- Medical Education Research at the post M.D. level
- Health Systems Research
- Healthcare Research by Community Physicians

CLINICAL RESEARCH

Clinical research is defined as research that is of direct relevance to patient care. Studies involving animals will be considered only if the animals are required as an immediate patient surrogate, which should be indicated in a written statement attached to the application.

Applications will be considered only where a practising physician is the principal investigator, which is defined as one having direct patient care responsibilities. Applicants must possess an academic appointment, defined as someone who is allowed to apply for his or her own research grants and be an independent investigator. Further in establishing priorities among applications, when scientific merit and clinical relevance are equal, preference will be given to the new investigator as opposed to the established investigator.

Fellows are eligible to apply for research grants but are required to have a co-investigator who has an academic appointment. The fellow must provide evidence of having official hospital status, which should be in the form of a letter from his or her supervisor or department chair.

The duration of projects considered will be for a maximum of two years with the possibility of renewal for one further year. Except under unusual circumstances, PSI cannot consider applications for projects requiring more than \$85,000 per year.

RESIDENT RESEARCH

Medical research being undertaken by a resident will be considered if the project is supervised by a physician with an academic appointment. A resident project's maximum duration is two years, with a maximum amount of \$20,000.

The maximum annual amount for total approvals for this funding stream is \$300,000. These applications are in competition with all others, thus the maximum amount awarded could obviously be less.

Proposals within this funding program must have been largely developed by the resident. The majority of the work involved in completing the research must be done by the resident.

The following is set out for the purpose of clarifying eligibility under the resident research program.

1. Salary for the resident must be provided by The Ministry of Health.
2. The individual must be in a recognized program leading to certification by the Royal College of Physicians and Surgeons or the College of Family Physicians. Residents in Royal College programs by accreditation without certification are also eligible.

3. Must be registered as a postgraduate student at the university where residency training is being taken.

The restriction whereby PSI will not consider applications for research within the areas of cancer, heart and stroke and mental health does not apply to resident research projects.

MEDICAL EDUCATION RESEARCH

Funds are available to support research projects designed to assess the post M.D. educational environment such as curricula, methods and teaching resources. PSI Foundation recognizes that research within this area may involve teams that include non-medical researchers.

HEALTH SYSTEMS RESEARCH

Projects focusing within the health care system, such as preventive medicine, care of the elderly, communications within the system, underserved regions and ways of enhancing the effectiveness of medical practice, will be considered under this category.

Applications within these categories should not exceed the maximum of two years duration and the limit of \$85,000 per year set for clinical research.

HEALTHCARE RESEARCH BY COMMUNITY PHYSICIANS

Within this category of funding, physicians practising in a community setting may apply for a grant to assist them in undertaking a review of their practice patterns which would enhance effectiveness of practice and patient care in their own clinic, hospital or region. Grants up to \$5,000 are available to cover the costs of the data gathering and analysis, support staff and preparation of reports. Up to an additional \$600 will be provided for travel costs incurred in presenting papers on the results of a community practice study. The Foundation does not exclude support of research in the areas of cancer, heart and stroke and mental health under the program of community-based research.

AREAS OF NON-SUPPORT

While not an all-inclusive list, the following areas are not supported by the Foundation:

- Annual fund raising campaigns
- Systematic reviews and meta-analyses
- Building funds or other capital cost campaigns
- Research in the areas of cancer, heart and stroke, mental health, drug and alcohol abuse, pharmaceutical drug studies or where there is relatively more funding opportunities available through other agencies
- Operating costs of any organization or department
- Budget deficits
- Service programs
- Ongoing research previously supported by another funding agency
- Major equipment, unless required for a research project being supported by the Foundation
- Projects outside the Province of Ontario
- Films, books and journals.

PSI Foundation will support only one project per investigator at any given time. If an investigator is currently being supported by the Foundation as the principal investigator, PSI will not consider an application for a new project until the current granting period has ended.

ASSISTANCE GIVEN

If in doubt as to whether a proposal would fit within PSI's interests or policies, please contact the Executive Director or Grants Coordinator for assistance.

GRANTING ACTIVITIES – 2012

PSI received 267 applications in 2012, with a total value of \$24,113,900. In the prior year, 218 applications totalling \$21,700,766 were received.

PSI Foundation started 2012 with grant commitments of \$3,729,875 and approved a further \$3,910,000. The Foundation paid \$3,713,786 in granting dollars in 2012, taking into account grant refunds of \$72,289.

At the end of 2012, total commitments going forward equalled \$3,957,300, with \$2,771,300 payable in 2013.

HEALTH EDUCATION

EDUCATIONAL FELLOWSHIPS FOR PRACTISING PHYSICIANS

1 Fellowship for \$3,500

PHYSICIAN	SUBJECT
Dr. G. Rabbat, Dryden, ON	C-section Training

HEALTH SYSTEMS RESEARCH

3 grants totalling \$32,000; a selection is highlighted below.

EDUCATION'S IMPACT ON HEALTHY SENIORS' ATTITUDES AND HEALTH CARE PREFERENCES REGARDING DIFFERENT STAGES OF ALZHEIMER'S DISEASE

Dr. Robyn Esther Waxman, Centre for Addiction and Mental Health

This pilot study's goals are to evaluate and compare the impact of brief education about Alzheimer's Disease (or AD) on healthy elderly people's attitudes and preferences for medical interventions for common, serious health problems that typically occur during different stages of AD. Of particular interest will be subjects' views about less well-known behavioural and psychological symptoms (or BPSD) of AD (e.g., aggression, psychosis, and apathy).

Three hypotheses will be tested: (1) education about mild, moderate, and advanced AD will result in significant changes in subjects' treatment/care preferences in the moderate and advanced stages of AD, (2) education about BPSD will result in significant changes in subjects' preferences in all three stages of AD, and (3) a majority of research subjects will prefer pharmacological options despite their potential cardiac and neurologic adverse effects to manage BPSD.

ICU DAILY GOALS CHECKLIST: A MIXED METHODS ANALYSIS OF EFFECTS ON COMMUNICATION & PATIENT CARE

Dr. Erick Duan (resident), Dr. John Centofanti (resident) and Dr. Deborah Cook (supervisor), McMaster University

A Daily Goals Checklist (DGC) has been implemented in several intensive care units (ICUs) over the past decade. This tool facilitates communication among clinicians by shared formulation of the care plan for each patient. DGCs help to emphasize a comprehensive, patient-centred multidisciplinary approach to daily rounds. In 2010, based on early published reports and endorsed by interest in our community, a DGC was implemented in the 19-bed tertiary care medical-surgical ICU of St Joseph's Healthcare in Hamilton, Ontario, Canada.

This study aims to determine the impact of the DGC on patient care and safety and interdisciplinary communication; moreover, the researchers plan to identify potential improvements to the DGC, enhancing its effectiveness both clinically and educationally.

RESEARCH BY COMMUNITY PHYSICIANS

No grants awarded under this program in 2012.

MEDICAL EDUCATION RESEARCH

1 grant totalling \$13,500

VISUAL IMAGERY AND MENTAL REHEARSAL IN SURGERY

Dr. Tulin Cil, University Health Network

Mental rehearsal- the action of systematically imagining objects and movements- is a training technique that has been studied extensively in sports psychology. It has been validated and successfully applied in professional sports for over three decades; however, visual imagery and mental rehearsal has not been explored in surgery.

The goal of this study is to better understand the role such cognitive processes may play in the acquisition and performance of surgical skills. This research team will conduct one-on-one semi-structured interviews with 24 surgeons representing different levels of experience and subspecialties.

The study's findings will prove valuable in understanding aspects of surgical planning and judgment. Future applications may include incorporation of such practices into traditional learning paradigms in surgical training.

CLINICAL RESEARCH

42 grants totalling \$3,261,000; a selection is highlighted below.

THE IMPACT OF TRACHEOSTOMY TIMING ON THE OUTCOME OF TRAUMATIC BRAIN INJURY

Dr. Abdulaziz Alali (resident), Dr. Avery B. Nathens (supervisor), St. Michael's Hospital

Severe traumatic brain injury (TBI) victims often require tracheostomy during their clinical course, mainly for airway protection and to help with clearance of respiratory secretions. However, the impact of tracheostomy timing on clinically relevant outcomes of TBI patients remains controversial.

Using a large database derived from the American College of Surgeons (ACS) Trauma Quality Improvement Program (TQIP), this research team plans to explore the impact of tracheostomy timing in TBI patients on outcomes including in-hospital mortality, total ventilator days, intensive care unit and hospital length of stay, and incidence of pneumonia, deep venous thrombosis, pulmonary embolism and pressure sores.

In addition, the knowledge, perceptions, and beliefs that may influence timing of tracheostomy in TBI patients will be studied through a survey of neurosurgeons, trauma surgeons and intensivists from trauma centres across Canada and the United States.

IDENTIFICATION AND ISOLATION OF A YEAST CERUMINASE FOR MANAGEMENT OF HUMAN EARWAX

Dr. Matthew Bromwich, Dr. Kristin Baetz, University of Ottawa

Cerumen impaction (plugged ears due to wax) is the single most common ear related complaint, resulting in referral to an ENT specialist with an incidence of 3% in the general population. No pharmaceutical exists which is demonstrably better than water for the treatment of this common condition. Discovery of novel effective therapeutics to dissolve earwax would allow treatment without mechanical extraction and a doctor's visit.

Identifying enzyme(s) that specifically breakdown wax, relieving the cerumen impaction, represents one strategy. Yeast species are one of the few organisms with the documented ability to digest wax. The researchers propose to identify and optimize yeast enzyme(s) with the ability to digest human earwax. This study's goal is the development of a new pharmaceutical for the treatment of cerumen impaction and its associated morbidities.

EXPLORING THE ASSOCIATIONS BETWEEN DAILY BLOOD PRESSURE FLUCTUATIONS AND CARDIOVASCULAR RISK AMONG PATIENTS WITH MOTOR COMPLETE SPINAL CORD INJURY: A PILOT STUDY

Dr. Derry Lawrence Dance (resident), Dr. B. Catharine Craven (supervisor), Toronto Rehabilitation Institute

Patients with spinal cord injury (SCI) experience disproportionately high rates of cardiovascular disease, even when conventional risk factors are considered. Blood pressure control is affected by injuries to the spinal cord and the autonomic nervous system among patients with tetraplegia and upper thoracic paraplegia. These impairments result in vulnerability to frequent short term fluctuations in systolic blood pressure (high and low) during self-care activities such as voiding or defecating.

This pilot study will document the daily fluctuations in blood pressure during a SCI patient's daily self-care activities using 24 hour mobile blood pressure monitors. In addition, aortic arterial stiffness, a correlate of cardiovascular disease, will be measured via ultrasound.

This pilot study will explore the associations between transient increases in blood pressure (*how much, how often, and for how long*) with arterial stiffness. Future interventions to reduce blood pressure fluctuates over time may reduce the frequency of heart attack and stroke among patients living with chronic SCI.

