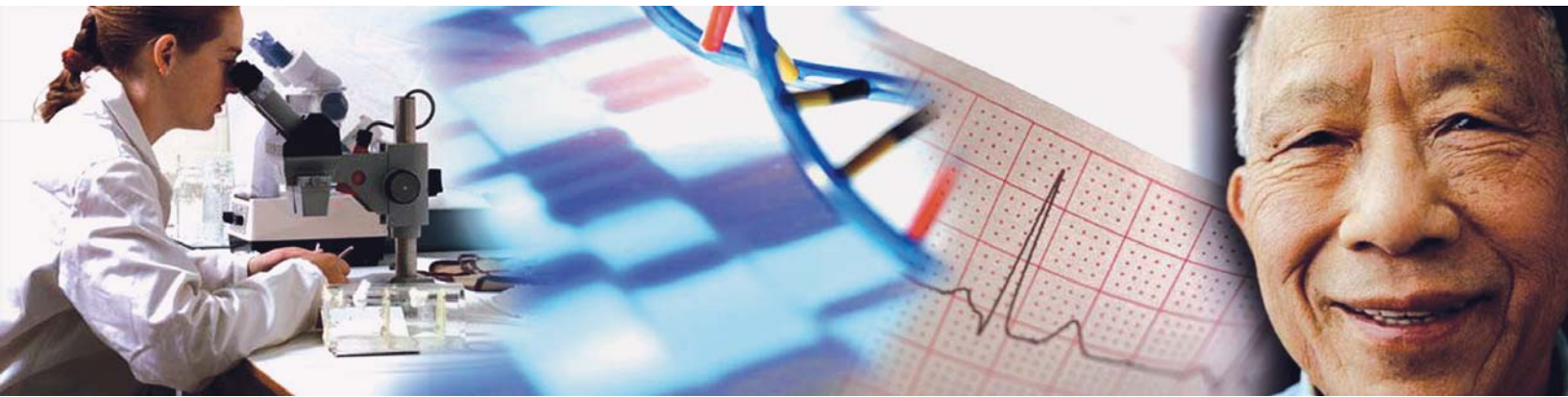


UNIVERSITY OF TORONTO

**HEART AND STROKE/RICHARD LEWAR CENTRE
OF EXCELLENCE IN CARDIOVASCULAR RESEARCH**



Creating and Sustaining Excellence in Cardiovascular Research
BIENNIAL REPORT
JULY 1, 2003 TO JUNE 30, 2005

TABLE OF CONTENTS

2	Message from the Director
4	The Centre: Mission, Vision, Goals and Objectives
5	Funding
6	Who are we?
6	Composition of HSRLCE Committees
7	HSRLCE Senior Administrators
8	HSRLCE Staff
9	Distinguished Members of the Centre of Excellence
11	Members of the Centre of Excellence
20	Selected Awards, Chairs and Honours Held by Members
23	Strategic Initiatives Launched
23	Genome Canada Project: Protein Protein Expression Profiling Platform for Heart Disease Biomarker Discovery
23	Strategic Planning Retreat on Translational Medicine
24	Translational Medicine Workshop
24	New Frontiers Program Workshop on “Cardiovascular Complications of Diabetes”
25	Ongoing Programs and Initiatives
	<i>Cutting Edge Research:</i>
25	Platform I: Transgenic Physiology
26	Platform II: Innovative Cardiovascular Therapies
26	Platform III: Clinical Genomics and Proteomics
28	Canadian Heart Failure Network (CHFNET)
29	Canadian Foundation for Innovation “Mammalian Models” Program
	<i>Innovative Education and Training Programs:</i>
30	TACTICS: Tailored Advanced Collaborative Training in Cardiovascular Sciences for Research Fellows
33	Trainee Awards
34	Distinguished Visiting Professor Lecture Series
36	Annual Cardiovascular Scientific Day
36	2004: New Technologies, Innovations and Outcomes
37	2005: Translational Medicine
38	Developmental Initiatives
38	National Heart, Lung and Blood Institute Application
38	CHFNET Renewal
39	Selected Peer-Reviewed Publications
64	Grants Obtained by Members
78	Acknowledgement of Sponsors and Supporters

MESSAGE FROM THE DIRECTOR

I am delighted to present to you the Centre's third biennial report which documents our achievements and the excellent work of our members, trainees and staff for the period July 1, 2003 to June 30, 2005.

In 2005, the Heart and Stroke/Richard Lewar Centre of Excellence celebrated its sixth anniversary. In just six short years, the Centre has grown from a concept on paper, to an exceptionally vibrant and successful organization, dedicated to creating and sustaining excellence and providing leadership in the area of cardiovascular research. Indeed, we have faced many challenges during our genesis and growth phases, but as we began to mature, we supported novel ideas for research, recruited the best researchers and trainees, and promoted our overarching values of innovation, excellence and collaboration.



To promote innovation throughout the community, we held two strategic planning retreats. In 2004, the focus was "regenerative medicine" and in 2005, "translational medicine". Both retreats were widely attended by our members as well as key representatives from the local university and hospital communities. These retreats led to the development and implementation of strategic plans in the respective areas, which led to new recruitments, high level publications, the establishment of a CIHR new emerging team and Genome Canada-funded projects. We also continued to build large-scale and innovative research platforms that support multiple research teams in the cardiovascular community; our goal being the provision of cutting-edge technologies that will fast-track innovation and novel hypotheses.

I am thrilled to report that the Centre's CIHR strategic training program for post-doctoral fellows, "TACTICS", has continued to attract the best young minds in cardiovascular research from around the world. One of our goals, a unique one to be sure, is to build international connections (a new CIHR priority), which we have successfully done. Indeed, the majority of our fellows have been able to leverage peer-reviewed funding from major national agencies, a testament to their level of excellence. The Centre's own fellowship and studentship programs have continued to support a full complement of young trainees who will one day become national and international leaders in the area of cardiovascular research.

A number of new, headline grabbing discoveries by members of the Centre have taken place in the past two years. Drs. Bruneau and Backx discovered how the heart's electrical current is restored after each contraction (*Cell* 2005), and Dr. Emili and colleagues, using proteomic analyses, uncovered how proteins inside cells interact with each other (*Cell* 2005; *Nature* 2005). Dr. MacLennan, member of the U.S. National Academy of Sciences, published research that describes how calcium is regulated in the heart cell (*Nature Reviews* 2004). Drs. Bradley and Floras evaluated the role of continuous positive airway pressure in heart failure in the CANPAP trial (*New England Journal of Medicine* 2005). Drs. Yau and Weisel identified the means by which cell and gene therapy can work together to restore cardiac function (*Circ.* 2005), and our team uncovered a new switch in cardiac inflammation (*Circ.* 2005). These are just some of the highlights of two more strong year's of publications, with the number of publications in high impact journals (IF>5) coming in at 43. 49% of these high impact publications were collaborative efforts between Centre members.

The Centre continued its aggressive recruitment strategy in 2003-2005, and was successful in recruiting some of the brightest leaders in the area of cardiovascular research to the University of Toronto. Together with the Department of Physiology, we have successfully recruited Dr. Stephen Bolz from Munich, Germany, a specialist in *in vivo* imaging technology. We are delighted that Dr.

Rudiger von Harsdorf has assumed the McEwen Regenerative Medicine Chair at the University Health Network. Dr. von Harsdorf joins us from Berlin, Germany, bringing him with him a global reputation in cell cycle control. Finally, we are thrilled that Dr. Erwin Oechsli from Zurich, Switzerland has joined us to lead our Adult Congenital Heart Disease program.

A number of major research awards were garnered by Centre members from 2003-2005. The Centre was also recognized by peer reviewed granting agencies as an ideal environment for collaboration, and the success of our investigators in grant competition is a testament of the strength of the cardiovascular community, and the dedication of the investigators. The quality of the team or program applications from Toronto is such a cut above the rest of the country that our scores are usually way ahead of the curve. Typically with each CIHR competition we have about 10 successful applications, often 5 years in duration. Similarly, at the Heart and Stroke Foundation of Canada/Ontario (HSF) competitions, we are usually awarded 15 to 20 successful grants per year, the largest proportion of successes amongst all institutions. Recently, the community successfully renewed a HSFC group program in vascular biology and a CIHR program in heart failure. The group also leveraged a new emerging team program in cell based regenerative therapy.

The Centre held two Annual Cardiovascular Scientific Days in the past two years. In 2005, we changed our location to the Bahen Centre on the University of Toronto campus, and achieved a record-breaking attendance level of over 280 participants. This annual event creates tremendous opportunities for cross-fertilization of ideas and enhanced collaborations. The Centre co-hosted several major international meetings, including the International Atherosclerosis and Vascular Biology Meeting, chaired by Dr. Avrum Gotlieb, and Heart Failure Society of America meeting (2004). In May 2005, the Centre proudly hosted the New Frontiers Workshop on "Diabetes and Cardiovascular Complications", which has evolved into the latest CIHR request for applications (RFA) in cardiorespiratory disease. The Centre looks forward to the hosting of the upcoming International Society for Heart Research (North American section) meeting in June 2006 in conjunction with the Heart Failure Summit at the Toronto Westin Harbour Castle hotel complex.

In looking forward, renewal and innovation are critical for the success of any research program. The Centre has now matured as a virtual research centre with well-established platforms, robust teams of principal investigators and trainees and a very strong staff complement. This hard work has led to a strong funding base and excellent publication records. However, research is a constant process of seeking innovation and ways to improve health through fundamental understandings and critical evaluation, and thus, we must continue to "invest locally, compete globally". Only by working together, will we reach new heights of knowledge; only by integrating our clinical strength with basic tools, will we innovate and achieve global impact.

I would like to express my gratitude to the many people who have volunteered their time to the Centre, including Dr. Richard Weisel, Deputy Director and Drs. Peter Backx, Duncan Stewart and York Pei, our research platform leaders. I am also grateful to the other members of our Executive Committee, Drs. Peter Lewis, Tom Parker, and Michael Sole, as well as those members who volunteered their time in support of our various committees. Finally, thanks to our dedicated staff members for their outstanding contributions to the Centre: Golam Kabir, Wendy Kubasik, Sandra Monkewich, Marc Perry and Dongling Zhao.



Peter Liu

MISSION, VISION, GOALS AND OBJECTIVES

What is the HSRLCE?

In 1999, the Heart and Stroke Foundation of Ontario (HSFO) and the family of Richard Lewar jointly donated \$13 million to establish a Centre of Excellence for cardiovascular research at the University of Toronto. The Centre's Director reports to the Dean of the Faculty of Medicine. The Centre is currently an "extra departmental unit" of the University, and is entirely self-funded, with space provided by the University of Toronto. The Director, together with the Executive Committee and Donor's Due Diligence Committee (chaired by the HSFO and comprised of representatives of the original donors and senior administrators at the University), will jointly with the membership develop the Centre's research and education programs.

Mission

The purpose of the Heart and Stroke/Richard Lewar Centre of Excellence (HSRLCE) is to bring the best of cardiovascular sciences at the University of Toronto together, including basic sciences, clinical investigations and community health. Research at the Centre is focused on the prevention and treatment of *atherosclerosis, heart failure and congenital heart disease*. From this research will evolve diagnostic, prognostic, and therapeutic innovations that can impact on the health of all Canadians.

Vision

The Centre of Excellence aims to become an internationally pre-eminent institution in cardiovascular research, through innovations in science, collaboration of minds, and training and recruitment of the best and brightest leaders in research.

Exponential Growth

The Heart and Stroke/Richard Lewar Centre of Excellence has grown from little more than a simple concept on paper, to an intricate and vibrant organization in just six short years. Driven by the enthusiasm, vision and ambition of many but especially the Centre's Director, Executive Committee and staff, the Centre reached a point in November 2002 when an external review committee commended the group for achieving what some thought impossible: bringing together the cardiovascular research community of Toronto. Having this achievement as a foundation, the Centre has now embarked on the next stage of its growth: sustained excellence.

Goals and Objectives

The overarching goals and objectives of the HSRLCE are based on the following principles:

- The Centre provides the infrastructure and environment for research in post-genomic medicine at the University of Toronto;
- The Centre encourages solutions to specifically target priority areas of research in terms of infrastructure, recruitment, start-up funding and support of young scientists. The criteria by which all programs are judged are excellence, innovation and collaboration;
- The Centre does not provide grant-in-aid, bridge funding or other programs to Principal Investigators that compete with standard peer-reviewed agencies.

The Centre aims to foster excellence in cardiovascular research through:

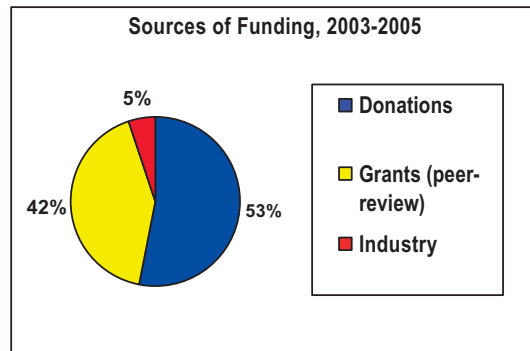
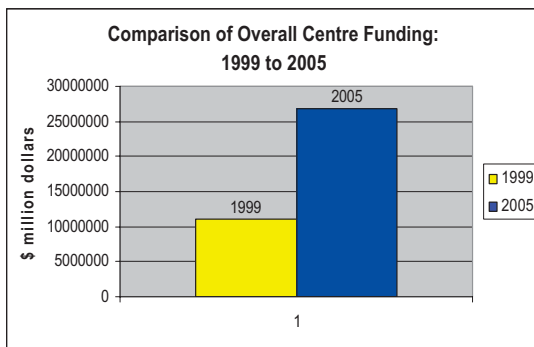
- Formation of three research platforms with identified leaders, infrastructure, and development of research programs to answer key questions;
- Development of collaborative infrastructure to facilitate knowledge and technique sharing;
- Recruitment of top-level scientists within the priority research platforms;
- Training of the next generation of research leaders;
- Improvement of communications within the cardiovascular community.