OPTIMIZING DURATION OF ANTIBIOTIC THERAPY FOR BLOODSTREAM INFECTIONS

Dr. Nick Daneman, Dr. Rob Fowler, Sunnybrook Health Sciences Centre

Bloodstream infections affect 15% of critically ill patients and triple their risk of death. Antibiotic overuse is also a common and serious problem in critical care, in that 30-50% of antibiotic use is unnecessary or inappropriate, resulting in avoidable drug side effects, *Clostridium difficile* colitis, increased costs, and spiraling antibiotic resistance rates.

A review of the literature and survey of Canadian infectious diseases and critical care physicians support the need for a trial comparing shorter (7 days) versus longer (14 days) antibiotic therapy for bloodstream infections. Prior to performing this trial a prospective observational study will: 1) confirm variability in current treatment practices; 2) identify which patients and pathogens are appropriate to include in a future trial; and 3) confirm that benefits of antibiotics are achieved within the first week.

By defining the optimal duration of treatment for bloodstream infections, this research will maximize clinical care of individual patients, while minimizing adverse consequences of antibiotics.

PROPHYLACTIC ANTIBIOTIC REGIMENS IN TUMOR SURGERY (PARITY): A PILOT RANDOMIZED MULTI-CENTRE CLINICAL TRIAL

Dr. Michelle Ghert, Dr. Mohit Bhandari, McMaster University

The most effective antibiotic regimen in preventing postoperative deep infections following limb reconstruction for tumor surgery remains controversial; the current state of practice varies widely, particularly with respect to duration of antibiotics.

The goal of this pilot study is to determine the feasibility with respect to recruitment, data quality management, follow up and compliance of a larger definitive trial. The ultimate goal for this research would be to develop clinical guidelines for post-operative management of Orthopaedic Oncology patients.

SYSTEMIC ABSORPTION OF BEVACIZUMAB AND RANIBIZUMAB IN HUMANS TREATED FOR CHOROIDAL NEOVASCULARIZATION SECONDARY TO AGE-RELATED MACULAR DEGENERATION

Dr. Davin Johnson (resident), Dr. Sanjay Sharma (supervisor), Queen's University

Age-related macular degeneration (AMD) is the most common cause of blindness in developed countries and affects an estimated 8 million people worldwide. The "wet" or neovascular form of AMD is characterized by the abnormal growth of blood vessels underneath the retina, which can leak and hemorrhage to cause severe vision loss. Of several available interventions for this form of AMD, intraocular injections of the vascular endothelial growth factor (VEGF) inhibitors bevacizumab (Avastin) or ranibizumab (Lucentis) remain the standard of care for the treatment of wet AMD.

Despite their relative success in stabilizing or improving vision loss, a recently published randomized clinical trial comparing the efficacy of the two agents highlighted a trend for an increased rate of severe systemic adverse effects in patients who had been randomized to bevacizumab injections. While it is hypothesized that these trends are the result of greater systemic absorption of bevacizumab compared to ranibizumab in patients receiving antiVEGF therapy by intraocular injection to treat AMD, no study has unequivocally demonstrated this.

This study's primary purpose is to measure and compare the amount of antiVEGF absorption into the bloodstream that occurs following intraocular injections of VEGF inhibitors in patients with wet AMD.

ONE-DAY POINT PREVALENCE OF ACUTE REHABILITATION IN ONTARIO INTENSIVE CARE UNITS: RATES OF, BARRIERS TO AND FACILITATING FACTORS FOR MOBILIZATION

Dr. Karen Kin-Yue Koo, Dr. Maureen O. Meade, Western University

Bed rest and sedation during life support remain common practice in intensive care units (ICUs). Consequently, muscle wasting occurs, leading to significant long-term disability. Studies show that 46% of ICU patients develop neuromuscular complications and 28% of these survivors sustain debilitating muscle weakness.

Research conducted in ICUs suggests that early mobilization in ICU patients is safe, cost effective and can improve outcomes. Recently, a national survey among physiotherapists and physicians illustrated multiple perceived institutional, provider and patient level barriers to mobilization in Canadian ICUs.

This study's objectives are to determine rates of immobility in patients who should be mobilized but are otherwise not, facilitating factors for mobilization, barriers to immobilization, current mobilization practices, and who are the participants of acute rehabilitation and their roles.

This work will identify gaps between the perceived and actual barriers to, and facilitating factors of mobilization in critically ill patients. The results of this study will build a foundation to guide future educational and research initiatives to promote ICU rehabilitation in Ontario.

OPRA (OPTIMIZING PAIN AND REHABILITATION AFTER KNEE ARTHROPLASTY)

Dr. Colin McCartney, Dr. Stephen Choi, Sunnybrook Health Sciences Centre

Total knee arthroplasty (TKA) remains a common surgical treatment with as many as 30,000 procedures in Canada per year, which can reduce pain and improve function. Severe acute and chronic pain is a significant problem after TKA, with more than 30% of patients suffering pain one year after surgery.

Continuous femoral nerve block (FNB) appears to be the best method for pain control after TKA. A single injection technique also exists and may provide similar benefits. Both techniques require training and are associated with side effects, such as weakness that can inhibit rehabilitation.

A newer technique with injections of local anesthetic into the joint after surgery (Local Infiltration Analgesia (LIA)) is becoming common and does not cause weakness and can be done quickly at the end of surgery. Preliminary studies demonstrate that pain control after LIA may not be as effective as the FNB techniques. It currently remains unknown which technique is superior for pain relief; therefore, a high quality study is required to compare these methods after TKA.

The aim of this multi-centre randomized clinical trial is to determine the optimal perioperative pain relief method to optimize pain control and rehabilitation after TKA.

BREAST RECONSTRUCTION DECISION WORKSHOP PILOT RCT

Dr. Jennica Platt (resident), Dr. Toni Zhong (supervisor), University Health Network

Postmastectomy breast reconstruction is increasingly utilized in breast cancer patients to provide surgical restoration of the breast mounds. No evidence exists to support whether a small but significant proportion of breast cancer survivors, who decide to undergo breast reconstruction, experience decision regret over some component of their surgical care. Dissatisfaction with information provision and not meeting one's desired level of participation in decision-making are associated with decision regret, thus a thorough decision-process where the patient is involved and well-informed may mitigate decision regret.

This study proposes that participation in a pre-consultation decision support workshop for breast cancer patients considering breast reconstruction will reduce decision regret compared with participants who receive usual care. This study will first examine the feasibility and acceptability of the intervention through implementation in a pilot randomized controlled trial.

THE ROLE OF THE NOVEL FGL2-FCYRIIB INHIBITORY PATHWAY IN HUMAN VIRAL HEPATITIS

Dr. Nazia Selzner, Dr. Gary Levy, University Health Network

Viral hepatitis poses a serious world health problem, affecting over 1 billion people worldwide. Presently, the lack of highly effective treatments results in many patients requiring liver transplantation or death. The researchers' laboratory defined the role of a unique molecule FGL2, its receptor fc-gammaR, and its role in the pathogenesis of both experimental and human hepatitis.

This study plans to test the hypothesis that measuring levels of FGL2 in plasma will identify individuals who will develop chronic disease and inhibition of binding of FGL2 to its receptor will allow the host with both acute and chronic disease to develop an appropriate immune response and clear the virus. The studies will provide rationale for the generation of new therapies to improve the treatment of patients with acute and chronic viral hepatitis by targeting FGL2.

THE PROTECTIVE ROLE OF SUPPLEMENTAL HYDROGEN SULPHIDE IN ALLOGENEIC RENAL TRANSPLANTATION FOLLOWING PROLONGED COLD STORAGE

Dr. Alp Sener, Western University

Kidney transplantation remains the best method to treat kidney failure; however, only a limited number of donor organs are available. To accommodate this shortage, centres have begun to transplant kidneys from older and less healthy donors. Unfortunately, these organs are more prone to injury that occurs as a result of the decreased blood flow and nutrients the kidneys face when removed from the donor. This damage may lead to increased rates of organ rejection and poor transplant kidney function.

It has been demonstrated in animal models of genetically identical kidney transplantation that the supplementation of standard preservation solutions with hydrogen sulphide during cold storage, a naturally occurring compound in all animals including humans, leads to an impressive improvement in kidney function and recipient survival.

This study proposes to determine whether the protective effect of hydrogen sulphide will remain in transplants between genetically different animals. Since less than 0.5% of all kidney transplants are done between genetically identical twins, this study's findings will not only enable future human clinical trials, but will also play a major role in improving existing organ preservation techniques and overall transplant kidney function and survival.

IMPACT OF INFECTION WITH TRANSMISSIBLE STRAINS OF *PSEUDOMONAS AERUGINOSA* ON LUNG TRANSPLANTATION OUTCOMES IN PATIENTS WITH CYSTIC FIBROSIS

Dr. Nadim Srour, Dr. Shawn Aaron, University of Ottawa

Infection with *P. aeruginosa* is frequent among cystic fibrosis (CF) patients and is associated with poor outcomes. A significant proportion of Ontario CF patients are infected with transmissible strains of *P. aeruginosa*. Such transmissible strains are associated with poorer clinical outcomes than unique strains; however, it is not known if transmissible strains are also associated with poorer outcomes following lung transplantation, one of the treatments for CF.

These researchers will identify Ontario patients with CF who have had lung transplantation and will collect information regarding how well they did after lung transplantation, particularly how long they lived. This study aims to determine if those patients infected with transmissible strains of *P. aeruginosa* do worse after lung transplantation than those infected with unique strains of *P. aeruginosa*.

It is important to determine if those infected with transmissible strains of *P. aeruginosa* are at increased risk post-transplant because this may impact on the decision to transplant these patients. Moreover, these patients may require more aggressive treatment following lung transplantation.

IMPACT OF FEEDING TYPE AND NUTRIENT FORTIFICATION ON THE GUT MICROBIOME OF VERY LOW BIRTH WEIGHT INFANTS

Dr. Sharon Unger, Dr. Deborah L. O'Connor, Hospital for Sick Children

Preterm birth remains the leading cause of infant death and disability in Canada. Optimum nutrition is critical in provision of the best care; mothers' own milk is the best nutrition as it contains live cells and indigestible sugars that promote colonization of the infant with protective versus pathogenic bacteria.

Beneficial colonization is the first line of protection against overwhelming infection and inflammation, both common and devastating in very low birth weight (VLBW) infants. Most mothers of VLBW infants are unable to express enough milk and require supplementation with formula or pasteurized human donor milk (PDM). Most gut colonization research has focused on term babies using cultures which miss 80% of all organisms. The effects of pasteurization of PDM which kills all live cells and adding cow's milk-based fortifiers to milk necessary to meet the high nutrition demands of VLBW infants are unclear.

This researcher's goal is to characterize bacteria colonizing VLBW infants fed mothers' milk, PDM or formula using sophisticated molecular techniques on bacterial DNA from stool. These findings will provide a key reference for understanding what represents optimal colonization in VLBW infants and guide nutritional strategies to best promote the health of fragile babies.