FUNDING

As noted previously, the Centre is a self-funded unit; the University of Toronto does not currently provide any operating budgets, but has generously provided the Centre with space and infrastructure support. The Centre was originally provided with generous start-up funding in the amount of \$13 million, \$2 million of which is an endowed Director's Chair, \$11 million of which was to have been expended over a ten-year period. In theory then, the balance in 2005 should have been roughly \$4.4 million; however, due to careful spending on the part of the Centre's management and the tremendous successes of the Centre's teams in leveraging funding from major national peer-reviewed agencies, the balance in these funds alone at the end of fiscal year 2005 was over \$8 million.

The Centre's senior administrators have also worked closely with the Faculty of Medicine's Advancement Office and the Donor's Due Diligence Committee to develop and implement a comprehensive fund-raising strategy. We are thrilled to announce that in 2005, Ms. Joanne Cole, working closely with Dr. Richard Weisel, was able to negotiate a very generous \$1 million donation from the Auerback family for the "Roma and Marvin Auerback Professorship in Developmental Biology and Congenital Heart Disease." Our fund raising efforts continue.

The following graph compares the Centre's overall funding base, including grants and contracts held by the Centre (not individual members), from 1999 to 2005 (note: grants held by Centre members as well as the Centre are listed on pages 64-77):



Sources of Funding 2003-2005

Astra Zeneca Canada
A.E. Diamond
Canadian Foundation for Innovation
Canada Heart Research Centre
Canadian Institutes of Health Research
Canadian Society of Atherosclerosis, Vascular Biology and Thrombosis
Heart and Stroke Foundation of Canada
Heart and Stroke Foundation of Ontario
Genome Canada

Jansen Ortho Inc.
Stephan and Sophie Lewar
Merck Frosst Canada & Co.
Novartis Pharmaceuticals Canada
Ontario Genomics Institute
Pfizer Canada
Roche Canada
Roche Diagnostics GmbH
Sanofi Aventis Pharma
The Family of Isadore Smith

WHO ARE WE?

The Centre is an organization for the cardiovascular research community in Toronto, run by the cardiovascular research community of Toronto. The directors and program heads of the Centre are faculty members from the University of Toronto. This group forms the Centre's Executive Committee. Members of the Centre occupy all the seats on the operational and advisory committees, for example, the Scientific Day Program Committee and Awards Review Committee. To obtain the best advice and guidance, the Director is guided in his strategic planning by two boards, populated by scientific and business leaders from outside the Centre: the Donor's Due Diligence Committee and the Oversight Committee. The strategic administrative functions of the Centre in essence develop the Centre's programs, while an operational administration, consisting primarily of Centre staff, deliver the functions. The following table lists the Centre's committees, members and mandate, role and function:

Composition of HSRLCE Committees, June 2005

	Members	Mandate, Role, and Function
EXECUTIVE COMMITTEE	Peter Backx, Wendy Kubasik, Peter Lewis, Peter Liu (Chair), Thomas Parker, York Pei, Marc Perry, Michael Sole, Duncan Stewart, Richard Weisel	Make operational and policy-related decisions on basis of Director's strategic direction including the financial, administrative and research-related issues of the Centre
OVERSIGHT COMMITTEE	Avrum Gotlieb, Denis Grant, Wendy Levinson, Peter Lewis (Chair), Peter Liu, John MacDonald, Stephen Scherer, Michael Sefton	Assess the performance of the Director and policies/ strategic directions of the Centre; provide Director with guidance on strategic research issues; harmonize goals and operations of Centre with other UofT institutions
DONOR'S DUE DILIGENCE COMMITTEE	Joanne Cole, Kathryn Feldman, Wendy Kubasik, Peter Lewis, Peter Liu, Bob Luba (Chair), David Naylor, Rocco Rossi/Andrew Scipio del Campo, Laura Syron, David Ward	Fulfill fiduciary responsibility to founding donors; act as an External Advisory Board
AWARDS REVIEW COMMITTEE	Recruited each year	Act as reviewers for Centre's fellowship and studentship awards competitions; provide Head, Education with guidance on awards allocations
SCIENTIFIC DAY PROGRAM COMMITTEE	Recruited each year	Provide advice on the scientific day program including theme, speakers, order of program

HSRLCE SENIOR ADMINISTRATORS



Dr. Peter Liu, MD, FRCPC

Director

Financially accountable; directs strategic direction (research programs, administration); supervises personnel

Tel: (416) 340-3035

peter.liu@utoronto.ca



Dr. Richard Weisel, MD, FRCSC

Deputy Director

Facilitates communications amongst members of the Centre; liaises with potential strategic and sponsoring partners; carries out fund raising activities

Tel: (416) 340-3825

richard.weisel@uhn.on.ca



Dr. Peter Backx, PhD, DVM, MSc

Associate Director, Research Platform I

Platform I spokesperson and Senior Researcher; oversees Transgenic Physiology Laboratory operations; facilitates collaborations with other researchers, hospitals and institutes

Tel: (416) 946-8112

p.backx@utoronto.ca



Dr. Duncan J. Stewart, MD, FRCPC

Associate Director, Research Platform II

Platform II spokesperson; develops Centre's research program in translational medicine

Tel: (416) 864-5724

stewartd@smh.toronto.on.ca



Dr. York Pei, MD

Associate Director, Research Platform III (As of July 2005)

Platform III spokesperson; develops Centre's programs in clinical genetics and proteomics

Tel: (416) 340-4257

york.pei@uhn.on.ca



Dr. Michael J. Sole, MD, BSc

Head, Education Programs

Chairs review committees for Centre's trainee award competitions; provides strategic direction and operational management for the Education Program

Tel: (416) 340-3471

michael.sole@uhn.on.ca



Dr. Thomas J. Parker, MD, FRCPC

Head, Training Programs

Represents TACTICS program at Centre; oversees Centre's participation in external training programs

Tel: (416) 864-5271

parkertg@smh.toronto.on.ca

HSRLCE STAFF MEMBERS, JUNE 2005



Ms. Wendy Kubasik

Business Manager

Implements the Centre's strategic plan; manages Centre finances, human resources, facilities, communications programs and overall operations

Tel: (416) 946-7500

wendy.kubasik@utoronto.ca



Dr. Marc Perry

Senior Science Officer

Identifies and implements new scientific and research opportunities; manages existing intramural programs; oversees industry relations and intellectual property development

Tel: (416) 946-0954

marc.perry@utoronto.ca



Ms. Sandra Monkewich

Research Officer

Coordinates research and educational collaborations and programs; administers the Centre's outreach and communications programs (including websites)

Tel: (416) 946-0953

sandra.monkewich@utoronto.ca



Dr. Golam Kabir

Laboratory Technician III

Generates animal models of heart and vascular disease in mice and other small mammals; performs various surgical procedures; provides assistance with experiments and training

Tel: (416) 946-8111

g.kabir@utoronto.ca



Ms. Dongling Zhao

Laboratory Technician II

Generates adenoviruses; designs new approaches using technological systems; provides expertise for isolating and culturing cardiac myocytes, vascular smooth muscle myocytes and isolated blood vessel preparations; provides assistance with various experiments and training

Tel: (416) 946-8111

dongling.zhao@utoronto.ca

No photo
available

Ms. Kristin Demuth/Kerri Kistnasami (maternity leave)

Administrative Secretary

Provides administrative and research-related assistance for Centre functions and programs

Tel: (416) 946-8543

DISTINGUISHED MEMBERS OF THE CENTRE OF EXCELLENCE

During the Summer of 2005, the Centre's Executive Committee completed a five-year review of members of the Centre of Excellence. Distinguished members are those individuals who have made an extraordinary contribution to the scientific, educational and/or administrative functions of the Centre over the five-year period.

The following is a list of those members:

Adamson, Lee PhD, MSc

Professor, Department of Obstetrics and Gynecology, University of Toronto; Principal Investigator, Research Centre for Women's Health, Samuel Lunenfeld Research Institute, Mount Sinai Hospital. Research interests: Dr. Adamson's goal is to generate powerful and accessible tools for evaluating physiologic function in genetically altered mice using state-of-the-art high resolution ultrasound system to monitor morphology and hemodynamics from implantation to adulthood in mice. Her lab has a longstanding interest in cardiovascular hemodynamic development in general, and in the role of the placenta in controlling maternal and fetal hemodynamic function during pregnancy in particular.

Bendeck, Michelle PhD, MSc

Associate Professor, Departments of Medicine and Laboratory Medicine and Pathobiology, University of Toronto. Research interests: The main focus of Dr. Bendeck's research is the interactions between cells and extracellular matrix during vascular remodelling in response to arterial injury (e.g., atherosclerosis, ischemia). She is using experimental models of arterial injury in the mouse and rat, studying the role of extracellular matrix, cell-surface integrin receptors, the novel discoidin-domain receptors (DDR) and MMPs in mediating SMC responses.

Backx, Peter PhD, DVM, MSc

Professor, Departments of Physiology and Medicine and Associate Director, Research Platform I, Heart and Stroke/Richard Lewar Centre of Excellence, University of Toronto; Division of Cardiology, University Health Network. Research interests: Dr. Backx's research focuses in two main areas: the molecular structure of cardiac ion channels and the physiological role of cardiac ion channels in normal and diseased myocardium.

Courtman, David PhD

Assistant Professor, Departments of Surgery and Laboratory Medicine and Pathobiology and the Institute for Biomaterials and Biomedical Engineering, University of Toronto; Staff Scientist, St. Michael's Hospital. Research interests: Dr. Courtman's research centers on the biological mechanisms of vascular remodelling and the development of regenerative therapies for vascular disease.

Cybulsky, Myron MD

Associate Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Pathologist, Toronto General Hospital, University Health Network; Senior Scientist, Toronto General Research Institute. Research interests: Dr. Cybulsky's research examines the functions of endothelial cell and leukocyte adhesion molecules in leukocyte emigration during inflammation and atherosclerosis; cellular molecular mechanisms of endothelial cell NF kappa B signal transduction in different regions of the arterial tree during the initiation of atherosclerotic lesions.

Floras, John MD, DPhil, FRCPC

Professor, Department of Medicine, University of Toronto; Staff Cardiologist and Research Director, Division of Cardiology, University Health Network and Mount Sinai Hospital. Research interests: Dr. Floras' research focuses on the neural and endothelial mechanisms of cardiovascular regulation in humans; congestive heart failure; hypertension; cardiopulmonary interaction; and, sleep apnea.

Husain, Mansoor MD

Associate Professor, Department of Medicine and Scholar, McLaughlin Center for Molecular Medicine, University of Toronto; Clinician-Scientist, Toronto General Hospital Research Institute, University Health Network. Research interests: Dr. Husain's research interests include molecular regulation of vascular smooth muscle cell proliferation and development; mouse models of vascular and cardiac gene regulation and pathobiology; cardiovascular imaging; and acute cardiac care.

Liu, Peter P. MD, FRCPC

Professor and Heart and Stroke Polo Chair, Department of Medicine, Director, Heart and Stroke/Richard Lewar Centre of Excellence, Associate Director, Division of Cardiology, University of Toronto; Director, CIHR Group in Heart Failure Research, Staff Cardiologist and Associate Director, Division of Cardiology, University Health Network. Research interests: inflammatory and immune mechanisms of cardiovascular disease; role of host responses to cardiovascular injury in producing heart failure investigated through the use of transgenic models; translation of heart failure investigation from the bench to the bedside through clinical trials and health service research.

Sole, Michael BSc, MD, FRCPC, FACC

Professor, Departments of Medicine and Physiology, University of Toronto; Staff Physician, University Health Network and Mount Sinai Hospital. Research interests: Dr. Sole is interested in conditioned nutritional requirements and pathogenesis of myocardial failure; circadian molecular rhythms in cardiovascular tissues.

Stewart, Duncan J. MD, FRCPC

Professor and Director, Division of Cardiology, Department of Medicine, Director, Regenerative Medicine Program, R. Samuel McLaughlin Centre for Molecular Medicine, and Associate Director, Research Platform II, Heart and Stroke/Richard Lewar Centre of Excellence, University of Toronto; Staff, Division of Cardiology and Associate Director, Basic Science, St. Michael's Hospital. Research interests: Dr. Stewart's research currently focuses on the applications of novel approaches for the regeneration of cardiac and vascular structure and function using cell and/or gene based therapies. In particular, the initiation of the world's first clinical trials using endothelial progenitor cells transfected to overexpress endothelial nitric oxide synthase with treatment of patients with pulmonary hypertension or post-myocardial infarction.

Tsushima, Robert PhD

Assistant Professor, Department of Medicine, University of Toronto. Research interests: Dr. Tsushima's research examines the developmental and biophysical properties of TRPC channels in the heart; SNARE protein interactions with cardiac voltage-gated channels; and, role of PI-3 kinase isozymes in myocardial ischemic preconditioning protection.

Wittnich, Carin CVMA, DVM, MSc, CVO

Professor, Departments of Surgery and Physiology, Director, Cardiovascular Sciences Collaborative Program, University of Toronto; Scientific Staff, Department of Surgery, The Hospital for Sick Children. Research interests: Dr. Wittnich's research interests include the role of age, gender and sex hormones on myocardial pathology (hypertrophy, failure); developmental changes in myocardial intolerance to oxygen stress and its impact on congenital heart disease.

Weisel, Richard MD, FRCSC

Professor, Department of Surgery and Chair, Division of Cardiac Surgery, University of Toronto; Cardiac Surgeon, University Health Network; Director, Toronto General Research Institute. Research interests: Dr. Weisel's research examines the mechanisms of cardiac regeneration by cell transplantation in mouse, rat, hamster and pig models; comparison of alternate approaches for cardiac restoration in patients with cardiomyopathies.

MEMBERS OF THE CENTRE OF EXCELLENCE

University of Toronto faculty with a focus in cardiovascular research can apply for membership in the Centre. The Executive committee reviews and approves all membership applications. Each member has a voice at the Centre, most clearly heard at the annual strategic planning retreat. Members occupy many places in the administrative structure of the Centre, and all members' trainees are eligible to apply for Centre awards.

The following is a list of Centre members and their research interests:

Adeli, Khosrow PhD, FCACB, DABCC

Head and Associate Professor, Clinical Biochemistry Division and Department of Pediatric Laboratory Medicine, The Hospital for Sick Children and University of Toronto. Research interests: elucidation of the key genetic and environmental factors that link insulin resistance, lipoprotein abnormalities, and cardiovascular disease.

Belik, Jaques MD

Professor, Departments of Pediatrics and Physiology, University of Toronto; Staff Neonatologist, Department of Pediatrics, The Hospital for Sick Children. Research interests: developmental and pulmonary hypertension and vascular smooth muscle contractile potential.

Belsham, Denise D. PhD

Associate Professor, Departments of Physiology, Medicine and Obstetrics and Gynecology, University of Toronto; Toronto General Research Institute, University Health Network. Research interests: development of an understanding, at the molecular level, on how the hypothalamus achieves its diverse physiological functions and signals from the hypothalamus that may influence circadian gene expression in the heart.

Bradley, T. Douglas BA, MD, FRCPC

Professor of Medicine and Director, Centre of Sleep and Chronobiology, University of Toronto; Director, Cardio-pulmonary Sleep Disorders and Research Centre, University Health Network; Staff Physician, Division of Respiriology, University Health Network; Director, Sleep Research Laboratory, Toronto Rehabilitation Institute. Research interests: pathophysiological interactions of sleep apnea and the cardiovascular system; clinical trials on the effects of sleep apnea with CPAP.

Briester, Stephanie BSc, MSc, MD

Associate Professor, Department of Surgery, University of Toronto; Staff Cardiac Surgeon, University Health Network. Research interests: thrombosis; haemostasis; women and ischemic heart disease.

Brooks, Dina PhD, MSc

Associate Professor, Department of Physical Therapy, University of Toronto. Research interests: rehabilitation of individuals with cardiac or respiratory disease, especially after surgery, focusing on the development of interventions that maximize recovery and promote higher health-related quality of life.

Bruneau, Benoit PhD

Assistant Professor, Department of Molecular and Medical Genetics, University of Toronto; Scientist, Programs in Cardiovascular Research and Developmental Biology, The Hospital for Sick Children. Research interests: congenital heart defects and how they occur, using two approaches at the genetic level with the aid of mouse models. Dr. Bruneau is looking at genes that may possibly be linked to congenital heart disease and elucidating their function, and also looking at genes that are already known to be mutated in humans with congenital heart defects in order to understand the role these genes play in the disease.

Butany, Jagdish MD, MBBS, FRCPC

Professor, Department of Pathology, University of Toronto; Staff Pathologist and Director, Autopsy Service, University Health Network. Research interests: biological and prosthetic heart valves; peripheral vascular disease; cardiac tumors, incidence and morphology.

Chan, Christopher MD, FRCPC

Assistant Professor of Medicine, University of Toronto; Medical Director, Home Dialysis and Staff Nephrologist, University Health Network. Research interests: human integrative physiology, endothelial progenitor cells, and circulatory effects of nocturnal hemodialysis.

Cheung, Angela MD, PhD, FRCPC

Assistant Professor, Departments of Surgery, Medicine, Public Health Sciences, and Health Administration, University of Toronto; Associate Director, Women's Health Program and Associate Director, Osteoporosis Program, University Health Network. Research interests: women's postmenopausal health, especially as it relates to cardiovascular disease, osteoporosis and breast cancer; cost-effectiveness analyses and medical decision making; functional outcomes, quality of life and health research; clinical and health policy issues related to women's health.

Cohen, Eric MD, FRCPC

Associate Professor, Department of Medicine, University of Toronto; Director, Cardiac Catheterization Laboratory, Sunnybrook and Women's College Health Sciences Centre. Research interests: interventional cardiology including adjunctive pharmacotherapy; evaluation of new interventional devices; and outcomes and cost-effectiveness of percutaneous revascularization.

Connelly, Philip PhD, BA

Associate Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Staff Scientist and Director, J. Alick Little Lipid Research Laboratory, St. Michael's Hospital. Research interests: HDL oxidation; the role of paraoxonase 1 and 3 in the metabolism of fatty acid lactones; cardiovascular complications of diabetes; inflammation in the pre-diabetes and diabetes populations.

Dorian, Paul MD, MSc, FRCPC

Professor, Department of Medicine, University of Toronto; Director, Arrhythmia Service, Division of Cardiology, Department of Medicine, St. Michael's Hospital. Research interests: cardiac electrophysiology; antiarrhythmic drug pharmacology; quality of life in patients with cardiac arrhythmias.

Dumont, Daniel J. PhD

Professor, Department of Medical Biophysics, University of Toronto; Scientist, Sunnybrook and Women's College Research Institute. Research interests: control of angiogenic response using both biochemical and mouse molecular genetic approaches to study the importance of receptor tyrosine kinase signalling during angiogenesis.

Emili, Andrew PhD, MSc

Associate Professor, Program in Proteomics and Bioinformatics, Banting and Best Department of Medical Research, University of Toronto. Research interests: investigation of gene function in model organisms; investigation of the complex biochemical circuitry that underlies cell growth, proliferation, metabolism and development; development of ultrasensitive high-throughput tandem mass spectrometry-based proteomics procedures to analyze protein complexes and functional protein networks; methods development for global quantitative MS-based proteome profiling.

Ethier, C. Ross PhD, M.Math, SM

Professor, Department of Mechanical and Industrial Engineering and Director, Institute of Biomaterials and Biomedical Engineering, University of Toronto. Research interests: focus on the biomechanics of molecules, cells and whole organs; numerical and experimental studies of blood flow in large arteries; study of the hemodynamic basis of arterial disease; outflow of aqueous humour within the eye as related to the problem of glaucoma; mechanical and cellular response of optic nerve tissues to intraocular pressure in glaucoma.

Fantus, I. George MD, FRCPC

Professor, Departments of Medicine and Physiology, Director, Division of Endocrinology and Metabolism and Director, Banting and Best Diabetes Centre Core Laboratory, University of Toronto; Associate Scientist, Samuel Lunenfeld Research Institute, Mount Sinai Hospital; Staff Physician, Mount Sinai Hospital. Research interests: diabetes mellitus, focusing on two main areas of investigation: 1. mechanisms underlying the pathogenesis of insulin resistance, and 2. cellular and molecular changes induced by hyperglycemia which lead to the chronic microvascular complications of diabetes.

Feng, Zhong-Ping PhD, MD, MSc

Assistant Professor, Department of Physiology, University of Toronto. Research interests: function and modulation of voltage-dependent calcium channels in excitable cells under physiological and pathological conditions (e.g., ischemic cell injury and recovery).

Fremes, Stephen MD, MSc, FRCSC

Professor, Department of Medicine, University of Toronto; Head, Division of Cardiovascular Surgery, Sunnybrook and Women's College Health Sciences Centre. Research interests: comparison of the angiographic patency of radial and saphenous vein grafts five to six years post-operatively, specifically, the biochemical and genetic markers in these patients, and testing whether the intra-operative patency assessment with fluorescent angiography improves post-operative graft patency.

Giacca, Adria MD, PhD

Professor, Departments of Physiology and Medicine, University of Toronto. Research interests: atherogenic and cardinogenic effects of energy excess and insulin; effects of energy excess on insulin secretion, action and kinetics: implications for type 2 diabetes.

Goodman, Jack PhD, MSc

Associate Professor, Faculty of Physical Education and Health, University of Toronto. Research interests: left ventricular response to acute and chronic exercise stress in both health and disease; central and peripheral adaptations to exercise training in health and cardiovascular disease.

Goodman, Shaun MD, MSc

Associate Professor, Department of Medicine, University of Toronto; Staff Cardiologist, St. Michael's Hospital; Medical Director, Canadian Heart Research Centre. Research interests: acute and chronic ischemic heart disease including anti-thrombotic/platelet therapy; role of 12-lead continuous electrocardiographic (ECG) monitoring in acute coronary syndromes; secondary prevention.

Gotlieb, Avrum MD, CM, FRCPC

Professor and Chair, Department of Laboratory Medicine and Pathobiology, University of Toronto; Staff Pathologist, University Health Network; Senior Scientist, Toronto General Research Institute, University Health Network. Research interests: cell biology of atherosclerosis; cell biology of the mitral valve as it relates to pathobiological processes which induce heart valve dysfunction and disease.

Grace, Sherry L. PhD, MA

Member, Graduate Department of Rehabilitation Sciences, University of Toronto; Assistant Professor, School of Kinesiology and Health Science, York University; Affiliate Scientist, Toronto General Research Institute, Behavioral Sciences and Health Division, University Health Network. Research interests: cardiac psychology and health services utilization, specifically, referral and participation in secondary preventive services for women and men with heart disease.

Gross, Gil MD, LMCC

Assistant Professor, Department of Pediatrics, University of Toronto; Staff Cardiologist, The Hospital for Sick Children; Clinician Scientist, The Hospital for Sick Children Research Institute. Research interests: bradycardic ventricular electrical remodelling, mouse intracardiac electrophysiology studies and pediatric tacharrhythmias.

Heximer, Scott PhD

Assistant Professor, Department of Physiology and Principal Investigator, Heart and Stroke/ Richard Lewar Centre of Excellence, University of Toronto. Research interests: regulation of G protein signalling mechanisms in cardiovascular tissues.

Hinek, Alek MD, PhD, DSc

Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Senior Scientist, Cardiovascular Research Program, The Hospital for Sick Children. Research interests: role of elastin and elastin receptor in development of cardiovascular system and in cardiac and vascular diseases, especially those associated with inherited pediatric syndromes such as Williams syndrome, Hurler disease, Costello syndrome and with adult cardiomyopathies.

Irvine, Jane PhD

Associate Professor, Department of Psychiatry, University of Toronto; Affiliated Scientist Division of Behavioural Sciences and Health, Toronto General Research Institute, University Health Network. Research interests: behavioural; electrophysiology; quality of life; congenital; ischemic heart disease.

Keeley, Fred W. PhD

Professor, Departments of Biochemistry and Laboratory Medicine and Pathobiology, University of Toronto; Senior Scientist, Cardiovascular Research Program, The Hospital for Sick Children Research Institute. Research interests: regulation of elastin synthesis and assembly; sequence/structure/function relationships governing the self-assembly and material properties of the extracellular elastic matrix.

Langer, Anatoly MD, BSc, FRCPC, FACC

Associate Professor, Department of Medicine, University of Toronto; Director, Canadian Heart Research Centre. Research interests: processes of arterial remodelling, at the cellular level, in response to injury and altered hemodynamics. Current studies examine: the role of the cell cytoskeleton in directional (polarized) cell activities, local regulators of arterial remodelling, and the transduction of mechanical forces by vascular cells.

Langille, Lowell PhD

Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Director, Heart and Stroke Foundation of Ontario Cell Biology of Atherosclerosis Program. Research interests: influences of physical forces in the biology of vascular cells and tissues; mechanotransduction pathways in vascular endothelium and smooth muscle cells, and how these pathways regulate cellular activities and tissue remodelling in cell culture and animal models.

Letarte, Michelle PhD

Professor, Departments of Immunology and Medical Biophysics, University of Toronto; Senior Scientist, The Hospital for Sick Children. Research interests: role of endoglin in normal vascular function and in the pathobiology of Hereditary Hemorrhagic Telangiectasia type 1 (HHT1).

Lewis, Gary MD, FRCPC

Professor, Department of Medicine, University of Toronto; Head, Division of Endocrinology, University Health Network and Mount Sinai Hospital. Research interests: determining the mechanism of intestinal and hepatic lipoprotein overproduction in insulin resistance and Type 2 diabetes; determining the mechanism of high density lipoprotein (HDL) lowering in hypertriglyceridemic states such as insulin resistance and type 2 diabetes; effects of free fatty acids on pancreatic beta cell secretory function; insulin sensitizing effects of vasoactive agents; and, mechanisms of action of dipeptidyl peptidase IV inhibitors.

Leytin, Valery PhD, MSc, DSc

Assistant Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Staff Scientist, St Michael's Hospital. Research interests: study of platelet apoptosis induced by chemical agonists, shear stresses and storage; study of the role of platelet surface receptors in regulation of platelet viability; animal models for testing viability and function of human platelet concentrates.

Li, Ren-Ke MD, PhD

Professor, Departments of Laboratory Medicine and Pathobiology and Surgery, University of Toronto; Senior Scientist, Cardiovascular Surgery Division, University Health Network. Research interests: cell transplantation to regenerate damaged myocardium and restore cardiac function; cell transplantation to induce angiogenesis in ischemic cardiomyopathy; tissue engineering to create cardiac tissue.

Lindsay, Thomas MD, CM, MSc, FRCSC, FACS

Associate Professor, Department of Surgery and Chair, Division of Vascular Surgery, University of Toronto; Director, Toronto General Hospital Vascular Centre, University Health Network. Research interests: ruptured aortic aneurysm and multi system organ failure; risk reduction in peripheral arterial disease.

Logan, Alexander MD, MSc, FRCPC

Professor, Departments of Medicine and Public Health Sciences, University of Toronto; Medical Staff, University Health Network and Mount Sinai Hospital. Research interests: genetic epidemiology and gene identification in human hypertension; clinical trials in heart failure; clinical investigations assessing sleep apnea in refractory hypertension.

MacLennan, David PhD, DSc

University Professor and J.W. Billes Professor of Medical Research, Banting and Best Department of Medical Research, University of Toronto. Research interests: structure/function of the calcium ATPase; structure/function of the calcium release channel; muscle diseases caused by calcium dysregulation; sites of interaction among phospholamban, sarcolipin and the calcium pump; and proteomic analysis of progression to heart failure and discovery of biomarkers of heart failure.

Marsden, Philip MD

Professor and Keenan Chair in Medical Research, Department of Medicine, University of Toronto; Staff, Division of Nephrology, St. Michael's Hospital. Research interests: endothelial-derived vasomediator gene expression.

Mickle, Don MSc, MD

Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Director, Western Division Laboratories and Clinical Biochemistry, University Health Network. Research interests: myocardial cell transplantation.

Myers, Martin MD, FRCPC

Professor, Department of Medicine, University of Toronto; Attending Staff, Division of Cardiology, Sunnybrook & Women's College Health Sciences Centre. Research interests: IMAGINE study Executive Committee member (quinapril therapy after coronary artery bypass surgery); evaluation of automated blood pressure recording devices and their use in clinical practice.

Newton, Gary MD

Assistant Professor, Department of Medicine and Institute of Medical Sciences, University of Toronto; Attending Staff (Cardiology), Mount Sinai Hospital; Associate Staff Physician, University Health Network. Research interests: congestive heart failure, cardiac physiology, regulation of cardiac function and mechanistic studies of antioxidants in humans.