ELUCIDATING THE ROLE OF BIRT-HOGG-DUBE (BHD) IN ADVERSE CARDIAC REMODELING

Dr. Bobby Yanagawa (resident), Dr. Subodh Verma (supervisor), St. Michael's Hospital

An increase in the thickness of the heart muscle wall is a characteristic of hearts that exhibit elevated size/volume. This is an initial adaptive strategy to normalize wall stress and maintain heart function; however, such increases in heart size/volume can result in heart failure, heart disease, stroke, and sudden cardiac death.

The evolutionary conserved mammalian target of rapamycin (mTor) protein is a critical regulator of how heart cells grow, multiply, survive and function in response to the increase in heart size/volume. However, how mTor- and therefore the activities it subsequently controls- is regulated remains poorly defined.

Birt-Hogg-Dube (BHD) is a tumor suppressor gene, and mutations for BHD are linked to the BHD syndrome, a condition which predisposes to higher risks of developing some forms of skin and kidney cancers. The role of BHD in the heart remains unknown. Considering BHD inhibits mTor activities, these researchers' hypothesis is that BHD is a novel and yet unrecognized negative regulator of mTor activity and may therefore play an important role in the protective response to pressure-driven increases in heart volume/size.

FINANCIAL REPORT

2012 OVERVIEW

- Original investment by the doctors of Ontario: \$16.7 million in 1970
- Market value of assets as of December 31, 2012: \$77.9 million before accruing for future grant commitments (2011 \$74.8 million)
- Increase in value of assets over prior year: \$3.1 million (2011 - \$6.3 million decrease)
- Rate of return on investments 10.9% consisting of 3.1% from dividends and interest plus 7.8% from an increase in market value of investments (2011 combined return -0.5%)
- Grants approved in 2012: \$4.0* million (2011 - \$3.9 million)
- Grants paid in 2012: \$3.7 million (2011 - \$4.6 million)
- Total grants paid since inception: \$114.1 million
- Future grant commitments at 2012 year-end: \$4.0 million, with \$2.8 million payable in 2013, the remainder in 2014 (2011 - \$3.7 million with \$2.9 million payable in 2012)
- Operating costs, including investment management fees: \$1.3 million (2011 - \$1.3 million)
- Operating costs as percentage of assets under management: 1.7% (2011 - 1.8%)
- Asset allocation at year end:

	2012	2011
Canadian bonds	7%	31%
Canadian equities	56	34
U.S. equities	33	22
International equities	-	9
Cash	4	4

*before refunds and withdrawals

2012 IN DETAIL

The year 2012 was an eventful one for the PSI investment portfolio, with several decisions made during the course of the year, that in retrospect, have had favourable outcomes to date and contributed to the 10.9% return on assets recorded for 2012.

Early in the year it was recognized, based on advice from Beutel Goodman, the manager of our Canadian bond portfolio, that prospective yields from fixed income securities during the current low-interest-rate environment were not very promising. Furthermore, with interest rates eventually beginning to rise, as they would normally be expected to do some time in the next few years, then bond prices will decline. Maintaining our traditional weighting of about 40% of our investment portfolio in bonds would therefore expose us to the risk of loss of capital. As a consequence, we reduced our Canadian fixed income investments from \$22.7 million at the end of 2011 to about \$5 million at the end of the first quarter of 2012, and maintained that level of investment for the balance of the year, with our holdings being comprised of good quality corporate bonds issued by utilities, pipelines, etc.

In March 2012, the decision was made to liquidate our international equity portfolio, which was heavily concentrated in the financial sector of Western Europe. At that time there was much concern about the future of the euro and the negative outlook for many countries in Europe, and that concern remains in place, even though equity markets in Western Europe have improved during the course of 2012, as they have done in most equity markets.

The timing of our entry into the particular international equity portfolio managed by AGF International Advisors Company in early September 2008 was most unfortunate, as two weeks later the 2008 global financial crisis was initiated, beginning with the collapse of Lehman Bros.

With the liquidation of much of our fixed income investments and our international equity portfolio, we had about \$25 million in short-term money-market funds earning a very low rate of interest. As an interim measure, in order to have current exposure to equity markets, most of the funds held in short-term money-market funds were used over a period of time to purchase units in an Exchange Traded Fund (ETF), based on the 60 largest companies listed on the Toronto Stock Exchange.

In mid-2012, we began to increase our exposure to U.S. equity markets and by year-end we had \$25.7 million invested in U.S. equities as compared to \$16.7 million at the end of 2011. Our return in 2012 on U.S. equities managed by Neuberger Berman was 15.2%. The Canadian dollar remained at close to parity with the U.S. dollar throughout 2012 and consequently minimal foreign exchange gains or losses occurred during the year.

In August, we initiated a search for a second Canadian equity manager and in September appointed Connor Clark and Lunn of Vancouver to manage a new portfolio focused on dividend-paying equities and starting with an initial funding of \$10 million.

Our principal Canadian equity portfolio continued to be managed by Magna Vista Investment Management, who in 2012 enjoyed their best year ever since being associated with PSI, with a return on assets of 11.3%.

As a result of the foregoing changes in our investment portfolio composition during 2012, PSI has a much different allocation of assets at the end of 2012, than that at the end of 2011. We now have 56% of our assets in Canadian equities and 33% in U.S. equities, for a total of 89% invested in North American markets vs. 56% a year earlier. We also only have 7% of our assets in fixed income securities vs 31% at the end of 2011.

Eventually, we would expect to return to a more traditional balance between bonds and equities for a Foundation such as PSI that has always relied on income from bonds to provide much of the funding for medical research grants. However, during the current period of low interest rates and improving equity markets we feel we are making the appropriate choices to be heavily weighted in favour of equities.

In the enclosed audited financial statements for the PSI Foundation, we draw your attention to the improved presentation for the Statements of Cash Flow in which our sources and uses of funds are clearly indicated. In the Statement of Cash Flows for 2011 and 2012, the annual cash requirements of \$5 to \$6 million are comprised of a steady \$1.3 million for administration expenses and the balance for medical research grants. This amount has been funded by approximately \$2.5 million of dividend and interest income, with the balance now to come from sale of equities, as and when required.

Despite all the uncertainty in financial markets in the last few years and particularly since 2008, PSI has consistently maintained its annual funding for medical research at about the \$4 million level.

In 2012, we were fortunate that we made what would appear to date to be appropriate choices in the reallocation of assets between our portfolio sectors, and that have allowed PSI to not only maintain its research funding support, but also to record in 2012 a good gain in the total value of our assets at year-end, and the first quarter of 2013 has continued to demonstrate the same positive momentum.

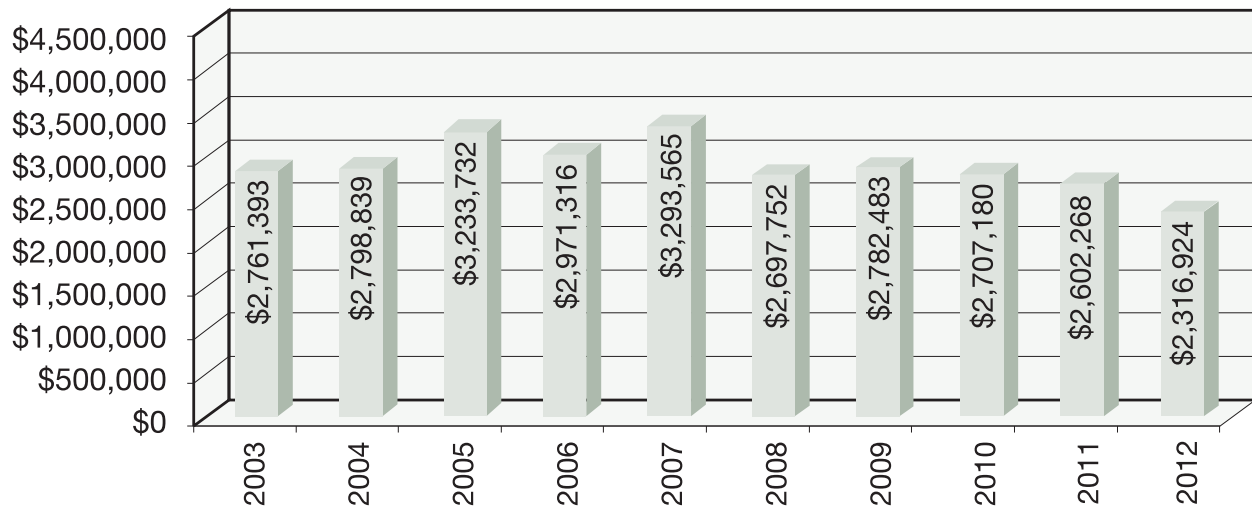
PSI FOUNDATION

FINANCIAL SUMMARY

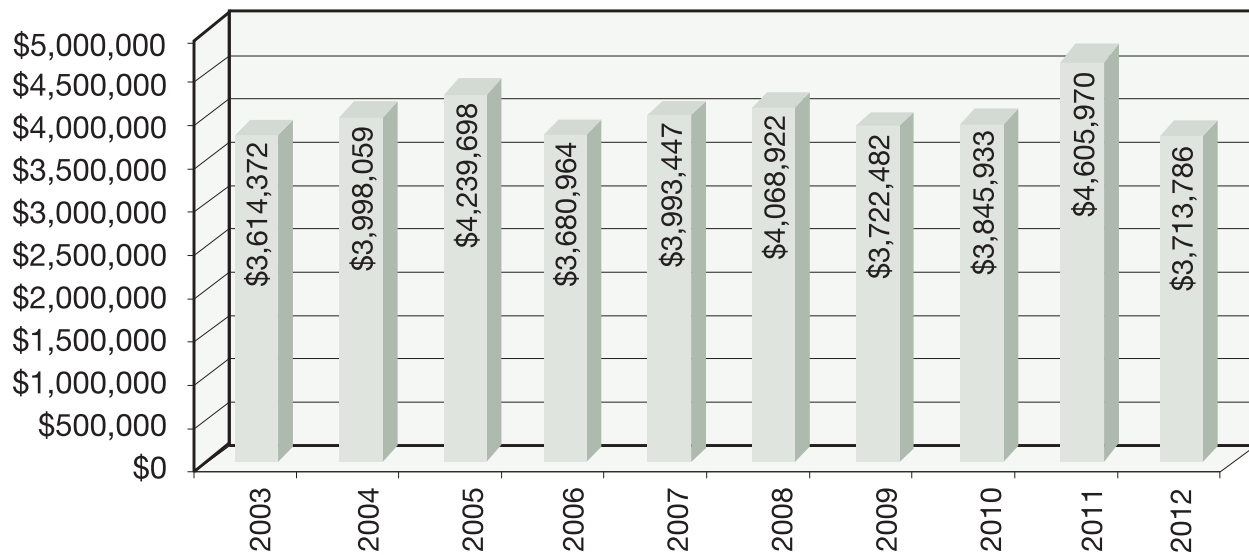
1970 - 2012

Donated Capital		\$ 16,693,123
Plus Capital appreciation	\$ 84,779,702	
Revenue earned	113,713,625	198,493,327
		<hr/>
		215,186,450
Less: Charitable contributions	\$ 114,377,803	
Investment & administrative expense	26,882,254	141,260,057
		<hr/>
Net assets, December 31, 2012		73,926,393
Net assets, December 31, 2011		71,007,305
Increase for year		\$ 2,919,088
		<hr/>
Consisting of:		
Deficit for year		(2,924,351)
Capital appreciation on investments		5,843,439
		<hr/>
		\$ 2,919,088
		<hr/>

REVENUE 2003 - 2012



GRANTS PAID 2003 - 2012





INDEPENDENT AUDITORS' REPORT

To the House of Delegates of The Physicians' Services Incorporated Foundation

We have audited the accompanying financial statements of The Physicians' Services Incorporated Foundation which comprise the statements of financial position as at December 31, 2012, December 31, 2011 and January 1, 2011, the statements of operations, changes in net assets and cash flows for the years ended December 31, 2012 and December 31, 2011, and notes, comprising 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 accounting standards for not-for-profit organizations, 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.