Ni, Heyu PhD, MD, MSc

Assistant Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Research Scientist, St. Michael's Hospital; Associate Scientist, Canadian Blood Services. Research interests: mechanisms of thrombosis and hemostasis; mechanisms of autoimmune thrombocytopenia; animal models of maternal immune response to fetal platelet antigens; platelet physiology and immunology; adhesion molecules; intravital microscopy; and proteomics.

Nolan, Robert MA, PhD

Assistant Professor, Department of Psychiatry and Adjunct Professor, Graduate Programme in Psychology, University of Toronto; Cardiovascular Research Psychologist and Director, Behavioral Cardiology Research Unit, University Health Network. Research interests: cardiovascular reactivity to stress and heart rate variability; environmental and psychosocial determinants of cardiovascular health; behavioral strategies for risk factor reduction counseling.

Opas, Michael PhD, MSc

Professor, Department of Laboratory Medicine and Pathobiology and the Institute of Medical Science, University of Toronto. Research interests: cytoskeleton, cell adhesion, and motility; cell biology of Ca-binding proteins; importance of calreticulin in cardiac development and function.

Opavsky, Anne MD, PhD, MSc

Assistant Professor, Department of Pediatrics, University of Toronto; Scientist, Infection, Immunity, Injury and Repair Research and Cell Biology, The Hospital for Sick Children; Staff, The Hospital for Sick Children. Research interests: determinants of individuals' susceptibility to viral infections, specifically, viral infections of the heart (myocarditis). Dr. Opavsky is now investigating the role that viral receptors and associated signalling molecules play in coxsackieviral myocarditis in order to establish new approaches to therapy.

Parker, John MD, FRCPC

Professor, Departments of Medicine and Pharmacology, University of Toronto; Head, Division of Cardiology, Mount Sinai Hospital and University Health Network. Research interests: autonomic physiology; nitrate pharmacology; kinetics.

Parker, Thomas MD, FRCPC, FACC

Associate Professor, Department of Medicine, University of Toronto; Brazilian Ball Chair and Division Head, Division of Cardiology, St. Michael's Hospital. Research interests: molecular regulation of cardiac hypertrophy and calcium-binding proteins.

Pei, York MD, FRCPC

Professor, Department of Medicine and Associate Director, Research Platform III, Heart and Stroke/Richard Lewar Centre of Excellence, University of Toronto; Senior Scientist, Division of Genomic Medicine, Toronto General Hospital Research Institute, University Health Network. Research interests: gene mapping for complex disease trait, microarray analysis, human genome epidemiology of kidney disease.

Rakowski, Harry MD, FRCPC

Professor, Department of Medicine, University of Toronto; Staff Cardiologist and Director, Clinical Cardiology, University Health Network. Research interests: hypertrophic cardiomyopathy; valvular heart disease; contrast echocardiography.

Rao, Vivek MD, PhD, FRCSC

Associate Professor, Department of Surgery, University of Toronto; Staff Surgeon and Surgical Director, Divisions of Cardiology and Transplant and Mechanical Circulatory Assistance, University Health Network; Scientist, Division of Experimental Therapeutics, Toronto General Research Institute. Research interests: myocardial protection for cardiac surgery; transplant vasculopathy; vascular biology of the endothelium.

Ross, Heather MD, MHSc, FRCPC

Associate Professor, Department of Medicine, University of Toronto; Medical Director of Cardiac Transplantation and Director, Clinical Trials for the Multiorgan Transplant Program, University Health Network. Research interests: end of life care; clinical trials in heart failure; cardiac transplantation.

Rubin, Barry MD, PhD, FRCSC, FACS

Associate Professor, Department of Surgery, University of Toronto, Head and Staff Surgeon, Division of Vascular Surgery, University Health Network, Senior Scientist, Toronto General Research Institute, Consultant Staff, Mount Sinai Hospital and The Hospital for Sick Children. Research interests: molecular regulation of cardiac gene expression; role of MAP kinases.

Scholey, James MD, FRCPC

Associate Professor, Department of Medicine, University of Toronto, Staff Physician and Chair of Fellowship Awards, University Health Network. Research interests: growth factors; cell signalling; diabetes; mechanical strain.

Sefton, Michael BAsC, ScD

University Professor and Michael E. Charles Professor, Department of Chemical Engineering and Applied Chemistry; Director, Institute of Biomaterials and Biomedical Engineering, University of Toronto. Research interests: tissue engineering and regenerative medicine; angiogenesis, endothelial and smooth muscle cells; blood compatibility.

Simmons, Craig PhD

Assistant Professor, Departments of Mechanical and Industrial Engineering, Dentistry and the Institute of Biomaterials and Biomedical Engineering, University of Toronto. Research interests: heart valve biomechanics and mechanobiology; valvular calcification; skeletal tissue engineering and mechanobiology; cellular mechanics and mechanobiology; bioMEMS.

Siu, Sam MD, SM, FACC, FRCPC

Associate Professor, Department of Medicine, University of Toronto; Director of Research, University of Toronto Congenital Cardiac Centre for Adults; Director of Echocardiography, University Health Network and Mount Sinai Hospital. Research interests: adult congenital heart disease; pregnancy and heart disease; quantitative echocardiography.

Stewart, Donna MD, FRCPC

Professor and Lillian Love Chair of Women's Health, Department of Psychiatry, University of Toronto and University Health Network. Research interests: gender differences in cardiovascular disease and rehabilitation; cardiovascular risk factors; acute coronary events; stroke.

Strauss, Bradley MD, PhD

Professor, Departments of Medicine and Laboratory Medicine and Pathobiology, University of Toronto; Cardiology Staff and Director, Interventional Cardiology, St. Michael's Hospital. Research interests: restenosis; atherosclerosis; interventional cardiology; vascular biology; gene therapy.

Thomas, Scott PhD

Associate Professor, Department of Physical Therapy and Associate Dean, Graduate Education and Research, Faculty of Physical Education and Health, University of Toronto. Research interests: cardiovascular control in response to stressors in aging humans; modelling the dose/response relation to exercise and performance; assessing the efficacy of early exercise interventions in stroke, pre-diabetes and early cardiovascular disease.

Tu, Jack MD, PhD, FRCPC, FACP

Professor, Departments of Medicine, Public Health Sciences and Health Administration, University of Toronto; Senior Scientist, Institute for Clinical and Evaluative Sciences (ICES); Staff Physician, Division of General Internal Medicine, Sunnybrook & Women's College Health Sciences Centre. Research interests: quality of acute myocardial infarction, congestive heart failure and stroke care; outcomes of cardiac surgery and carotid endarterectomy; health care report cards and performance measurement; and, international comparisons of health care systems.

Verma, Subodh MD, PhD

Assistant Professor, Department of Surgery, University of Toronto; Scientist and Staff Surgeon, Division of Cardiac Surgery, St. Michael's Hospital. Research interests: basic and translational atherosclerosis; endothelial function and stem cell control of atherogenesis; inflammation and atherosclerosis.

Ward, Michael MD, PhD

Associate Professor, Department of Medicine, University of Toronto; Staff, Department of Medicine, St. Michael's Hospital. Research interests: endothelium; nitric oxide; endothelin; vascular smooth muscle; contractile proteins; hypoxia; atherosclerosis; and angiogenesis.

West, Lori J. MD, DPhil, FRCPC

Associate Professor, Departments of Pediatrics and Physiology, University of Toronto; Section Head, Transplant Cardiology and Staff Cardiologist, The Hospital for Sick Children; Scientist, The Hospital for Sick Children Research Institute. Research interests: ABO-incompatible organ transplantation; infant and pediatric heart transplantation; neonatal tolerance in mice and humans.

Wright, Graham A. PhD

Professor, Department of Medical Biophysics, University of Toronto; Research Director, Heart and Circulation Program and Senior Scientist, Sunnybrook & Women's College Health Sciences Centre; Chair, Ontario Consortium for Cardiac Imaging. Research interests: cardiovascular imaging, with an emphasis on Magnetic Resonance Imaging (MRI), including assessment, treatment planning and therapy guidance associated with revascularization, tissue regeneration, and arrhythmia correction.

Yang, Burton PhD, MSc

Associate Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto; Scientist, Trauma Research Program, Sunnybrook & Women's College Health Sciences Centre. Research interests: the roles of proteoglycans in mediating cell activities. Currently he is studying the role of versican, a proteoglycan involved in regulating cell-substrate interactions, and how versican enhances angiogenesis, and induces leukocyte aggregation and blood coagulation.

Yau, Terrence MD, MSc, FRCSC

Associate Professor, Department of Surgery, University of Toronto; Staff Surgeon and Director of Research, Division of Cardiovascular Surgery, University Health Network. Research interests: cell based gene therapy for myocardial repair; clinical trials of myocardial protection and novel surgical technologies.

Yeh, Wen-Chen MD, PhD

Associate Professor, Department of Medical Biophysics, University of Toronto; Senior Scientist, Princess Margaret Hospital and University Health Network. Research interests: signal transduction pathways induced by inflammatory cytokines and Toll-like receptors. His studies provide mechanistic information on regulation of inflammatory responses and cell apoptosis, which play important roles in infectious, ischemic and degenerative cardiovascular diseases.

SELECTED AWARDS, CHAIRS AND HONOURS HELD BY MEMBERS

Our members have received recognition for their academic activities on both national and international levels. Listed below are just a few awards and honours received by members, and reported to the HSRLCE.

Adeli, Khosrow

2004 National Award for outstanding contributions to the profession of Clinical Biochemistry, Canadian Academy of Clinical Biochemistry, CSCC Annual Meeting, London, Ontario

Backx, Peter

2004-2009 Heart and Stroke Foundation of Ontario Career Investigator Award

Belsham, Denise

2004-2009 Canada Research Chair in Neuroendocrinology, Tier Two
2004 Ruth Pike Lectureship Award, Pennsylvania State University

Bendeck, Michelle

2004-2009 Heart and Stroke Foundation of Ontario Career Investigator Award
2005 Undergraduate Teaching/Education Award, Department of Laboratory Medicine and Pathobiology, University of Toronto
2000-2005 Premier's Research Excellence Award (PREA)

Brooks, Dina

2001-2006 Canadian Institutes of Health Research, New Investigator Award
2005 Mentorship Award, Canadian Physiotherapy Association
2004 Recognition in Teaching Award, Department of Physical Therapy, University of Toronto

Butany, Jagdish

2005 Vice President and President Elect, Society for Cardiovascular Pathology
2005 Vice President and President Elect, Canadian Association of Pathologists

Chan, Christopher

2005 New Faculty Teaching Award, University Health Network

Cheung, Angela

2004-2009 Premier's Research Excellence Award (PREA)
2005-2010 Canadian Institutes of Health Research Mid-Career Award in Women's Health
2005 Award for Excellence in Clinical Teaching, University Health Network

Dorian, Paul

2003-2007 Professorship in Electrophysiology, St. Michael's Hospital

Dumont, Daniel

2005-2012 Canada Research Chair in Angiogenics and Lymphangiogenic Signalling, Tier One

Feng, Zhong-Ping

2003-2008 Canadian Institutes of Health Research, New Investigator Award
2003-2008 Premier's Research Excellence Award (PREA)

Floras, John

2001-2006 Heart and Stroke Foundation of Ontario, Career Investigator Award
2004-2011 Canada Research Chair in Integrative Cardiovascular Biology, Tier One

Fremes, Stephen

2005 Lister Prize, University of Toronto
2005 Dr. Marvin Tile Award, Sunnybrook and Women's College Health Sciences Centre

Heximer, Scott

2003-2008 Canada Research Chair in Cardiovascular Physiology, Tier Two

Hinek, Alexander

2004-2007 Heart and Stroke Foundation of Canada, Career Investigator Award

Husain, Mansoor

2004-2009 Heart and Stroke Foundation of Ontario Career Investigator Award
2003-2007 Premier's Research Excellence Award (PREA)
2004 Allan Bruce Robertson Young Investigator Award, Clinical Research Society of Toronto

Irvine, Jane

2005 Faculty of Graduate Studies Teaching Award, York University

Lewis, Gary

2001-2011 Canada Research Chair in Diabetes, Tier Two

Lindsay, Thomas

2004 President Elect, Canadian Society for Vascular Surgery

Liu, Peter

2005 Visiting Professor Award, Royal College of Physicians and Surgeons of Canada
2005 Merit Award for Continued Excellence in Extramural Education Programs, American College of Cardiology
2005 University Lecturer, University of Saskatchewan
2005 Distinguished Cardiovascular Research Lecturer, University of British Columbia

MacLennan, David

2005 Honorary member, Japanese Biochemical society

Rao, Vivek

2003-2005 American Association of Thoracic Surgeons, Robert E. Gross Scholarship

Stewart, Donna

2004 University Professor, University of Toronto
2004 President, International Association of Women's Mental Health
2005 Recipient of the Mary Cohen Leadership Award

Tsushima, Robert

2000-2005 Heart and Stroke Foundation of Ontario New Investigator Award
2001-2006 Premier's Research Excellence Award (PREA)

Tu, Jack

2005 Heart and Stroke Foundation of Ontario Career Investigator Award
2000-2010 Canada Research Chair in Health Services Research, Tier Two
2001-2005 Canada Research Chair, Ontario Innovation Trust — Ontario Distinguished Research Award

Weisel, Richard

2004 Wilfrid Bigelow Lectureship Award, Canadian Society of Cardiac Surgeons
2004 Distinguished Achievement Award, Council on Cardiovascular Surgery and Anesthesia, American Heart Association
2005 Guest Lecturer, American Association for Thoracic Surgery

West, Lori J.

2005 Rick Gallop Award for Research Excellence, Heart and Stroke Foundation of Ontario

Wittnich, Carin

2005 Graduate Teaching Award, Faculty of Medicine, University of Toronto

Genome Canada Project: Protein Expression Profiling Platform for Heart Disease Biomarker Discovery

In 2003, a team from the HSRLCE consisting of Drs. Peter Liu, Andrew Emili and David MacLennan submitted an application for the Genome Canada-sponsored competition, "Applied Genomics and Proteomics Research in Human Health." We are pleased to announce that in April 2004, this proposal was funded at the level of \$6.1 million dollars over three years. Our major co-funding partner in this innovative and exciting venture is Roche Diagnostics GmbH (Roche Diagnostics GmbH is the world's leader in developing new diagnostic assays for biomarkers). This project, which falls under the auspices of the Centre's research platform III, was spawned by our successful Interdisciplinary Health Research Team (IHRT) on Gene-Environment Interactions (CHFNET, described on page 28), and involves using two complementary techniques to identify biomarkers of heart failure.

Biomarkers are a new way for doctors to screen an individual's susceptibility to a specific disease, even if the patient has no obvious symptoms. With this type of information, patients and their doctors may be able to apply preventative strategies long before any symptoms have developed. This development will herald the era of "personalized medicine."

This research project is based on preparing samples from animal models of heart failure, and using new powerful tools, like proteomics and gene expression microarrays (the so-called "gene-chip") to measure the amounts of every individual RNA in a cell in order to examine all the proteins in a diseased heart and compare them with the proteins found in a healthy heart. The goal is to find differences that correlate with the progression of the disease condition. Finally, any biomarkers identified in the animal models will be validated by assessing their presence and usefulness in samples from human patients.

Strategic Planning Retreat, February 2005: "Translational Medicine"

In February 2005, the Centre convened a half-day strategic planning retreat focusing on "Translational Medicine". Our goal was to learn more about the phenomenal transformation underway in Toronto's biomedical research community. No matter which name it goes by, "knowledge translation", "translational research", or "bench-to-bedside", there can be no mistake that scientists and clinicians are energized about the possibilities that now exist for fast-tracking laboratory discoveries from the bench to the bedside, thereby making a fundamental difference in patient's experiences of the clinic, and health more broadly. Guest speakers presented exciting developments taking place in Toronto at the Terrence Donnelly Centre for Cellular and Biomolecular Research (CCBR), the McLaughlin Centre for Molecular Medicine, the Molecular Design and Information Technology Centre (MDIT), and within the Department of Medicine itself. Three of our members also related how their own research interests had inspired them to form their own companies based on intellectual property developed in their academic laboratories: Dr. Michael Sefton, from the Institute for Biomaterials and Biomedical Engineering (IBBME), Dr. Michelle Letarte, from The Hospital for Sick Children, and Dr. Duncan Stewart, from St. Michael's Hospital and Associate Director of the Centre's research platform II.

The retreat included break-out workshops to facilitate further discussion and brainstorming, followed by a session to synthesize ideas and recommendations. The final outcome of the exercise was the development of a set of "next steps" that the Centre is currently implementing to help foster translational medicine amongst our members. These next steps encompassed three main

themes: information dissemination, research funding, and enhanced interactions between local investigators. The Centre will use its website to establish a database of member's expertise, and publicize the proactive efforts and services available through the University's Innovation Foundation. The Centre will also create targeted traineeship opportunities in translational medicine and may develop an in-house program for seed grants to foster translational projects. Finally, the Centre will foster interactions and possible collaborations between researchers by holding translational medicine workshops (see below), and by recruiting informal and formal mentors with expertise in this area.

HSRLCE Special Workshop, June 2005: "Translational Medicine"

One of the "next steps" of the Centre's Strategic Planning Retreat on *Translational Medicine* was to hold a workshop where clinician-scientists and basic research could meet to discuss possible collaborations that would take laboratory discoveries from the bench to the patient's bedside. Thus, a half-day event was held at Hart House in June 2005, featuring talks from Drs. Benoit Bruneau, George Fantus, Mansoor Husain, Peter Liu, Duncan Stewart, Craig Simmons, Bradley Strauss and Richard Weisel. The fifteen participants of this workshop engaged in lively discussions, and were exposed to new ideas and research underway.

New Frontiers Program Workshop, May 2005: "Cardiovascular Complications of Diabetes"

Type I and type II diabetes have many associated complications and represent one of the most significant health burdens among Canadians. The cardiovascular complications of the disease account for the majority of costs and mortality. Currently, we have a poor understanding of the interactions between diabetes and cardiovascular diseases. Research activity is required at the interface between the diabetes and cardiovascular research communities and requires coordinated efforts and novel approaches in order to devise and fast-track more effective methods of treating and managing affected Canadians. The Heart and Stroke Foundation of Canada (HSFC) and the Institute of Circulatory and Respiratory Health (ICRH) of the Canadian Institutes of Health Research (CIHR) plan to launch a request for applications (RFA) with this interface as the focus. To prioritize research foci for the upcoming RFA, the CIHR Institute of Circulatory and Respiratory Health and the HSFC supported, and participated, in an international New Frontiers Program (NFP) workshop organized by the Heart and Stroke/Richard Lewar Centre of Excellence in May 2005.

A pre-workshop survey was designed to solicit input, and was distributed by the HSRLCE to a broad range of research communities and experts, both national and international. The input provided enabled the HSRLCE to develop a comprehensive agenda for the workshop, held May 28 to 29, 2005, in Toronto, Ontario, under the leadership of Drs. Peter Liu, Subrata Chakrabarti, Dan Drucker and George Fodor. The workshop was attended by over 60 invited, leading national and international researchers, and representatives from partner organizations and agencies. State-of-the-art reviews, large group discussions and focused working groups enabled attendees to identify specific knowledge gaps, discuss research themes as well as possible funding mechanisms.

The HSRLCE was pleased to collate a synthesis report submitted by the workshop leaders that summarizes the workshop discussions, knowledge gaps and recommendations of priority areas of potential research focus. An electronic copy of the Executive Summary of the synthesis report is available at http://www.cihr-irsc.gc.ca/e/documents/NFPExecutiveSummary_e.pdf.

Research Platform I: Transgenic Physiology (Associate Director: Dr. Peter Backx)

The Transgenic Physiology (TP) Laboratory of the Heart and Stroke/Richard Lewar Centre of Excellence continues to provide members of the local cardiovascular research community with access to state-of-the-art equipment, resources and high-level expertise for cardiovascular assessment of transgenic mice, and in some cases rats. The laboratory is pleased to have the support of two full-time technicians: Dr. Golam Kabir, our Surgical Technician (who replaced Dr. Zhiqiang Jia in June 2005), and Ms. Dongling Zhao, our in-house biochemical and viral expert. The TP Laboratory provides members of the Centre, and in many cases, investigators from the local cardiovascular community, with access to the services and expertise of these technicians. Assistance with the training of students and laboratory members on various procedures, and access to the Centre's equipment, facilities and other resources is also provided.

Dr. Kabir's duties include the generation of animal models of heart and vascular disease using mice and other small mammals. Specific procedures include coronary artery ligation, aortic banding and vascular injury. Dr. Kabir is also responsible for performing cardiovascular assessments on mice and other mammals using tail-cuff recordings, pressure and pressure-volume Millar catheters, echocardiography, programmed electrical stimulation, telemetry and electrocardiograms (ECGs). While most of these surgeries and procedures have been performed at the Transgenic Physiology Laboratory, Dr. Kabir has also kindly provided these services to other locally-based laboratories when required. During the past twelve month period alone, Drs. Kabir and Jia have performed more than 250 surgeries and over 400 procedures for a number of HSRLCE members and cardiovascular community members including:

- Dr. Benoit Bruneau (HSC);
- Dr. John Floras (Mount Sinai);
- Dr. Scott Heximer (UofT);
- Dr. Mansoor Husain (UHN),
- Dr. Lowell Langille (UHN);
- Dr. Peter Liu (UHN);
- Dr. Michael Opas (UofT);
- Dr. Anthony Pawson (Mount Sinai);
- Dr. Janet Rossant (HSC);
- Dr. James Scholey (UofT);
- Dr. Michael Sole (UHN);
- Dr. Michael Ward (SMH), and many others.

The results of these interactions have contributed to the publication of more than 45 manuscripts in journals including *Nature Medicine*, *Cell*, *Journal of Clinical Investigation*, *Circulation Research* and many others.

Dr. Kabir also routinely provides training in *in vivo* hemodynamic pressure recordings in arterial vessels and hearts, pressure-volume loop assessment of mouse ventricles, ultrasound imaging (2D and M-mode), Doppler measurements, tail cuff recordings, Langendorff heart preparations (both isometric, working heart, constant perfusion pressure and constant perfusion flow), electrocardiograms and telemetry.

Ms. Zhao has the expertise to generate adenoviruses and is designing new approaches using the more convenient Lentivirus system. Ms. Zhao also provides expertise for isolating and culturing cardiac myocytes, vascular smooth muscle myocytes and isolated blood vessel preparations. The Transgenic Physiology Laboratory houses a cellular/multicellular function core to conduct studies which assess contractile mechanics, excitation-contraction coupling and cellular electrophysiology of cardiac or smooth muscle cells and tissues. The cellular function core also has an inverted Olympus confocal microscope for the imaging and fluorescence measurements of isolated cells and tissues.

With the continued efforts of members of the Centre and the staff at the Transgenic Physiology Laboratory, the impact of the Centre is expected to expand in the coming years. There are plans in place to expand the capability of the laboratory to include the measurement of surface electrical activity in isolated hearts using optical electrical mapping studies, the measurement of myofibrillar contractile properties and confocal measurements of multicellular cardiac and vascular preparations. The implementation of these new recording methods will be assisted by a new electrical engineer in the laboratory, Mr. Wallace Yang.

Research Platform II: Innovative Cardiovascular Therapies (Associate Director: Dr. Duncan Stewart)

The goal of HSRLCE research platform II is to translate basic scientific discovery into innovative new therapies for cardiovascular disease. The Centre has had a major focus on gene and cell-based therapies, and has played an important role in the ongoing NORTHERN Trial studying the efficacy of VEGF gene therapy in patients with severe symptomatic coronary artery disease that are unsuitable for standard revascularization procedures. This trial is now in its final stages of enrolment, and we expect to be in a position to evaluate the results by the Fall of 2006.

At present, we are in the advanced stages of planning a clinical trial using progenitor cells to repair myocardial damage in patients who have suffered large heart attacks. This represents the first phase of a broad based collaborative program of all the cardiovascular centers at the University of Toronto under the acronym "Toronto Heart Repair and Angiogenesis Trials (Triple Threat)" with the other targets being chronic myocardial ischemia and heart failure. We expect to be initiating our first study before the end of 2006. This trial leaves a strategy that we have developed for the PHACET Trial, which uses a cell-based gene therapy to treat patients with intractable pulmonary arterial hypertension. This trial will begin in the first quarter of 2006 and utilizes endothelial progenitor cells isolated from the peripheral circulation and transfected with endothelial and nitric oxide synthase, a gene which enhances the growth and regenerative capacity of these cells.

Research Platform III: Genes/Proteins and Populations (Associate Directors: Drs. Peter Liu and York Pei)

The completion of human genome, together with the genome of a number of model species, including the mouse, rat, worm, pig, etc., permitted the development of microarrays to determine gene expression patterns across the entire genome. The more recent completion of the human haplotype map (HapMap) will permit the detection of single nucleotide polymorphisms (SNP) on a chip containing 500,000 SNPs. These are extremely powerful system biology-based tools that will have a major influence on how cardiovascular research will be conducted in the future.

The expression array infrastructure is currently run on a very small budget provided by the Heart and Stroke/Richard Lewar Centre of Excellence, as the majority of financial support is derived from a CIHR-funded peer review network team grant (CHFNET). The microarrays are processed by local expert teams, read by the robotics at the Toronto Advanced Genomic Centre (TAGC) hosted by the Hospital for Sick Children, and analyzed by partially-supported Centre staff. Similarly, the proteomics platform is supported mostly through Genome Canada funding (total \$6 million) that was awarded in 2004, on biomarkers developed by Drs. Andrew Emili, Peter Liu and David MacLennan. This research platform integrates both animal models and human samples, and can also help to identify novel pathways and biomarkers. The biomarkers are then validated through gel or chip based strategies, or using ELISA where antibody is already available.

Research platform III was previously led by Dr. Alexander Logan, who possesses extensive experience with genetic epidemiology and informatic analysis. However, because of changes in his research focus, Dr. Logan in 2004 delegated his leadership position to Dr. York Pei. We are most grateful to Dr. Logan for his participation in this project, and welcome Dr. Pei, who has led translational research platforms and will be instrumental in leading the clinical application aspects of the research in the coming years.

From 2003 to 2005, the microarray gene expression platform supported more than 21 Principal Investigators in their analyses of both animal model based expression pattern changes and human blood-based analysis. This research platform was instrumental in helping several research trainees win research competitions, and providing hypotheses generating molecular pathways to support new grant applications. As a result of uniform approaches towards model generation and sample collection, we have also accrued a critical database on disease processes such as cardiovascular remodelling, vascular injury, myocardial ischemia and cardiovascular regeneration. These will serve as future tools for "in silico" research that provides important hypotheses validation steps before actually committing resources at the bench or bedside while minimizing the risk of a failed experiment.

The proteomics platform, although much younger, is already extremely competitive internationally. The proteomic team (Drs. Emili and Liu) have been invited to co-host the sixth and the newest international initiative on Cardiovascular Proteomics by the HUPO (Human Proteomic Organization). In addition, the team has been invited by Journal of American College of Cardiology and Circulation to write state-of-the-art reviews in the field of cardiovascular proteomics. This team has also leveraged partnership support by Roche Diagnostics Global, which is the world's largest diagnostic company, to develop potentially novel biomarkers that may derive from this platform.

In future, the need to acquire sustained infrastructure support for this platform is vital. While we have provided a leading edge cardiovascular expression microarray and proteomics platform, it has been done on a shoestring budget with minimal in-house infrastructure. Should this technology platform continue to grow and support a greater number of investigators, then more infrastructure, particularly in bioinformatics, will be necessary. To meet this need, the investigators in this platform have submitted a Canada Foundation for Innovation (CFI) renewal grant to seek expansion of the core labs located in the FitzGerald Building on the University of Toronto campus. The labs will accommodate computational platforms, and the grant will provide salary support for operational staff. These labs will serve the community with the goal of facilitating additional leading-edge research programs for the investigators at the Centre.

An Integrated Canadian Strategy in Heart Failure – CHFNET

(A Research Network on Gene-Environment Interactions in Heart Failure: Molecules to Populations; Peptides to Patients)

Heart disease is the leading cause of death for Canadians today, and chief among these is heart failure, a condition where the heart cannot always meet the body's demand for blood. While some forms of heart disease are actually decreasing, the number of new cases of heart failure continues to increase every year. This disease is placing an increased burden on our health care system, and once diagnosed, is usually fatal.