Auditors' 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 an 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 our 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, we consider 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 institute'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 in our audits 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 The Physicians' Services Incorporated Foundation as at December 31, 2012, December 31, 2011 and January 1, 2011, and its results of operations, changes in net assets and its cash flows for the years ended December 31, 2012 and December 31, 2011 in accordance with Canadian accounting standards for not-for-profit organizations.

Chartered Accountants, Licensed Public Accountants

Toronto, Canada
February 27, 2013

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Statements of Financial Position

December 31, 2012, December 31, 2011 and January 1, 2011

	December 31, 2012	December 31, 2011	January 1, 2011
Assets			
Cash and cash equivalents (note 2)	\$ 2,788,551	\$ 2,934,536	\$ 2,551,922
Bonds and debentures (note 3)	5,631,711	22,678,600	26,234,784
Shares (note 3)	68,939,485	48,717,957	51,909,999
Dividends and interest receivable	197,312	276,359	318,212
HST receivable	35,100	44,890	23,591
Capital assets (note 4)	3,372	5,058	-
Accrued benefit asset (note 8)	347,503	148,173	103,848
	\$ 77,943,034	\$ 74,805,573	\$ 81,142,356
Liabilities and Net Assets			
Liabilities:			
Accounts payable and accrued liabilities	\$ 59,341	\$ 68,399	\$ 73,961
Grants payable (note 5)	3,957,300	3,729,875	4,761,650
	4,016,641	3,798,274	4,835,611
Net assets			
Invested in capital assets	3,372	5,058	-
Internally restricted capital (note 6)	73,923,021	71,002,241	76,306,745
	73,926,393	71,007,299	76,306,745
Lease commitments (note 7)			
	\$ 77,943,034	\$ 74,805,573	\$ 81,142,356

See accompanying notes to financial statements.

On behalf of the Board:

Director

Director

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Statements of Operations

Years ended December 31, 2012 and 2011

	2012	2011
Revenue:		
Interest on bonds and debentures	\$ 464,306	\$ 1,043,722
Dividends	1,852,618	1,558,546
	2,316,924	2,602,268
Expenses:		
Investment management fees	464,006	476,670
	1,852,918	2,125,598
Administrative:		
Salaries and benefits	387,087	344,756
Board and committee expenses	146,899	131,569
Office supplies and expenses	57,295	79,325
Rent and maintenance	76,074	78,727
Referees' fees	67,336	69,509
Safekeeping charges	56,099	69,097
Donation	-	50,000
Legal and audit fees	19,740	19,664
Delegate and annual meeting expenses	14,543	13,689
Information services and annual report	9,293	9,878
Amortization of capital assets	1,686	1,684
	836,052	867,898
Grants	3,941,211	3,574,195
	4,777,263	4,442,093
Excess of expenses over revenue before the undernoted	(2,924,345)	(2,316,495)
Other income/expenses:		
Realized gain (loss) on sale of investments	1,365,317	(724,601)
Unrealized gain (loss) on investments	4,478,122	(2,258,350)
	5,843,439	(2,982,951)
Excess (deficiency) of revenue over expenses	\$ 2,919,094	\$ (5,299,446)

See accompanying notes to financial statements.

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Statements of Changes in Net Assets

Years ended December 31, 2012 and 2011

2011	Invested in capital assets	Internally restricted capital	Unrestricted	Total
Balance, beginning of year	\$ -	\$ 76,306,745	\$ -	\$ 76,306,745
Excess (deficiency) of revenue over expenses	(1,684)	-	(5,297,762)	(5,299,446)
Investment in capital assets	6,742	-	(6,742)	-
Internally restricted capital (note 7)	-	(5,304,504)	5,304,504	-
Balance, end of year	\$ 5,058	\$ 71,002,241	\$ -	\$ 71,007,299
2012	Invested in capital assets	Internally restricted capital	Unrestricted	Total
Balance, beginning of year	\$ 5,058	\$ 71,002,241	\$ -	\$ 71,007,299
Excess (deficiency) of revenue over expenses	(1,686)	-	2,920,780	2,919,094
Investment in capital assets	-	-	-	-
Internally restricted capital (note 7)	-	2,920,780	(2,920,780)	-
Balance, end of year	\$ 3,372	\$ 73,923,021	\$ -	\$ 73,926,393

See accompanying notes to financial statements.

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Statements of Cash Flows

Years ended December 31, 2012 and 2011

	2012	2011
Cash provided by (used in):		
Operating activities:		
Cash received from:		
Investment income	\$ 2,443,052	\$ 2,681,521
Grant refunds	72,289	168,280
GST/HST receivable	9,790	-
	2,525,131	2,849,801
Cash applied to:		
Administrative expenses	1,307,430	1,348,446
Grants paid	3,786,075	4,774,250
Pension contributions	199,330	44,325
GST/HST receivable	-	21,299
	5,292,835	6,188,320
	(2,767,704)	(3,338,519)
Investing activities:		
Cash received from proceeds of investments:		
Bonds and debentures	27,175,011	26,608,440
Magna Vista Investment Management Equities	2,165,518	2,915,703
Connor, Clark & Lunn Equities	1,505,383	-
Scotia Equities	6,165,019	-
Neuberger Berman, LLP	8,013,177	3,976,170
AGF Asset Management Group Equities	7,462,657	114,140
	52,486,765	33,614,453
Cash applied to purchase of investments:		
Bonds and debentures	10,135,846	22,190,525
Magna Vista Investment Management Equities	3,705,991	3,622,330
Connor, Clark & Lunn Equities	11,335,901	-
Scotia Equities	9,585,351	-
Neuberger Berman, LLP	14,686,254	3,925,357
AGF Asset Management Group Equities	415,703	148,366
	49,865,046	29,886,578
Cash applied to purchase of capital assets	-	6,742
Increase (decrease) in cash	(145,985)	382,614
Cash and cash equivalents, beginning of year	2,934,536	2,551,922
Cash and cash equivalents, end of year	\$ 2,788,551	\$ 2,934,536
Cash and cash equivalents on hand represented by:		
Canadian dollars	\$ 959,576	\$ 1,501,004
U.S. dollars	1,828,975	1,080,566
Other currencies	-	352,966
	\$ 2,788,551	\$ 2,934,536

See accompanying notes to financial statements.

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements

Years ended December 31, 2012 and 2011

The Physicians' Services Incorporated Foundation (the "Foundation") is incorporated without share capital under the laws of Ontario. Under the Income Tax Act (Canada), the Foundation is registered as a public foundation constituted for charitable purposes and, accordingly, is exempt from income taxes, provided certain requirements of the Income Tax Act (Canada) are met.

On January 1, 2012, the Foundation adopted Canadian accounting standards for not-for-profit organizations in Part III of the Canadian Institute of Chartered Accountants ("CICA") Handbook. These are the first financial statements prepared in accordance with Canadian accounting standards for not-for-profit organizations.

In accordance with the transitional provisions in Canadian accounting standards for not-for-profit organizations, the Foundation has adopted the changes retrospectively, subject to certain exemptions allowed under these standards. The transition date is January 1, 2011 and all comparative information provided has been presented by applying Canadian accounting standards for not-for-profit organizations.

There were no adjustments to net assets as at January 1, 2011 or excess of expenses over revenue for the year ended December 31, 2011 as a result of the transition to Canadian accounting standards for not-for-profit organizations.

1. Significant accounting policies:

These financial statements have been prepared by management in accordance with Canadian accounting standards for not-for-profit organizations in Part III of the CICA Handbook.

(a) Use of estimates:

The preparation of financial statements in conformity with Canadian accounting standards for not-for-profit organizations requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the year. Significant items subject to such estimates and assumptions include the assets and obligations related to employee future benefits. Actual results could differ from those estimates.

(b) Cash and cash equivalents:

Cash and cash equivalents include cash on hand and short-term deposits which are highly liquid with original maturities of less than three months.

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements (continued)

Years ended December 31, 2012 and 2011

1. Significant accounting policies (continued):

(c) Bonds, debentures and shares:

Bonds, debentures and shares of foreign corporations and the income derived therefrom are recorded in the accounts in Canadian funds, based on the rate of exchange at the transaction settlement date.

(d) Capital assets:

Purchased capital assets are recorded at cost. Capital assets are amortized on a straight-line basis using the following annual rates:

Asset	Rate
Computer equipment	25%

(e) Revenue recognition:

Investment income is recognized on the accrual basis.

(f) Grants:

Grants are recognized in the statement of operations as an expense in the year the grant is approved by the Board of Directors.

(g) Employee future benefits:

The Foundation has a defined benefit pension plan covering its employees. The benefits are based on years of service and final average salary.

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements (continued)

Years ended December 31, 2012 and 2011

1. Significant accounting policies (continued):

The Foundation uses the deferral and amortization approach to account for its defined benefit plan. The Foundation accrues its obligations under the defined benefit plan as the employees render the services necessary to earn the pension benefits. The actuarial determination of the accrued benefit obligations for pension benefits uses the projected benefit method prorated on service (which incorporates management's best estimate of future salary levels, other costs escalation, retirement ages of employees and other actuarial factors). The most recent actuarial valuation of the pension plan was as of June 1, 2012, and the next required valuation will be as of June 1, 2015.

Actuarial gains (losses) on plan assets arise from the difference between the actual return on plan assets for a period and the expected return on plan assets for that period. For the purpose of calculating the expected return on plan assets, the assets are valued at fair value. Actuarial gains (losses) on the accrued benefit obligation arise from differences between actual and expected experience and from changes in the actuarial assumptions used to determine the accrued benefit obligation. The excess of the net accumulated actuarial gains (losses) over 10% of the greater of the accrued benefit obligation and the fair value of plan assets is amortized over the average remaining service period of active employees. The average remaining service period of the active employees covered by the pension plan is 10 years (2011 - 9 years).