To fulfill this urgent need to find improved diagnostics for early detection of heart failure and the need for improved treatments to improve the lives of those living with heart failure, the CHFNET group (an Interdisciplinary Health Research Team, or IHRT) was formed. With \$2.5 million of funding from the Canadian Institutes of Health Research (CIHR) and the Heart and Stroke Foundation of Canada (HSFC), researchers from across Canada are looking for new and better ways of predicting, preventing and treating heart failure. This is a big task, and will take years of research. The innovative approach that the CHFNET group is taking is to link together experts in many different areas of science, to give each other new perspectives and insights. The goal of this group is to generate advances in the understanding of heart failure occur at unprecedented rates, so this understanding can be applied to improve diagnosis and treatment.

Traditionally, scientists have been experts in very narrow areas of science, spending entire careers studying single molecules in isolation. One of the philosophies of the CIHR, a government of Canada institution, is to accelerate the pace of discovery in Canada, by having the Canadian health research community work together, better and more often. Thus, the CHFNET group brings together scientists from across the country, from the University of British Columbia, University of Alberta, University of Manitoba, University of Western Ontario, McMaster University, University of Toronto, Queen's University and the University of Montreal, as well as scientists who study various fields of basic biology, clinical researchers, geneticists, and psychologists. All this brain power is focused on heart failure research. The challenge is to make this innovative new approach to scientific research work. The key to this is good communication between the various nodes.

In just three short years, the team has already published 20 high impact papers, some of which have led to major breakthroughs. For example, while a role for phosphatidylinositol-3 Kinase (PI3Kinase) signalling in cardiac development and function was appreciated, Drs. P. Backx and J. Penninger were the first to demonstrate that distinct isoforms of this lipid phosphorylating enzyme have discrete functions in the heart. PI3Kinase- α controls growth of heart cells while PI3Kinase- γ separately regulates muscle contractility (this signalling cascade also plays important roles in endothelial cells in the vasculature). Based on these discoveries the PI3K pathway has become an important drug target to treat hypertension and congestive heart failure (Crackower *et al.*, 2002 *Cell* 110:737).

Another example are the angiotensin peptides known to be key regulators of mammalian blood pressure. Drs. Y. Pei, J. Scholey, P. Backx, and J. Penninger discovered that a new enzyme, Angiotensin Converting Enzyme 2 (ACE2) maps genetically to a locus implicated in rodent models of hypertension, and went on to create ACE2 knockout mice that revealed novel unappreciated roles for this enzyme in cardiac function (Crackower *et al.*, 2002 *Nature* 417: 822).

The CHFNET team has also been investigating how excessive iron levels in humans cause cardiomyopathy. Using a mouse model of iron overload cardiomyopathy Drs. P. Liu and P. Backx

demonstrated that it is the L-type calcium channel that permits Ca^{++} to enter the heart, leading to a new therapy with low dose Ca^{++} channel blockers to treat and prevent cardiomyopathy in these patients (Oudit *et al.*, 2003 *Nature Medicine* 9:1187).

Canadian Foundation for Innovation (CFI) Leading Edge Fund Application: University of Toronto Initiative in Mammalian Models of Human Disease

At the inception of the HSRLCE, the Centre's Director, Dr. Peter Liu, joined with Dr. Janet Rossant in an application to the Canadian Foundation for Innovation (CFI) for infrastructure funds to renovate and equip the space that the University of Toronto had allocated to the Centre in the FitzGerald Building, on the University of Toronto campus. This space was remodeled, and became the Centre's Transgenic Physiology Laboratory, a central component of HSRLCE research platform I. Building on the subsequent spectacular successes of our members, we have now prepared a new proposal for the CFI's Leading Edge Fund competition in 2005, requesting further funds to renovate and expand the Centre's current space, into contiguous laboratory space in the FitzGerald Building. The projects that our members have undertaken in the first five years of the Centre's genesis are generating such exciting new discoveries that we require new facilities and equipment to stay at the leading edge of this fast-paced field.

Our Transgenic Physiology Laboratory has provided researchers with the infrastructure needed to perform detailed analyses of cardiac structure and function in animal model systems. Further, this laboratory has facilitated the development of major programs in regenerative medicine, heart failure, and disease biomarker identification. The logical and highly desirable next step would be to take these discoveries from the laboratory (bench) to the clinic (bedside). Through an interdisciplinary approach using genetics, genomics, proteomics, bioinformatics and clinical cardiology, this Leading Edge Fund (LEF) program will lead to vastly improved strategies to diagnose, treat, and monitor cardiovascular disease. Our specific goal is to build on information derived from mouse models, specifically in cardiovascular disease, and apply it to human patients in a modern program for personalized medicine. The new equipment for this Models of Cardiovascular Disease and personalized medicine program will include:

- Imaging and data collection equipment to enhance our ability to measure cardiac output and visualize heart function in real-time in transgenic and mutant mice;
- A dedicated computer cluster that will house data from animal models of cardiovascular disease and human patients, as well as customized software analysis tools that will aid in drug target discovery; and,
- A high throughput combinatorial SNP/expression microarray scanner, to collect patient data to be stored and analyzed in the informatics cluster.

The development of a *personalized medicine cardiovascular research centre* in the heart of the country's largest medical school will have a huge impact on the health and well-being of our population. The intellectual property, patents, biomedical discoveries and training of highly qualified personnel from these projects will fuel the Canadian biotechnology engine, and contribute to Canada's economic growth and international reputation.

ONGOING PROGRAMS AND INITIATIVES: INNOVATIVE EDUCATION AND TRAINING PROGRAMS

TACTICS: Tailored Advanced Collaborative Training in Cardiovascular Science for Post-doctoral Fellows and Clinician Scientists

(A Canadian Institutes of Health Research Strategic Training Program in Cardiovascular Science)

History

The TACTICS program is one of a select group of Strategic Training Initiatives in Health Research (STIHR) that were sponsored in 2002 by the Canadian Institutes of Health Research's Institute of Circulatory and Respiratory Health, and the Institute of Genetics. With additional funding from the Heart and Stroke Foundation of Canada and the pharmaceutical firm Sanofi-Aventis, this six-year training grant provides competitive fellowship awards designed to foster the future leaders of cardiovascular research both in Canada and globally, and ensures their successful transition to fulfill their role as research leaders. The program, which targets both Clinician-Scientists and PhD Scientists during their critical post-doctoral stage of training, after graduate or medical school but prior to becoming independent investigators, is administered through the Heart and Stroke/Richard Lewar Centre of Excellence at the University of Toronto. One of only two STIHR programs in the country specializing in cardiovascular training, TACTICS selects only the best and brightest biomedical trainees.

Under the leadership of the Centre's Director, Dr. Peter Liu, a team of scientists and clinicians from across Canada, each with outstanding track records serve as mentors and associate mentors for the TACTICS fellows. Key features of the TACTICS program include:

- Access to additional training experiences, such as workshops, or conferences;
- Ability to network with TACTICS fellows across the country;
- Interaction with world-class Canadian cardiovascular scientists;
- Training in grant writing and other skills necessary to complement scientific expertise;
- Use of novel communication technologies;
- Ongoing multifaceted mentorship program; and,
- Access to tailored modular curriculum.

As the program has grown and expanded during the last two years we have held and participated in a variety of scientific and educational events. In October 2003 and August 2004 we held annual retreats for the fellows and mentors to meet and present their findings. In April of 2004 and 2005, many fellows and mentors participated in the Young Investigator's Forum held in Winnipeg, MB. In the Spring of 2004 and continuing through the Winter of 2005 we held 11 videoconferencing journal clubs that allowed TACTICS Fellows and Mentors located across North America to interact in real-time and discuss exciting new research findings.

The TACTICS program is designed to be two years in length, and we are pleased to report that nine fellows from the very first cohort have successfully completed the program. Several of these fellows have established their own research labs. For example, Dr. Koichi Fuse, who trained with Dr. Peter Liu, has returned to Japan as a Principal Investigator, and Dr. Ondrej Seda, who trained with Dr. Pavel Hamet, has recently started his own lab in the Czech Republic. We have now held three entry competitions (in 2003, 2004, and 2005) and have selected a total of 22 TACTICS fellows, as shown on the following pages:

Name	Institution	Mentor(s)	Project	Tenure
BARTA, JUDIT, PHD	Institute of Cardiovascular Sciences, St. Boniface Research Centre, Winnipeg, MN	N. Dhalla	Reverse remodelling of myofibrils in congestive heart failure upon blockade of the Renin-angiotensin system	2004-2006
DESAI, NIMESH, MD	Sunnybrook & Women's College Health Science Centre, Cardiovascular Surgery Program, Toronto, ON	S. Fremes, R. Weisel	Intra operative patency assessment to improve outcomes of coronary artery bypass surgery	2003-2005
FAZEL, SHAFIE, MD	Toronto General Hospital, Division of Cardiac Surgery, Toronto, ON	R. Li	Gene-enhanced cell-transplantation to reverse-remodel the failing heart	2003-2005
FUSE, KOICHI, MD, PHD	Division of Cardiology, and University Health Network Research Institute, Toronto, ON	P. Liu	The roles of innate immunity in the pathogenesis of CVB3 induced myocarditis	2003-2005
GONG, NANLING, PHD	Heart and Stroke/Richard Lewar Centre of Excellence, University of Toronto, Toronto, ON	P. Backx	Regulation of Kv4 potassium channels in cardiac hypertrophy	2004-2006
GURU, VEENA, MD	Sunnybrook & Women's College Health Science Centre and Institute for Clinical and Evaluative Sciences, Toronto, ON	S. Fremes, J. Tu	Quality control in cardiac surgery - how do clinical outcomes relate to quality of care?	2003-2005
KASSIRI, ZAM, PHD	Princess Margaret Hospital, University Health Network, University of Toronto, Toronto, ON	R. Khoka, P. Liu	The role of TIMPs in the progression of cardiovascular disease	2005-2007
KERFANT, BENOIT-GILLES, PHD	Heart and Stroke/Richard Lewar Centre of Excellence, University of Toronto, Toronto, ON	P. Backx	The role of PI3K gamma in control and failing heart function	2004-2006
KHAPER, NEELAM, PHD	Division of Cardiology and Research Institute, University Health Network, Toronto, ON	P. Liu	Cytokines, oxidative stress, cardiovascular reprogramming and stem cell homing	2004-2005
LEE, CANDACE, MD	Department of Physiology, University of Manitoba, Winnipeg, MN	N. Dhalla, L. Hryshko	Pharmacological profile and therapeutic potential of novel sodium-calcium exchange inhibitors in diabetes	2003-2005
LEE, DOUGLAS, MD, PHD	NHLBI Framingham Heart Study, Framingham, MA	D. Levy, P. Liu	Clinical and genetic epidemiology of heart failure and left ventricular phenotypes in the Framingham heart study	2004-2006

Name	Institution	Mentor(s)	Project	Tenure
LEKAS, MICHAEL, MD	Division of Cardiology, University of Toronto and St. Michael's Hospital, Toronto, ON	D. Stewart	Interactions between angiopoitin-1 and angiopoietin-2 in neovascularization of the ischemic hind limb	2004- 2005
MARTINO, TAMI, PHD	Division of Cardiology and Research Institute, University Health Network, Toronto, ON	M. Sole, P. Backx	Molecular circadian rhythms in normal and diseased myocardium	2004- 2006
MCCARTER, SARAH, PHD	Division of Cardiology, University of Toronto and St. Michael's Hospital, Toronto, ON	D. Stewart	HO-1 and Ang-1 in ARDS	2004- 2005
NIAN, MIN, PHD	Division of Cardiology, and University Health Network Research Institute, Toronto, ON	P. Liu	The role of FLIP in cardiac remodelling following myocardial infarction	2003- 2005
OUKIT, GAVIN, MD	Heart and Stroke / Richard Lewar Centre of Excellence, Toronto, ON	P. Backx	Role of the L-type Ca ²⁺ channel and intracellular Ca ²⁺ signalling in iron- overload cardiomyopathy	2003- 2004
PANNIRSELVAM, MALAR, PHD	Heart and Stroke/Richard Lewar Centre of Excellence, University of Toronto, Toronto, ON	P. Backx	Characterization of physiological interaction between angiotensin converting enzyme-2 and apelin in cardiovascular function	2005- 2007
RAMZY, DANNY, MD	Division of Surgery and Research Institute, University Health Network, Toronto, ON	V. Rao, R. Weisel	The role of C-reactive protein and endothelin-1 in atherosclerosis	2005- 2007
SADER, SAWSAN, PHD	Division of Cardiology, and University Health Network Research Institute, Toronto, ON	P. Liu	Role of gelsolin in cardiac remodelling and heart failure	2003- 2005
SEDA, ONDREJ, MD	CHUM Research Centre, Laboratory of Molecular Medicine, Montreal, PQ	P. Hamet	Comparative genomic analysis of genetic components of metabolic syndrome X and hypertension	2003- 2005
SHI, YU, MD, PHD	Division of Cardiology and Research Institute, University Health Network, Toronto, ON	P. Liu	Chlamydia vaccine as a novel preventative strategy of the obesity- metabolic syndrome	2005- 2007
TRIVIERI, MARIA, MD, PHD	Heart and Stroke/Richard Lewar Centre of Excellence, University of Toronto, Toronto, ON	P. Backx	Role of thyroid hormone in heart	2004- 2006

TRAINEE AWARDS

Heart and Stroke/Richard Lewar Centre of Excellence Fellowship/Studentship Support 2003-2005

2004-2005*

Trainee	Supervisor
OGSST	
E. Adiguzel	M. Bendeck
B. Ho	M. Bendeck
D. Quaglietta	C. Wittnich
P. Sabatini	L. Langille / M. Bendeck

HSRLCE Studentship

N. D'Avanzo	P. Backx
S. Handa	M. Husain
J. He	M. Ward
N. Tata	M. Sole
H. Woldu	M. Husain

HSRLCE Fellowship

Y. Babichev	D. Dumont
M. Haidari	M. Husain
W.J. Lin	W.-C. Yeh
M.G. Triveri	P. Backx

2005-2006*

Trainee	Supervisor
OGSST	
N. Askin	C. Wittnich
D. Breen	A. Giacca
A. Tang	D. Brooks

HSRLCE Studentship

S. Bunda	A. Hinek
W. Chow	M. Bendeck
M. Chretien	L. Langille
C. Kim	T. Yau
A. Miori	B. Bruneau
N. Tata	M. Sole
S.-S. Zhang	B. Bruneau

HSRLCE Fellowship

R. Alikhani-Koopei	D. MacLennan
T. Charron	B. Strauss
M. Pennirselvam	P. Backx
H. Yang	H. Ni

* Notes: Year of award tenure

DISTINGUISHED VISITING PROFESSOR LECTURE SERIES

The Centre has organized a "Distinguished Visiting Professors Lecture Series" with sponsorship generously provided by Merck Frosst Canada & Co, and in 2005, Astra Zeneca Canada. Through this series, a forum is provided whereby experts performing cutting edge research in priority areas are invited to speak and interact with Centre's members and in turn, the activities of the Centre are profiled to the world's opinion leaders. The Centre regularly collaborates with University of Toronto Departments and teaching hospitals. Faculty, clinicians, students and visitors are encouraged to attend. Continuing Medical Education (CME) credits are also available.

Seminars held from 2003 to 2005 include:

September 29, 2003

"Cardiac Progenitor Cells from Adult Myocardium: Homing, Differentiation, and Fusion Following Infarction"

Dr. Michael Schneider, Professor, Centre for Cardiovascular Development, Baylor College of Medicine, Houston, TX

October 20, 2003

"Liquid Heart: Injectable Microenvironments for Cardiac Regeneration"

Dr. Richard Theodore Lee, MD, Associate Professor of Medicine, Harvard Medical School, Cambridge, MA

November 3, 2003

'Aldosteronism: A New Perspective on the Neuroendocrine-Immune Interface'

Dr. Karl T. Weber, Neuton Stern Professor of Cardiovascular Medicine, Director, Division of Cardiovascular Diseases, University of Tennessee Health Sciences Center, Memphis, TN

January 12, 2004

"Everything You Wanted To Know About Potassium Channels; But Were Afraid To Ask"

Dr. Stephen L. Archer, Professor of Medicine & Physiology, Director, Division of Cardiology, Heart and Stroke Chair in Cardiovascular Research, University of Alberta, Edmonton, AB

February 9, 2004

"Myocardial Insulin Resistance and Cardiac Dysfunction in Obesity and Diabetes"

Dr. E. Dale Abel, MD, PhD, Assistant Professor of Medicine & Biochemistry, Division of Endocrinology, Diabetes and Metabolism, University of Utah, School of Medicine, Salt Lake City, UT

April 5, 2004

"PKCalpha: A Novel Regulator of Cardiac Contractility and Heart Failure"

Dr. Jeffery D. Molkentin, PhD, Associate Professor, Children's Hospital Medical Center, Molecular Cardiovascular Biology, Cincinnati, OH

April 26, 2004

"The Heart Failure Quartet: 4 Large Trials in Heart Failure Populations"

Dr. Robert Califf, Professor of Medicine, Associate Vice Chancellor for Clinical Research, Director, Duke Clinical Research Institute, Durham, NC

May 31, 2004

“CQI in Cardiac Care: Ending Business as Usual”

Dr. Eric Peterson, Associate Professor of Medicine, Director of Cardiovascular Outcomes Research and Quality, Duke University Medical Center, Durham, NC

October 18, 2004

“Linking Blood Pressure Control with Thrombosis; A Novel Interaction Between the Plasma Kallikrein/Kinin and Renin Angiotensin Systems”

Dr. Alvin H. Schmaier, MD, Professor of Internal Medicine and Pathology, Director, Coagulation Laboratory, University of Michigan, Ann Arbor, MI

November 22, 2004

‘Novel Targets for the Regulation of Hepatic Cholesterol Homeostasis: Impact on the Kinetics of ApoB100 Metabolism In Vivo.’

Dr. Murray W. Huff, PhD, Professor, Department of Medicine and Endocrinology, Director, Vascular Biology Group, Robarts Research Institute, University of Western Ontario, London, ON

January 17, 2005

“Mechanisms for Depressed Contractility in Heart Failure: How Can We Fix Them?”

Dr. Steven R. Houser, PhD, Laura H. Carnell Professor of Physiology, Director, Cardiovascular Research Center, Temple University School of Medicine, Philadelphia, PA

January 31, 2005

“Mitochondria at the Crossroads of Vascular Disease and Cancer: Novel Therapeutic Approaches”

Dr. Evangelos Michelakis, Associate Professor of Medicine and Director of the Pulmonary Hypertension Program, University of Alberta, Edmonton, AB

February 28, 2005

“Electrical Remodelling in the Failing Heart: Implications for Sudden Cardiac Death”

Dr. Gordon F. Tomaselli, MD, Professor of Medicine, Division of Cardiology and Molecular Medicine, Vice-Chair of Research, Department of Medicine, Johns Hopkins University, Baltimore, MD

April 4, 2005

“Targeting the Tissue Response to Hypoxia: Therapeutic Angiogenesis with a Constitutively Active HIF-1 α Transgene”

Dr. Ralph A. Kelly, Vice President, Clinical Affairs, Genzyme Corporation, Framingham, MA

April 18, 2005

“Novel Imaging of Myocardial Remodelling and Heart Failure”

Dr. Jagut Narula, MD, PhD, Associate Dean, College of Medicine, Chief of Cardiology and Professor of Medicine, University of California Irvine, Irvine, CA

May 2, 2005

“Regression of Atherosclerosis and of Related Clinical Events”

Dr. Jean-Claude Tardif, MD, Associate Professor, Department of Medicine, Director, Montreal Heart Institute Research Centre, Pfizer and CIHR Chair in Atherosclerosis, Montreal, PQ

The Centre holds an Annual Cardiovascular Scientific Day each year in May to bring together faculty and researchers from the Centre and across the University of Toronto. The goal is to provide updates on the frontiers of cardiovascular sciences. Symposium topics are drawn from all research themes, from basic biomedical to clinical to outcomes; it is hoped that discussion will promote cross-fertilization of ideas and research direction. CME credits are available.

2004 – “New Technologies, Innovation and Outcomes”

Central Symposium (Co-Chairs: Dr. D. Alter and Dr. P. Liu)

Isadore E. Smith Lecture (Chair: Dr. D. Alter)

- Dr. Daniel Levy • *Hypertension 2004: Lessons from Observational Studies and Clinical Trials to Guide Patient Care*

Morning Plenary: Embracing New Technologies (Co-Chairs: Dr. D. Stewart and Dr. L. Langille)

- Dr. George Jackowski • *From Bench to Patient and Back to the Bench*
- Dr. Andreas Laupacis • *Health Technology Assessment: Attempting to Balance Innovation and Sustainability*
- Dr. Peter Backx • *Brief Update on Research Activities at the HSRLCE Mouse Physiology Lab*
- Dr. Duncan Stewart • *Translational Programs*
- Dr. Thomas Parker • *Training Programs*
- Dr. Peter Liu • *Clinical Genomics and Proteomics to Populations*

A.E. Diamond Lecture (Chair: Dr. M. Sole)

- Dr. Eric Topol • *The Genetics of Heart Attack*

Afternoon Plenary: Populations (Co-Chairs: Dr. J. Tu and Dr. K. Adeli)

- Dr. Andrew Emili • *Molecules: Profiling Heart Disease Using Protein Mass Spectrometry*
- Dr. Josette Chan • *Experimental Models: Cardiovascular Mouse Mutants as seen by Several Imaging Modalities*
- Dr. Robert Nolan • *Hamankind: Suspected Psychological Risk Factors for CHD*

New Kids on the Block (Co-Chairs: Dr. L. Adamson and Dr. J. Floras)

- Dr. Alexander Dick • *Delivery and Tracking of Stem Cells in Acute Myocardial Infarction*
- Dr. Michael Borger • *Late Outcomes Following Cardiac Surgery – Tracking our Results*

2005 – “Translational Medicine”

Central Symposium (Co-Chairs: Dr. S. Verma and Dr. R. Weisel)

Isadore E. Smith Lecture (Chair: Dr. R. Weisel)

Dr. Philippe Menasché • *Cell Therapy for Cardiac Failure*

Featured Presentations (Co-Chairs: Dr. B. Stanford and Dr. B. Strauss)

Dr. Duncan Stewart • *“Re-generative” Medicine: Combined Cell and Gene Therapy Trials for Cardiovascular Disease*

Dr. Ren-Ke Li • *Neovascularization Derived from Cell Transplantation in Ischemic Myocardium*

Dr. Terry Yau • *Cell-based gene Therapy for Myocardial Repair*

Dr. Peter Zandstra • *Stem Cell Bioengineering*

A.E. Diamond Lecture (Chair: Dr. S. Verma)

Dr. Paul Ridker • *C-Reactive Protein Comes of Age*

Featured Presentations (Chair: Dr. M. Husain)

Dr. Myron Cybulsky • *Leukocytes, Inflammation and the Initiation of Atherosclerosis*

Dr. Subodh Verma • *C-Reactive Protein Incites Atherosclerosis*

Dr. Muhammad Mamdani • *Cox-2 Inhibitors and Cardiovascular Risk: Fact, Fiction, or Fantasy?*

Simultaneous Sessions

(i) **Clinical Outcomes** (Chair: Dr. J. Parker)

Dr. Nimesh Desai • *Perfecting Coronary Bypass Surgery: The Role of the Patient, the Vessel, and the Surgeon*

Dr. David Latter • *Mitral Valve Repair: Current Trends and Future Opportunities*

Dr. Vivek Rao • *Surgical Therapy for Ischemic Cardiomyopathy: The STICH Trial*

(ii) **Translating Basic Research Discoveries** (Co-Chairs: Dr. T. Parker and Dr. P. Fedak)

Dr. Michelle Letarte • *From the Discovery of Endoglin to a Molecular Diagnosis for Hereditary Hemorrhagic Telangiectasia*

Dr. Michael Sefton • *Angiogenic Biomaterials: Translating an Observation into a Business*
• *Dr. Eleanor Fish Protective Role for Interferon- β in Coxsackievirus B3 Infection*

DEVELOPMENTAL INITIATIVES

National Institutes of Health, National Health, Lung and Blood Institute Application, 2005

In late 2004 the United States National Institutes (NIH) of Health's National Heart Lung and Blood Institute (NHLBI) issued a Request For Applications (RFA) to establish a Heart Failure Clinical Research Network to accelerate research in the diagnosis and management of heart failure. The aim of the network, made up of eight regional clinical centres, is to translate new basic science findings into clinical testing. Subsequently, during the Summer of 2005, the Heart and Stroke/Richard Lewar Centre's Director, Dr. Peter Liu, assembled a team of Principal Investigators from research platforms II and III and submitted a grant application in response to this RFA proposing that one of the regional clinical centres be based here in Toronto at the University of Toronto. Given our international reputation in the field of heart failure, this proposal was a natural extension of our world-class expertise. The Centre's exciting and innovative basic research discoveries coupled with our access to a large population of heart failure patients will logically lead to ground-breaking clinical trials.

CHFNET Renewal

In addition to the dramatic successes outlined previously, the initial discoveries from the CHFNET proteomics platform lead directly to the HSRLCE launching a new heart biomarker discovery project that is funded by Genome Canada (see page 23).

Based on these successes, the Centre submitted an application to the CIHR's TEAM Grant program during the Fall of 2005 (the renewal program will build on our discoveries and provide an additional five years of research funding and support). The new proposal: *A Canadian Heart Failure Research Network (CHFNET) – Uncovering Critical Novel Mechanisms for an Evolving Disease* proposes ground breaking experimental approaches that will test an innovative hypothesis that one of the major causes of heart failure is due to a misactivated inflammatory - or immune - response. Using high throughput proteomics to exploit the sequence of the human genome, and functional genomics to map disease susceptibility loci, this team will discover new treatments for this disease.

SELECTED PEER-REVIEWED PUBLICATIONS BY MEMBERS

To compile the list of publications by members of the Centre of Excellence for the period July 1, 2003 to June 30, 2005, a request was sent to each Centre member. The result was overwhelming. 74% of members responded, with a list of 609 publications. 415 peer-reviewed, full-length publications are listed on the pages that follow (only those publications that are cardiovascular-related have been included here). Member's names have been bolded.

The fundamental unit of productivity of scientists is published papers. Thus, not all of the members' publications can be directly ascribed to the Centre. Two criteria that can be applied to the members' publications, which are related to the missions and goals of the Centre, are collaboration and excellence. As a metric for collaboration, the publications that were co-authored by more than one Centre members were counted – 29% (120 of the 415 publications listed below). For excellence, publications in a journal with a 2004 impact factor greater than 10 were considered. In total, 43 of the 415 (10%) members' publications were published in high impact journals. Of these, 21 were co-authored by more than one Centre faculty Member. Thus, 49% of the high impact publications reported by members for the time frame July 2003 to June 2005 were collaborative efforts with other Centre members. While it would be premature to conclude that collaboration leads to excellence, or excellence includes collaboration, these observations will form the basis of on-going studies by the Centre to determine its impact and productivity.