Past service costs arising from plan amendments are deferred and amortized on a straight-line basis over the expected average remaining service period of employees active at the date of amendment.

(h) Financial instruments:

Financial instruments are recorded at fair value on initial recognition. Equity instruments that are quoted in an active market are subsequently measured at fair value. All other financial instruments are subsequently measured at cost or amortized cost, unless management has elected to carry the instruments at fair value. The Foundation has elected to carry its shares and bonds and debentures at fair value.

Transaction costs incurred on the acquisition of financial instruments measured subsequently at fair value are expensed as incurred. All other financial instruments are adjusted by transaction costs incurred on acquisition and financing costs. These costs are amortized using the straight-line method.

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements (continued)

Years ended December 31, 2012 and 2011

1. Significant accounting policies (continued):

Financial assets are assessed for impairment on an annual basis at the end of the fiscal year if there are indicators of impairment. If there is an indicator of impairment, the Foundation determines if there is a significant adverse change in the expected amount or timing of future cash flows from the financial asset. If there is a significant adverse change in the expected cash flows, the carrying value of the financial asset is reduced to the highest of the present value of the expected cash flows, the amount that could be realized from selling the financial asset or the amount the Foundation expects to realize by exercising its right to any collateral. If events and circumstances reverse in a future period, an impairment loss will be reversed to the extent of the improvement, not exceeding the initial carrying value.

2. Cash and cash equivalents:

Cash and cash equivalents include deposits in banks and short-term investments which are highly liquid with original maturities of less than three months. Components of cash and cash equivalents are as follows:

	December 31, 2012	December 31, 2011	January 1, 2011
Cash on deposit	\$ 2,488,909	\$ 2,841,680	\$ 2,420,830
Beutel Goodman Cash Management Funds	100,180	92,856	131,092
Connor, Clark and Lunn Short Term Investments	199,462	-	-
	<u>\$ 2,788,551</u>	<u>\$ 2,934,536</u>	<u>\$ 2,551,922</u>

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements (continued)

Years ended December 31, 2012 and 2011

3. Investments:

Investments are managed by four independent investment managers.

	December 31, 2012	December 31, 2011	January 1, 2011
Bonds and debentures:			
Beutel Goodman and Company Limited	\$ 5,631,711	\$ 22,678,600	\$ 26,234,784
Shares:			
Magna Vista Investment Management	29,113,973	25,514,485	28,052,600
Neuberger Berman, LLP	25,677,860	16,721,707	16,228,347
AGF Asset Management Group	-	6,481,765	7,629,052
Connor, Clark & Lunn Investment Management Ltd.	10,117,641	-	-
Scotia iTrade	4,030,011	-	-
	\$ 68,939,485	\$ 48,717,957	\$ 51,909,999

4. Capital assets:

December 31, 2012	Cost	Accumulated amortization	Net book value
Furniture and equipment	\$ 28,752	\$ 28,752	\$ -
Computer equipment	35,024	31,652	3,372
Leasehold improvements	18,141	18,141	-
	\$ 81,917	\$ 78,545	\$ 3,372

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements (continued)

Years ended December 31, 2012 and 2011

4. Capital assets (continued):

December 31, 2011	Cost	Accumulated amortization	Net book value
Furniture and equipment	\$ 28,752	\$ 28,752	\$ -
Computer equipment	35,024	29,966	5,058
Leasehold improvements	18,141	18,141	-
	\$ 81,917	\$ 76,859	\$ 5,058

January 1, 2011	Cost	Accumulated amortization	Net book value
Furniture and equipment	\$ 28,752	\$ 28,752	\$ -
Computer equipment	28,282	28,282	-
Leasehold improvements	18,141	18,141	-
	\$ 75,175	\$ 75,175	\$ -

5. Grants payable:

Grants payable represent the balance of grants approved by the Board of Directors which are payable over the next two years.

6. Restriction on net assets:

The Board of Directors has internally restricted the original net assets which established the Foundation as the base on which investment income would be earned annually to fund general operations and provide funds for charitable endeavours in the health field. Annually, the Board of Directors increases or decreases these internally restricted amounts depending on the level of grants awarded in the year. These internally restricted amounts are not available for other purposes without approval of the Board of Directors.

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements (continued)

Years ended December 31, 2012 and 2011

7. Lease commitments:

The Foundation has leased office premises and certain equipment under net operating leases which expire at various dates to June 30, 2017. Future minimum payments, by year and in aggregate, are as follows:

2013	\$	46,000
2014		46,000
2015		22,071
2016		5,769
2017		790
	\$	120,630

8. Employee future benefits:

The Foundation makes contributions, on behalf of its staff, to the Employees of the Physicians' Services Incorporated Foundation Pension Plan (the "Plan"). Employees are required to contribute 5% of their earnings to the Plan.

Information about the Foundation's defined benefit plan is as follows:

	December 31, 2012	December 31, 2011	January 1, 2011
Accrued benefit obligation	\$ 1,016,115	\$ 885,312	\$ 725,692
Fair value of plan assets	971,542	626,502	605,732
Funded status - deficit	\$ (98,573)	\$ (258,810)	\$ (119,960)
Unamortized transitional obligation	\$ -	\$ 5	\$ 2,414
Unamortized experienced losses	446,076	406,978	221,394
Accrued benefit asset	\$ 347,503	\$ 148,173	\$ 103,848

THE PHYSICIANS' SERVICES INCORPORATED FOUNDATION

Notes to Financial Statements (continued)

Years ended December 31, 2012 and 2011

9. Financial risks:

The Foundation manages its investment portfolio to earn investment income. The Foundation is not involved in any hedging relationships through its operations and does not hold or use any derivative financial instruments for trading purposes.

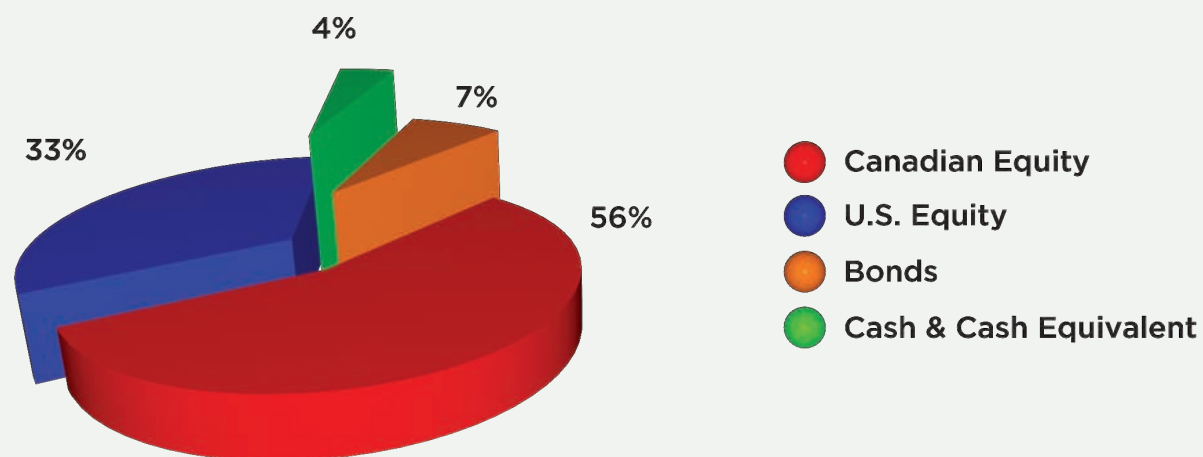
The Foundation is exposed to financial risks as a result of exchange rate fluctuations and the volatility of these rates. The Foundation is exposed to foreign exchange risk in its foreign investment portfolios.

Interest rate risk arises from fluctuations in interest rates and the degree of volatility of these rates. The Foundation is exposed to interest rate risk on its bonds and debentures investments. The Foundation manages this risk by staggering the maturity dates of its investments.

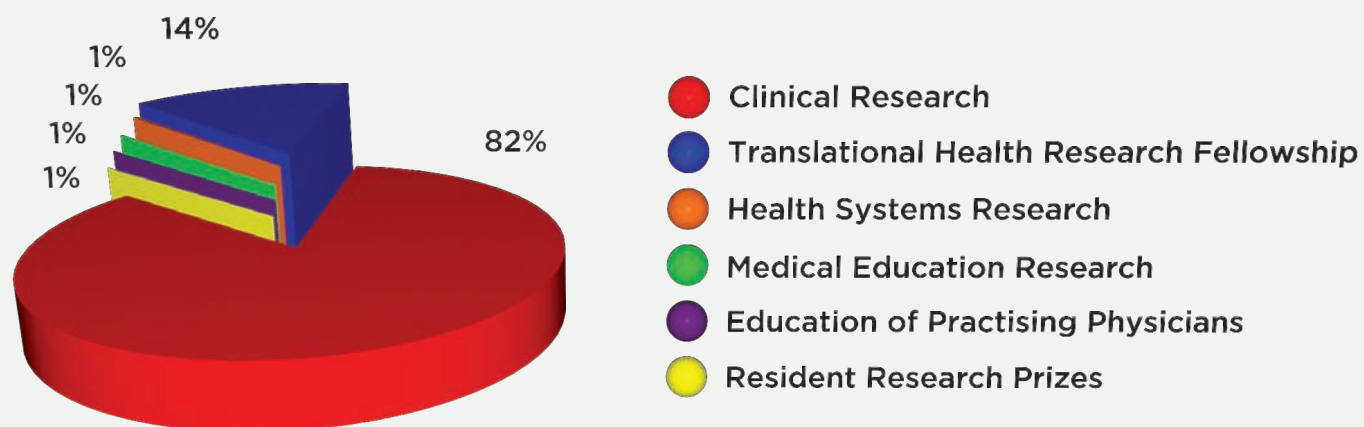
The Foundation believes that it is not exposed to significant credit risk arising from its financial instruments.

Additionally, the Foundation believes it is not exposed to significant liquidity risk as all investments are held in instruments that are highly liquid and can be disposed of to settle commitments.

2012 DISTRIBUTION OF ASSETS AT MARKET VALUE



2012 DISTRIBUTION OF GRANTS APPROVED



PSI FOUNDATION

GRANTS APPROVED

FOR THE YEAR ENDED DECEMBER 31, 2012

AMOUNT
APPROVED

HEALTH EDUCATION

Fellowships for Practising Physicians

Dr. G. Rabbat
C-section Training

\$ 3,500

Total Health Education

\$ 3,500

HEALTH SYSTEMS RESEARCH

McMaster University

Dr. E. Duan*, Dr. J. Centofanti*, Dr. D. Cook
ICU Daily Goals Checklist: a mixed methods analysis of effects
on communication and patient care

\$ 13,000

Dr. G. Hovhannisyan*, Dr. J. Emili
Syndromic management of gonorrhea and chlamydia in patients with
vaginal discharge at the Public Health Sexual Health Clinics in Hamilton, ON

\$ 10,500

Centre for Addiction and Mental Health

Dr. R.E. Waxman
Education's impact on healthy seniors' attitudes and health care
preferences regarding different stages of Alzheimer's disease

\$ 8,500

Total Health Systems

\$ 32,000

MEDICAL EDUCATION RESEARCH

Princess Margaret Hospitale

Dr. T. Cil
Visual imagery and mental rehearsal in surgery

\$ 13,500

Total Medical Education

\$ 13,500

CLINICAL RESEARCH

McMaster University

Dr. L. Braga
ALPHA: antibiotic prophylaxis versus placebo in infants
diagnosed with hydronephrosis antenatally: a prospective,
randomized controlled trial

\$ 164,500

GRANTS APPROVED

FOR THE YEAR ENDED DECEMBER 31, 2012 (CONTINUED)

AMOUNT
APPROVED**CLINICAL RESEARCH (CONTINUED)****McMaster University (continued)**

Dr. M. Ghert, Dr. M. Bhandari	
Prophylactic antibiotic regimens in tumor surgery (PARITY): a pilot randomized multi-center clinical trial	\$ 50,000
Dr. K.J. Jerzak*, Dr. K. Zbuk	
Serum and urine markers of metabolic dysfunction in colorectal cancer: a pilot study	\$ 7,000

Queen's University

Dr. D. Johnson*, Dr. S. Sharma	
Systemic absorption of bevacizumab and ranibizumab in humans treated for choroidal neovascularization secondary to age-related macular degeneration	\$ 20,000

University of Ottawa

Dr. R.E. Agarushi, Dr. G.P. Moore	
A randomized controlled trial: suprapubic aspiration versus urinary catheterization in the neonatal intensive care unit	\$ 52,000
Dr. M. Bromwich, Dr. K. Baetz	
Identification and isolation of a yeast ceruminase for management of human earwax	\$ 161,000
Dr. M.M. Lalu*, Dr. L.L. McIntyre, Dr. D.J. Stewart	
In vivo assessment of a cellular clinical-grade immunotherapeutic for septic shock (CELLS ²)	\$ 20,000
Dr. K. Menon	
Steroid use in pediatric fluid and/or vasoactive infusion dependent shock (The STRiPES Study)	\$ 164,000
Dr. N. Srouf, Dr. S. Aaron	
Impact of infection with transmission strains of <i>Pseudomonas</i> <i>aeruginosa</i> on lung transplantation outcomes in patients with cystic fibrosis	\$ 51,000
Dr. J. Trier*, Dr. N. Dudek	
Defining success and satisfaction with functional abilities after upper limb amputation	\$ 17,500

Hospital for Sick Children

Dr. K. Boutis	
Salter-Harris I fracture of the distal fibula: clinical suspicion versus reality	\$ 170,000
Dr. E. Cohen	
Intrapleural DNase and tissue plasminogen activator in pediatric empyema (DTPA trial)	\$ 162,000
Dr. S. Unger, Dr. D.L. O'Connor	
Impact of feeding type and nutrient fortification on the gut microbiome of very low birth weight infants	\$ 167,500

Mount Sinai Hospital

Dr. P. Deshpande*, Dr. V. Shah	
Effect of maternal skin-to-skin contact (SSC) in the delivery room on the skin colonization of preterm infants: a pilot randomized controlled study	\$ 12,000
Dr. H. Faghfoury, Dr. I. Tein	
Identification of carnitine-responsive cardiomyopathy and myopathy in adult patients with dilated and/or hypertrophic cardiomyopathy and limb girdle weakness	\$ 170,000

GRANTS APPROVED

FOR THE YEAR ENDED DECEMBER 31, 2012 (CONTINUED)

AMOUNT
APPROVED**CLINICAL RESEARCH (CONTINUED)****Mount Sinai Hospital (continued)**

Dr. T.K.Y. Ip*, Dr. S. Mehta

A phase 1 study: the determination of the maximum tolerable dosage of nebulized sodium nitroprusside in adult acute lung injury	\$ 20,000
---	-----------

St. Michael's Hospital

Dr. A. Alali*, Dr. A.B. Nathens

The impact of tracheostomy timing on the outcome of traumatic brain injury	\$ 17,000
--	-----------

Dr. S. Lin*, Dr. L.J. Morrison

Therapeutic hypothermia: the impact of processes of care on outcomes after cardiac arrest	\$ 20,000
---	-----------

Dr. J.C. Marshall

Cellular and molecular mechanisms of prolonged neutrophil-mediated inflammation in trauma and sepsis: the role of PBEF/Nampt/Visfatin	\$ 169,500
---	------------

Dr. V.A. McCredie, Dr. A.J. Baker

Observational study of cerebral tissue oxygen saturation during blood transfusion in severe traumatic brain injured patients	\$ 46,000
--	-----------

Dr. T. Wang*, Dr. A. Grin

Correlation of HER2 status in biopsy and resection specimens of gastric and gastroesophageal junction adenocarcinoma	\$ 20,000
--	-----------

Dr. B. Yanagawa*, Dr. S. Verma

Elucidating the role of Birt-Hogg-Dube (BHD) in adverse cardiac remodeling	\$ 20,000
--	-----------

Sunnybrook Health Sciences Centre

Dr. N. Dehghan*, Dr. R. Jenkinson

Early weight bearing and mobilization versus non-weight bearing and immobilization after ORIF of unstable ankle fractures: a randomized controlled trial	\$ 20,000
--	-----------

Dr. N. Daneman, Dr. R. Fowler

Optimizing duration of antibiotic therapy for bloodstream infections	\$ 167,000
--	------------

Dr. T. Huynh*, Dr. R. Aviv

Developing a focused-ultrasound animal model of hemorrhagic stroke	\$ 20,000
--	-----------

Dr. C. McCartney, Dr. S. Choi

OPRA (Optimizing pain and rehabilitation after knee arthroplasty)	\$ 141,500
---	------------

Dr. N. Singh*, Dr. A.R. Moody

The ability of routine clinical high resolution 3-Tesla MR imaging of carotid intraplaque hemorrhage to identify vulnerable cardiovascular and cerebrovascular patients	\$ 20,000
---	-----------

Dr. J.J. Wang*, Dr. C. McCartney, Dr. S. Choi

Determining the minimal effective volume (MEAV 95) for interscalene brachial plexus block for surgical anesthesia	\$ 19,000
---	-----------

Toronto General Hospital

Dr. M. Atri

Utility of shear wave elastography in scoring liver fibrosis and prediction of response to treatment in hepatitis C virus (HCV) patients	\$ 26,000
--	-----------

Dr. D.H. Delgado

Association of human leukocyte antigen-G polymorphisms and clinical outcomes post transplantation	\$ 111,500
---	------------

Dr. N. Paul

Ultralow dose computed tomography for assessment of pulmonary thromboembolic disease	\$ 165,000
--	------------

GRANTS APPROVED

FOR THE YEAR ENDED DECEMBER 31, 2012 (CONTINUED)

AMOUNT
APPROVED**CLINICAL RESEARCH (CONTINUED)****Toronto General Hospital (continued)**

Dr. N.I. Perlis*, Dr. M. Krahn	
Quality of life and utility elicitation in bladder cancer patients	\$ 20,000
Dr. J. Platt*, Dr. T. Zhong	
Breast reconstruction decision workshop pilot RCT	\$ 19,000
Dr. F. Quittnat Pelletier*, Dr. C.E. Lok	
Validation of a practical diagnostic approach to catheter-related blood stream infections in hemodialysis patients with central venous hemodialysis catheters	\$ 17,000
Dr. N. Selzner, Dr. G. Levy	
The role of the novel FGL2-FcyRIIB inhibitory pathway in human viral hepatitis	\$ 168,000

Toronto Western Hospital

Dr. M.G. Fehlings	
Enhancing recovery following cervical spinal cord injury by modulating inflammation with IgG	\$ 167,000
Dr. M. Hassouna	
Estimation of bladder volume from sacral nerve root recordings	\$ 126,000
Dr. D. Mikulis, Dr. R. Green	
Time course, clinical correlates and incidence of neurodegeneration in the first year of moderate-severe traumatic brain injury	\$ 166,000

Toronto Rehabilitation Institute

Dr. D.L. Dance*, Dr. B.C. Craven	
Exploring the associations between daily blood pressure fluctuations and cardiovascular risk among patients with motor complete spinal cord injury: a pilot study	\$ 20,000

Western University

Dr. L.A. Dubois*, Dr. T.L. Forbes	
APPROPRIATE study: assessing patient preferences for and ranking of outcomes presented in randomized trials of endovascular aortic surgery	\$ 9,500
Dr. K.K. Koo, Dr. M.O. Meade	
One-day point prevalence of acute rehabilitation in Ontario intensive care units: rates of, barriers to and facilitating factors for mobilization	\$ 58,000
Dr. A. Sener	
The protective role of supplemental hydrogen sulphide in allogeneic renal transplantation following prolonged cold storage	\$ 99,500

Total Clinical	\$ 3,261,000
-----------------------	---------------------

PSI Fellowship for Translational Research

Dr. D. Scales (2012 Fellow)	\$ 300,000
Dr. A. Gershon (2013 Fellow)	\$ 300,000

Total Fellowship	\$ 600,000
-------------------------	-------------------

GRAND TOTAL	\$ 3,910,000
--------------------	---------------------

* Investigators funded under the Resident Research Program

PSI FOUNDATION

RESIDENT RESEARCH PRIZES

FOR EXCELLENCE IN RESEARCH PAPERS 2012

TITLE OF PAPER	AWARDEE	DEPARTMENT
Queen's University		
Randomized controlled clinical trial comparing prophylactic nepafenac and ketorolac versus placebo in preventing postoperative macular edema after uncomplicated phacoemulsification cataract extraction	Almeida, D.R.	Ophthalmology
Decreased internal cerebral vein filling in acute ischemic stroke	Klourfeld, E.	Neurology
A retrospective analysis of blood loss following coronary artery bypass grafting with combined topical and intravenous tranexamic acid	Mahaffey, R.H.P.	Anesthesia/Critical Care Medicine
MircoRNAs distinguish a subgroup of low stage endometrial cancer with a high risk of recurrence	Snowdon, J.F.	Anatomical Pathology
Percutaneously placed central venous catheter-related sepsis in Canadian neonatal intensive care units	Wong, J.	Pediatrics
McMaster University		
Hypothermia after out-of-hospital cardiac arrest: perspectives from Hamilton	Ainsworth, C.D.	Critical Care Medicine
Understanding communication between emergency and consulting physicians	Chan, T.M-Y	Emergency Medicine
Fecal transplantation via retention enema is effective for recurrent or refractory <i>Clostridium difficile</i> infection	Kassam, Z.	Gastroenterology
Characterization of a cellular phone light source for indirect ophthalmoscopy	Teichman, J.C.	Ophthalmology
Clinical predictors of abnormal findings on unenhanced computed tomography of the head in non-trauma patients in the emergency department	Wang, X.	Diagnostic Radiology
Western University		
The relationship between the duration of cauda equina compression and functional outcomes in a rat model	Glennie, A.R.	Orthopaedic Surgery
Radiographic changes after lung stereotactic ablative radiotherapy (SABR) - can we distinguish recurrence from fibrosis? A systematic review of the literature	Huang, K.	Radiation Oncology
Extraspinal findings at lumbar spine CT examinations: prevalence and clinical importance	Lee, S.Y.	Diagnostic Radiology
Oral bisphosphonates in the elderly and acute kidney injury: a population-based study	Shih, A.W-Y.	Internal Medicine

RESIDENT RESEARCH PRIZES

FOR EXCELLENCE IN RESEARCH PAPERS 2012 (CONTINUED)

TITLE OF PAPER	AWARDEE	DEPARTMENT
Western University (continued)		
New fibrate use and acute renal outcomes in elderly adults: a population-based study	Zhao, Y.Y.	Respirology
University of Ottawa		
The efficacy of a web-based educational tool for the management of low back pain and shoulder injuries in the primary care setting	Bradley, L. Nicholson, A.	Family Medicine
Demographics and posterior knee capsule histologic and genetic characterization in patients with severe knee osteoarthritis: comparing those with contracture to those without contracture	Campbell, M.T.	Physical Medicine and Rehabilitation
Haploinsufficiency of a spliceosomal GTPase encoded by <i>EFTUD2</i> causes mandibulofacial dysostosis with microcephaly	Lines, M.A.	Medical Genetics
Comparison of serum bilirubin measurement and transcutaneous bilirubin measured with the JM-103 in the newborn infant in their ability to predict severe hyperbilirubinemia	Samiee, S.	Neonatal – Perinatal Medicine
The new age of play audiometry: validation testing of an iPad-based play audiometer	Yeung, J.C.	Otolaryngology
Northern Ontario School of Medicine		
Presence of developmental delays in Northern Ontario communities: a pilot study	Bresee, N. Kherani, T. Samaan, K.	Pediatrics
First response in psychiatric crises: teaching and learning mental health first aid in a remote First Nation	Mukhopadhyay, B.	Family Medicine
University of Toronto		
Using mental practice and modeling to enhance clinical learning experiences in medical education harnessing novel podcasting technology	Alam, F.	Anesthesia
Heterogeneity in regional T2* improvement in patients with transfusional iron overload treated with chelation therapy	Hanneman, K.	Diagnostic Radiology
Sex differences in implantable cardioverter-defibrillator outcomes: findings from a prospective defibrillator databases	MacFadden, D.R.	Internal Medicine
Factors influencing clinically meaningful recanalization after IV-rtPA in acute ischemic stroke	Murphy, A.	Diagnostic Radiology
Irradiated NK-92 targets AML leukemic stem cells in vivo and gene-modified CD16+NK-92 mediates antibody dependent cell mediated cytotoxicity (ADCC) against CD123+ cells	Williams, B.	Hematology

PSI FOUNDATION

RECENTLY PUBLISHED PAPERS
ON FOUNDATION FUNDED PROJECTS

TITLE	GRANTEE	JOURNAL
Treatment of <i>Aspergillus fumigatus</i> in patients with cystic fibrosis: a randomized, placebo-controlled pilot study	Aaron, S.D. Ratjen, F.	PLoS One, 2012;7(4):e36077
Reconstruction of the coronoid using an extended prosthesis: an in vitro biomechanical study	Alolabi, B. King, G.J.	J Shoulder Elbow Surg, 2011 Jul 20. [Epub ahead of print]
The psychiatric manifestations of mitochondrial disorders: a case and review of the literature	Anglin, R.E. Rosebush, P.I.	J Clin Psychiatry, 2012 Apr;73(4):506-12
Psychiatric symptoms correlate with metabolic indices in the hippocampus and cingulate in patients with mitochondrial disorders	Anglin, R.E. Rosebush, P.I.	Transl Psychiatry, 2012 Nov 13;2:e187
The psychiatric presentation of mitochondrial disorders in adults	Anglin, R.E. Rosebush, P.I.	J Neuropsychiatry Clin Neurosci, 2012 Sep 1;24(4):394-409
Decreased frontal lobe gray matter perfusion in cognitively impaired patients with secondary-progressive multiple sclerosis detected by the bookend technique	Aviv, R.	AJNR Am J Neuroradiol, 2012 Oct;33(9):1779-85
Robust perfusion deficits in cognitively impaired patients with secondary-progressive multiple sclerosis	Aviv, R.	AJNR Am J Neuroradiol, 2012 Jun 14. [Epub ahead of print]
Epidermal growth factor-like domain 7 suppresses intercellular adhesion molecule 1 expression in response to hypoxia/ reoxygenation injury in human coronary artery endothelial cells	Badiwala, M.V. Rao, V.	Circulation, 2010 Sep Sep 14;122 (11 Suppl): S156-61
Epidermal growth factor-like domain 7 is a novel inhibitor of neutrophil adhesion to coronary artery endothelial cells injured by calcineurin inhibition	Badiwala, M.V. Rao, V.	Circulation, 2011 Sep 13; 124(11 Suppl): S197-203
Central coordination as an alternative for local coordination in a multicenter randomized controlled trial: the FAITH trial experience	Bhandari, M.	Trials, 2012 Jan 8;13:5
Expression of genes encoding smooth muscle contractile proteins in vaginal tissue of women with and without pelvic organ prolapse	Bortolini, M.A.T. Alarab, M.	Neurourol Urodyn, 31(1):109-14, 2012
Effect of 12 months of whole-body vibration therapy on bone density and structure in postmenopausal women: a randomized trial	Cheung, A.M.	Ann Intern Med, 2011 Nov 15;155(10):668-79, W205

RECENTLY PUBLISHED PAPERS

ON FOUNDATION FUNDED PROJECTS (CONTINUED)

TITLE	GRANTEE	JOURNAL
Elimination of preoperative testing in ambulatory surgery	Chung, F.	Anesth Analg, 2009 Feb;108(2):467-75
Health effects of identifying patients with undiagnosed obstructive sleep apnea in the preoperative clinic: a follow-up study	Chung, F.	Can J Anaesth, 2012 Jun;59(6):544-555
High STOP-Bang score indicates a high probability of obstructive sleep apnoea	Chung, F.	Br J Anaesth, 2012 May;108(5):768-75
Pulmonary bacterial communities in surgically resected noncystic fibrosis bronchiectasis lungs are similar to those in cystic fibrosis	Cunningham, K.S. Hwang, D.M.	Pulm Med, 2012;2012: 746358. Epub 2012 Feb 8
Low flow-mediated constriction occurs in the radial but not the brachial artery in healthy pregnant and nonpregnant women	Davies, G.A.L.	J Appl Physiol, 2010 May;108(5):1097-105
Modification of angiogenic factors by regular and acute exercise during pregnancy	Davies, G.A.L.	J Appl Physiol, 2010 May;108(5):1217-23
Brachial artery flow-mediated dilation is not affected by pregnancy or regular exercise participation	Davies, G.A.L.	Clin Sci (Lond), 2011 Oct;121(8):355-65
Proton magnetic resonance spectroscopy of the motor cortex in cervical myelopathy	Duggal, N.	Brain, 135(Pt 2): 461-468, 2012
Immunoglobulin G: a potential treatment to attenuate neuroinflammation following spinal cord injury	Fehlings, M.G.	J Clin Immunol, 2010 May;30 Suppl 1:S109-12
Evaluation of a clinical dehydration scale in children requiring intravenous rehydration	Freedman, S.B.	Pediatrics, 2012 Apr 23. [Epub ahead of print]
Comparing peak and submaximal cardiorespiratory responses during field walking tests with incremental cycle ergometry in COPD	Goldstein, R.	Respirology, 2012 Feb;17(2):278-84
Defining the relationship between average daily energy expenditure and field-based walking tests and aerobic reserve in COPD	Goldstein, R.	Chest, 2012 Feb;141(2):406-12
WikiBuild: a new online collaboration process for multistakeholder tool development and consensus building	Gupta, S. Straus, S.E.	J Med Internet Res 13(4):e108, 2011
Predictors of nonconvulsive seizures among critically ill children	Hahn, C.	Epilepsia, 52(11): 1973-8, 2011
Effect of oxygen affinity on systemic perfusion and brain tissue oxygen tension after extreme hemodilution with hemoglobin-starch conjugates in rats	Hare, G.M.T.	Intensive Care Med, 2009 Nov; 35(11):1925-33

RECENTLY PUBLISHED PAPERS

ON FOUNDATION FUNDED PROJECTS (CONTINUED)

TITLE	GRANTEE	JOURNAL
Functional disability 5 years after acute respiratory distress syndrome	Herridge, M.S. Cheung, A.M.	N Engl J Med, 2011 Apr 7;364(14):1293-304
Self-reported symptoms of depression and memory dysfunction in survivors of ARDS	Herridge, M.S. Cheung, A.M.	Chest, 2009 Mar;135(3):678-87
Tractography delineates microstructural changes in the trigeminal nerve after focal radiosurgery for trigeminal neuralgia	Hodaie, M.	PLoS One, 2012; 7(3):e32745. Epub 2012 Mar 6
Handover patterns: an observational study of critical care physicians	Ilan, R.	BMC Health Serv Res, 12:11, 2012
Tests of neuromuscular function are associated with fractures in patients with chronic kidney disease	Jamal, S.A.	Nephrol Dial Transplant, 2011 Nov 18. [Epub ahead of print]
Bone mineral density by DXA and HR pQCT can discriminate fracture status in men and women with stages 3 to 5 chronic kidney disease	Jamal, S.A.	Osteoporos Int, 2012 Feb 2. [Epub ahead of print]
Analysis of seminal plasma from patients with non-obstructive azoospermia and identification of candidate biomarkers of male infertility	Jarvi, K.A.	J Proteome Res, 2012 Mar 2;11(3):1503-11
Characterization of the seminal plasma proteome in men with prostatitis by mass spectrometry	Jarvi, K.A.	Clin Proteomics, 2012 Feb 6;9(1):2
Verification of male infertility biomarkers in seminal plasma by multiplex selected reaction monitoring assay	Jarvi, K.A.	Mol Cell Proteomics, 2011 Dec; 10(12):M110.004127
Proteomic analysis of seminal plasma from normal volunteers and post-vasectomy patients identifies over 2000 proteins and candidate biomarkers of the urogenital system	Jarvi, K.A.	J Proteome Res, 2011 Mar 4;10(3):941-53
Burn size and survival probability in paediatric patients in modern burn care: a prospective observational cohort study	Jeschke, M.G.	Lancet, 2012 Mar 17;379(9820):1013-21
Community-associated methicillin-resistant <i>Staphylococcus aureus</i> : prevalence in skin and soft tissue infections at emergency departments in the Greater Toronto Area and associated risk factors	Katz, K.C. McGeer, A.J.	CJEM, 11(5):439-46, 2009
The natural history of pelvic vein thrombosis on magnetic resonance venography after vaginal delivery	Khalil, H. Rodger, M.	Am J Obstet Gynecol, 2012 Jan 13 epub
A blinded, randomized controlled trial to evaluate ketamine/propofol versus ketamine alone for procedural sedation in children	Lehnhardt, K. Shah, A.	Ann Emerg Med 57(5):425-33.e2, 2011

RECENTLY PUBLISHED PAPERS

ON FOUNDATION FUNDED PROJECTS (CONTINUED)

TITLE	GRANTEE	JOURNAL
Haploinsufficiency of a spliceosomal GTPase encoded by <i>EFTUD2</i> causes mandibulofacial dysostosis with microcephaly	Lines, M.A. Boycott, K.M.	Am J Hum Genet, 90(2):369-77, 2012
Effect of fish oil supplementation on graft patency and cardiovascular events among patients with new synthetic arteriovenous hemodialysis grafts: a randomized controlled trial	Lok, C.E. Moist, L.	JAMA, 2012 May 2;307(17):1809-16
Cough variant asthma: lessons learned from deep inspirations	Lougheed, M.D.	Lung, 2012 Feb;190(1):17-22
Compared with dual nerve stimulation, ultrasound guidance shortens the time for infraclavicular block performance	McCartney, C.J. Chan, V.W.S.	Can J Anaesth, 56(11):812-8, 2009
Functional electrical stimulation therapy for grasping in traumatic incomplete spinal cord injury: randomized control trial	McGillivray, C. Popovic, M.R.	Artif Organs, 2011 Mar;35(3):212-6
Spontaneous EEG-functional MRI in mesial temporal lobe epilepsy: implications for the neural correlates of consciousness	Mirsattari, S.M.	Epilepsy Research and Treatment, vol. 2012, Article ID 385626, 10 pages
Cortical reorganization following anterior temporal lobectomy in patients with temporal lobe epilepsy	Mirsattari, S.M.	Neurology, 2009 Aug 18;73(7):518-25
The laboratory impact of changing syphilis screening from the rapid-plasma reagin to a treponemal enzyme immunoassay: a case-study from the Greater Toronto Area	Mishra, S. Mazzulli, T.	Sex Transm Dis, 38(3):190-6, 2011
Telehealth Ontario detection of gastrointestinal illness outbreaks	Moore, K.M.	Can J Public Health, 2009 Jul-Aug; 100(4):253-7
Development and usability of a behavioural marking system for performance assessment of obstetrical teams	Morgan, P.J.	Qual Saf Health Care, 2009 Oct;18(5):393-6
A biomechanical assessment of soft-tissue damage in the cervical spine following a unilateral facet injury	Nadeau, M. Bailey, C.S.	J Bone Joint Surg Am 2012; 94:e156(1-6)
Direct quantification of breast dose during coronary CT angiography and evaluation of dose reduction strategies	Paul, N.S. Rogalla, P.	AJR Am J Roentgenol, 2011 Feb; 196(2):W152-8
The influence of chest wall tissue composition in determining image noise during cardiac CT	Paul, N.S.	AJR Am J Roentgenol, 2011 Dec; 197(6):1328-34
Toronto Rehabilitation Institute - Hand function test: assessment of gross motor function in individuals with spinal cord injury	Popovic, M.R.	Topics Spinal Cord Injury Rehab, 2012; 18(2): 167-186
Vitamin B-12 and neural tube defects: the Canadian experience	Ray, J.G.	Am J Clin Nutr, 2009 Feb;89(2):697S-701S

RECENTLY PUBLISHED PAPERS

ON FOUNDATION FUNDED PROJECTS (CONTINUED)

TITLE	GRANTEE	JOURNAL
New thinking about postoperative hypoalbuminemia: a hypothesis of occult protein-losing enteropathy	Redelmeier, D.A.	Open Med, 2009;3(4):e215-9
Effect of local anaesthetic volume (20 vs 5 ml) on the efficacy and respiratory consequences of ultrasound-guided interscalene brachial plexus block	Riazi, S. McCartney, C.J.L.	Br J Anaesth, 2008 Oct;101(4):549-56
Predicting postresection hydrocephalus in pediatric patients with posterior fossa tumors	Riva-Cambrin, J. Drake, J.M.	J Neurosurg Pediatr, 2009 May;3(5):378-85
A distinct microvascular endothelial gene expression profile in severe IUGR placentas	Roggensack, A.M. Kingdom, J.C.P.	Placenta, 33(4):285-93, 2012
Biological specimens for community-based surveillance studies: method of recruitment matters	Salvadori, M.	Survey Research Methods, 5(3):117-124, 2011
A cost effectiveness analysis of omitting radiography in diagnosis of acute bronchiolitis	Schuh, S.	Pediatr Pulmonol, 2009 Feb;44(2):122-7
The impact of diabetes education on blood glucose self-monitoring among older adults	Shah, B.	J Eval Clin Pract, 16(4):790-3, 2010
BODE index and quality of life in advanced chronic obstructive pulmonary disease before and after lung transplantation	Singer, L.G.	J Heart Lung Transplant, 2011 Dec;30(12):1334-41
When do the aminotransferases rise after acute acetaminophen overdose?	Sivilotti, M.L.A.	Clin Toxicol (Phila), 2010 Oct;48(8):787-92
Multiplying the serum aminotransferase by the acetaminophen concentration to predict toxicity following overdose	Sivilotti, M.L.A.	Clin Toxicol (Phila), 2010 Oct;48(8):793-9
Comparison of the 20-hour intravenous and 72-hour oral acetylcysteine protocols for the treatment of acute acetaminophen poisoning	Sivilotti, M.L.A.	Ann Emerg Med, 2009 Oct;54(4):606-14
Cost-effectiveness of transdermal nitroglycerin use for preterm labor	Smith, G.N.	Value Health, 2011 Mar-Apr;14(2):240-6
Effects of chronic carbon monoxide exposure on fetal growth and development in mice	Smith, G.N.	BMC Pregnancy Childbirth, 2011 Dec 14;11:101
Chronicity and complexity: is what's good for the diseases always good for the patients?	Upshur, R.E.G.	Can Fam Physician, 54(12):1655-8, 2008
Trends in health services utilization, medication use, and health conditions among older adults: a 2-year retrospective chart review in a primary care practice	Upshur, R.E.G.	BMC Health Serv Res, 9:217, 2009
Measuring change in health status of older adults at the population level: the transition probability model	Upshur, R.E.G.	BMC Health Serv Res, 10:306, 2010

RECENTLY PUBLISHED PAPERS

ON FOUNDATION FUNDED PROJECTS (CONTINUED)

TITLE	GRANTEE	JOURNAL
The out-of-hospital validation of the Canadian C-Spine Rule by paramedics	Vaillancourt, C. Stiell, I.G.	Ann Emerg Med, 2009 Nov;54(5):663-671
Incidence of potentially avoidable urgent readmissions and their relation to all-cause urgent readmissions	van Walraven, C. Forster, A.J.	CMAJ, 2011 Oct 4;183(14):E1067-72
Nocturnal haemodialysis is associated with improved vascular smooth muscle cell biology	Verma, S. Christopher Chan, C.	Nephrol Dial Transplant, 24(12):3867-71, 2009
Recent oral contraceptive use and adverse birth outcomes	Wen, S.W. Walker, M.C.	Eur J Obstet Gynecol Reprod Biol, 2009 May;144(1):40-3
Estimating GFR using serum beta trace protein: accuracy and validation in kidney transplant and populations	White, C.A. Knoll, G.A.	Kidney Int, 2009 pediatric Oct;76(7):784-91

2012 GRANTEE ANNUAL MEETING PRESENTERS

DR. MARGARET HERRIDGE, UNIVERSITY OF TORONTO

Dr. Herridge is an Associate Professor at the University of Toronto and a Clinician Scientist at the Toronto General Hospital. Dr. Herridge is board certified in internal medicine, pulmonary, and critical care medicine. She completed her Epidemiology training at the Channing laboratory in Boston, Massachusetts. Dr. Herridge also holds a Master's degree in Public Health from the Harvard School of Public Health.

Her research focuses on outcomes of critical illness, quality-of-life and ICU acquired weakness; she has published in the New England Journal of Medicine, the Annals of Internal Medicine and the Journal of the American Medical Association.



Dr. Margaret Herridge

DR. DAMON SCALES, SUNNYBROOK HEALTH SCIENCES CENTRE

Dr. Scales' current professional appointments include: Assistant Professor of Medicine at the University of Toronto, Staff Intensivist at the Sunnybrook Health Sciences Centre, Scientist at the Sunnybrook Research Institute, and Adjunct Scientist at the Institute for Clinical Evaluative Sciences. He is also the Program Director of the University of Toronto Adult Critical Care Medicine Residency program.

Dr. Scales is the recipient of the 2012 PSI Fellowship for Translational Health Research, which will allow him to conduct a stepped-wedge cluster randomized controlled trial (RCT) to improve the application of evidence-based predictions about neurological prognosis for patients that have suffered from anoxic brain injury.



Dr. Damon Scales

DR. MATTHEW LINES, UNIVERSITY OF OTTAWA

Dr. Lines is currently a Clinical Fellow in Medical Genetics at the Hospital for Sick Children. Dr. Lines received his medical degree from the University of Calgary. He was funded by PSI as a resident at the University of Ottawa, under the supervision of Dr. Kym Boycott. Dr. Lines' research project "Gaining insight into human craniofacial development through the identification of a novel gene for mandibulofacial dysostosis" was published in the American Journal of Human Genetics in 2012.



Dr. Matthew Lines

VISION STATEMENT

BACKGROUND

When the Foundation was established in 1970 it was agreed that it should primarily be a granting agency rather than an operating agency and it continues to be managed by the physicians of Ontario. It was mandated by the Board of the new foundation, and the participating physicians, that the Foundation's prime objective should be the provision of funds solely within the health field.

To meet this mandate the Board of the new Foundation agreed that a diversified portfolio should be held consisting of equities and income-producing securities to permit a consistent level of granting.

THE VISION

The Foundation seeks to build upon its unique situation in the health research community, as a physician sponsored granting agency, and is based on the belief that continued support of peer reviewed, innovative research, will bring new and improved benefits to clinical practice.

The vision of the Foundation is to seek to address the unparalleled challenges that will face physicians in providing effective health care for their patients in the years to come.

The essential supporting structure of this vision is to encourage the research efforts of the new investigator, as well as providing funding for the education of practising physicians.



GET INVOLVED

If you are interested in volunteering with PSI, please consider:

- Becoming a delegate: the House of Delegates meets annually with the mandate of overseeing the Board of Director's actions.
- Becoming a Director: PSI draws most of its Directors from the House of Delegates.
- Joining a committee: PSI has several working committees - including Grants and Finance Committees, for which PSI requires expertise in such areas as medical research and the financial sector.

DONATE

While PSI does not actively solicit funds, PSI is a registered charity and can provide tax receipts for charitable donations.

Please consider the above while reviewing PSI's accomplishments identified in this annual report.

Research & Education Funded by the Physicians of Ontario