The following is a list of member's publications:

"A 30-year analysis of cardiac neoplasms at autopsy", **Butany J.**, Leong S.W., Carmichael K., Komeda M., *Can J Cardiol*, 21:(8), 675-80, 2005

"The 2004 ACC/AHA guidelines: A perspective and adaptation for Canada by the Canadian Cardiovascular Society Working Group", Armstrong P.W., Bogaty P., Buller C.E., **Dorian P.**, O'Neill B.J., *Can J Cardiol*, 20:(11), 1075-9, 2004

"The 2005 Canadian Hypertension Education Program recommendations for the management of hypertension: Part 1 – Blood pressure measurement, diagnosis and assessment of risk", Hemmelgarn B.R., McAlister F.A., **Myers M.G.**, et al, *Can J Cardiol*, 21:(8), 645-656, 2005

"ABO-incompatible heart transplantation: A perfusion strategy", Foreman C., Gruenwald C., **West L.J.**, *Perfusion*, 19:(1), 69-7, 2004

"Aborted myocardial infarction in patients with ST-segment elevation insights from the assessment of the safety and efficacy of a new thrombolytic regimen-3 trial electrocardiographic substudy", Taher T., Fu Y., Wagner G.S., **Goodman S.G.**, Fresco C., Granger C.B., Wallentin L., Van de Werf F., Verheugt F., Armstrong P.W., *J Am Coll Cardiol*, 44:38-43, 2004

"ACC/AHA/ASE 2003 guidelines for the clinical application of echocardiography – summary article. A report of the American College of Cardiology/American Heart Association task force on practice guidelines application of echocardiography", Cheitlin M.D., Armstrong W.F., Aurigemma G.P., Beller G.A., Bierman F.Z., Davis J.L., Douglas P.S., Faxon D.P., Gillam L.D., Kimball T.R., Kussmaul W.G., Pearlman A.S., Philbrick J.T., **Rakowski H.**, Thys D.M. *J Am Coll Cardiol*, 42(5):954-70, 2003 [jointly published in *Circulation* 108(9):1146-62]

"Acceptance of related and unrelated cardiac allografts in neonatally-tolerized mice is cardio-specific and transferable by regulatory CD-4+ T cells", Hofmann B., Tao K., Mai L., **West L.J.**, *Journal of Heart and Lung Transplantation*, 23:(9), 1069-76, 2004

"Access to catheterisation facilities in patients admitted with acute coronary syndrome: Multinational registry study", Van de Werf F., Gore J.M., Avezum A., Gulba D.C., **Goodman S.G.**, Budaj A., Brieger D., White K., Fox K.A.A., Eagle K.A., Kennelly B.M., for the GRACE Investigators, *British Medical Journal*, 330:441, 2005

"ACE inhibition in stable coronary artery disease", **Myers M.G.**, *N Engl J Med*, 352:938, 2005

- "Acute and chronic effects of hormone replacement therapy (HRT) on the cardiovascular system in healthy postmenopausal women", Kirwan L., MacLusky N., Thomas S.G., **Goodman J.**, *The Journal of Clinical Endocrinology and Metabolism*, 89:1618-1629, 2004
- "Acute coronary syndromes without chest pain: An underdiagnosed and undertreated high-risk group. Insights from the Global Registry of Acute Coronary Events (GRACE)", Brieger D., Eagle K.A., **Goodman S.G.**, Steg P.G., Budaj A., White K., Montalescot G., for the GRACE Investigators *Chest*, 126:461-469, 2004
- "Acute treatment of myocardial infarction in Canada 1999-2002", Jackevicius C.A., Alter D., Cox J., Daly P., **Goodman S.**, Filate W., Newman A., **Tu J.V.**, for the Canadian Cardiovascular Outcomes Research Team, *Can J Cardiol*, 21:145-152, 2005
- "Adaptive averaging for improved SNR in real-time coronary artery MRI", Sussman M.R., Robert N., **Wright G.A.**, *IEEE Trans Med Imaging*, 28:(8),1034-1045, 2004
- "Adenoviral-mediated overexpression of ER-60 downregulates apolipoprotein B secretion: Evidence for an ER-60 mediated degradative pathway responsible for post-translational and non-proteasomal apoB degradation", Qiu W., Kohen-Avramoglu R., Rashid-Kolvear F., Au C.S., Chong T.M., Trinh D., **Adeli K.**, *Biochemistry*, 43:4819-4831, 2004
- "Adherence to evidence-based therapies after discharge for acute coronary syndromes: An ongoing, prospective, observational study", Eagle K.A., Kline-Rogers E., **Goodman S.G.**, Gurfinkel E.P., Avezum A., Flather M.D., Granger C.G., Erickson S., White K., Steg P.G. *Am J Med*, 117:73-81, 2004
- "Administrative data feedback for effective cardiac treatment", Beck C.A., Richard H., **Tu J.V.**, Pilote L., *JAMA*, 294:(3), 309-31, 2005
- "Altered expression of angiotensin during blood-brain breakdown and angiogenesis", Nourhaghghi N., Teichert-Kuliszewski K., Davis J., **Stewart D.J.**, Nag S. *Lab Invest*, 83:1211-1222, 2003
- "Ambulatory blood pressure monitoring for routine clinical practice", **Myers M.G.**, *Hypertension*, 45:483-484, 2005
- "Analysis of prosthetic cardiac devices: A guide for the practicing pathologist", **Butany J.**, Collins M.J., *J Clin Pathol*, 58:(2),113-24, 2005
- "Angiotensin 1 causes reversible degradation of the portal microcirculation in mice: Implications for treatment of liver disease", Ward N.L., Haninec A., Van Slyke P., Sled J., Sturk C., Henkelman M., Wanless I.R., **Dumont D.J.**, *American Journal of Pathology*, 165:889-899, 2004
- "Antiarrhythmic action of beta-blockers: Potential mechanisms", **Dorian P.**, *J Cardiovasc Pharmacol Ther*, 10:S15-22, 2005
- "Aortic dissection after stent dilatation for coarctation of the aorta: A case report and literature review", Varma C., Benson L.N., **Butany J.**, McLaughlin P.R. *Catheter Cardiovasc Interv*, 59(4):528-35, 2003
- "The aortic valve: Turning over a new leaf(let) in endothelial phenotypic heterogeneity", Davies P.F., Passerini A.G., **Simmons C.A.**, *Arterioscler Thromb Vasc Biol*, 24:1331-1333, 2004
- "Applying standard therapies to new targets: The use of ACE inhibitors and B-blockers for heart failure in adults with congenital heart disease", Vonder Muhll I., **Liu P.P.**, Webb G., *Int J Cardiol*, 97:S25-33, 2004
- "Applying the new STEMI guidelines: 1. Reperfusion in acute ST-segment elevation myocardial infarction", Bogaty P., Buller C.E., **Dorian P.**, O'Neill B.J., Armstrong P.W., *CMAJ*, 171:(9), 1039-41, 2004
- "Applying the new STEMI guidelines: 2. Disturbances of cardiac rhythm after ST-segment elevation myocardial infarction", **Dorian P.**, Bogaty P., Buller C.E., O'Neill B.J., Armstrong P.W., *CMAJ*, 171:(9), 1042-4, 2004
- "Are Canadian guidelines for cholesterol lowering in high-risk patients optimal ?", Fitchett D.H., Leiter L.A., Tardif J.C., **Goodman S.G.**, **Langer A.**, *Can J Cardiol*, 21:85-90, 2005

- "Arterial remodelling in response to decreased longitudinal tension", Jackson Z.S., **Gotlieb A.I., Langille B.L.**, *Arterioscl Thromb Vas Biol*, 25:957-962, 2005
- "Artificial chordae tendinae: Long-term changes", Privitera S., **Butany J.**, Silversides C., Leas R.L., David T.E., *J Card Surg*, 20:(1), 90-2, 2005
- "Ascending aortic aneurysm with dissection and aortic insufficiency", **Butany J.**, El Demellawy D., Collins M.J., Nair V., Graba J., Taebong C., David T.E., *J Card Surg*, 20:(1), 85-9, 2005
- "Assembly and reorientation of stress fibers drives morphological changes to endothelial cells exposed to shear stress", Noria S., Xu F., McCue S., Jones A., **Gotlieb A.I., Langille B.L.**, *Am J Pathol*, 64:1211-1223, 2004
- "Assessment of the cardiac patient for fitness to drive: Drive subgroup executive summary", Simpson C., **Dorian P.**, Gupta A., Hamilton R., Hart S., Hoffmaster B., Klein G., Krahn A., Kryworuk P., Mitchell L.B., Poirier P., Ross H., Sami M., Sheldon R., Stone J., Surkes J., *Can J Cardiol*, 20:(13), 1314-20, 2004
- "The association of left atrial size and occurrence of atrial fibrillation: A prospective cohort study from the Canadian Registry of Atrial Fibrillation (CARAF)", Parkash R., Green M.S., Kerr C.R., Connolly S.J., Klein G.J., Sheldon R., Talajic M., **Dorian P.**, Humphries K.H., *Am Heart J*, 148:649-54, 2004
- "Autologous peripheral blood stem cells transplantation for myocardial regeneration: A novel strategy for cell collection and surgical injection", (Invited Commentary), Fazel S., Angoulvant D., **Weisel R.D., Li R.K.**, *Annals of Thoracic Surgery*, 78:(5), 1812-13, 2004
- "Automatic referral to cardiac rehabilitation", **Grace S.L.**, Evinda A., Kung T., Scholey P., **Stewart D.E.**, *Medical Care*, 42:(7), 661-669, 2004
- "Baf60c is essential for function of BAF chromatin remodelling complexes in heart development", Lickert H., Takeuchi J.K., von Both I., Walls J.R., McAuliffe F., **Adamson S.L.**, Henkelman R.M., Wrana J.L., Rossant J., **Bruneau B.G.**, *Nature*, 4, 32:(7013), 107-12, 2004
- "Beating heart catheter-based edge-to-edge mitral valve procedure in a porcine model: Efficacy and healing response", Fann J.I., St. Goar F.G., Komtebedde J., Oz M.C., Block P.C., Foster E., **Butany J.**, Feldman T., Burdon T.A., *Circ*, 110:(8), 988-93, 2004
- "Bicuspid aortic valve disease: Recent insights in pathophysiology and treatment", Fedak P.W.M., David T.E., Borger M.A., **Verma S., Butany J., Weisel R.D.**, *Expert Rev Cardiovasc Ther*, 3:295-308, 2005
- "Bioluminescent imaging of a marking transgene and correction of Fabry mice by neonatal injection of recombinant lentiviral vectors", Yoshimitsu M., Sato T., Tao K., Walia J., Rasaiah V., Gillian S., Murray G., Poepl A., Underwood J., **West L.J.**, Brady R., Medin J., *Proceedings of the National Academy of Sciences*, 101:(48), 16909-14, 2004
- "Biomarkers of vascular disease linking inflammation to endothelial activation: Part II", Szmitko P.E., Wang C.H., **Weisel R.D.**, Jeffries G.A., Anderson T.J., **Verma S.** *Circulation*, 108:2041-2048, 2003
- "Biphasic vs. monophasic cardioversion in shock-resistant atrial fibrillation", Khaykin Y., Newman D., Kowalewski M., Korley V., **Dorian P.** *J Cardiovasc Electrophysiol*, 14:868-72, 2003
- "Blood pressure measurement and the guidelines: A proposed new algorithm for the diagnosis of hypertension", **Myers M.G.**, *Blood Press Monit*, 9:283-286, 2004
- "Bone morphogenetic protein receptor-2 and pulmonary arterial hypertension: Unravelling a riddle inside an enigma?" **Stewart D.J.**, *Circulation Research*, 96:1033-1035, 2005
- "Bootstrap methods for developing predictive models in cardiovascular research", Austin P.C., **Tu J.V.** *The American Statistician*, 58:131-137, 2004
- "Bridging to transplant with the HeartMate left ventricular assist device: The Columbia Presbyterian twelve year experience", Morgan J.A., John R., **Rao V.**, Weinberg A.D., Lee B.J., Mazzeo P.A., Flannery M.A., Chen J.M., Oz M.C., Naka Y. *J Thorac Cardiovasc Surg*, 127:1309-1316, 2004

"A bronchial epithelium-derived factor reduces pulmonary vascular tone in the newborn rat" **Belik J.**, Jankov R.P., Pan J., Tanswell A.K., *Journal of Applied Physiology*, 96:1399-1405, 2004

"The burden of atrial fibrillation: Should we abandon antiarrhythmic drug therapy?" **Dorian P.**, Mangat I., Pinter A., Korley V., *J Cardiovasc Pharmacol Ther*; 9:257-62, 2004

"Ca²⁺ signalling in HEK-293 and skeletal muscle cells expressing recombinant ryanodine receptors harboring malignant hyperthermia (MH) and central core disease (CCD) mutations" Brini M., Manni S., Pierobon N., Du G. G., Sharma P., **MacLennan D. H.**, Carafoli E., *J Biol Chem*, 280:15380-15390, 2005

"Calcium antagonists are associated with reduced mortality after cardiac surgery: A propensity analysis" Wijeyesundera D.N., Beattie W.S., **Rao V.**, Ivanov J., Karkouti K. *J Thorac Cardiovasc Surg*, 127:755-762, 2004

"Calcium channel antagonists reduce cardiovascular complications following cardiac surgery: A meta-analysis" Wijeyesundera D.N., Beattie W.S., **Rao V.**, Karski J. *JACC*, 41:1496-1505, 2003

"Calreticulin in the heart" Michalak M., Guo L., Robertson M., Lozak M., **Opas M.**, *Mol Cell Biochem*, 263, 137-142, 2004

"Can exposure to clinically relevant levels of hyperoxia cause OFR-mediated membrane injury, alter myocardial function and hemodynamics in the newborn?" Bandali K., Belanger M.P., **Wittnich C.** *Am J Physiol, Heart and Circulation*, 287:H553-559, 2004

"Can psychological interventions reduce mortality rates in patients with coronary heart disease and cancer? A review of randomized trials" Scott H.K., **Irvine J.**, Ritvo P., Mann R.E., *International Journal of Mental Health and Addictions*, 2:(2), 13-24, 2005

"Canadian Cardiovascular Outcomes Research Team: Outcomes of acute myocardial infarction in Canada" **Tu J.V.**, Austin P.C., Filate W.A., Johansen H.L., Brien S.E., Pilote L., Alter D.A. *Can J Cardiol*, 19:893-901, 2003

"Canadian Cardiovascular Society/Canadian Heart Rhythm Society position paper on implantable cardioverter defibrillator use in Canada" Tang A.S., Ross H., Simpson C.S., Mitchell L.B., **Dorian P.**, Goeree R., Hoffmaster B., Arnold M., Talajic M., *Can J Cardiol*, 21:(Suppl A), 11-8, 2005

"Canadian Cardiovascular Society commentary on implantable cardioverter defibrillators in Canada: Waiting times and access to care issues" Simpson C.S., O'Neill B.J., Sholdice M.M., **Dorian P.**, Kerr C.R., Ross D.B., **Ross H.**, Brophy J.M., for the Canadian Cardiovascular Society Access to Care Working Group, *Can J Cardiol*, 21:(Suppl A), 19-24, 2005

"Canadian Cardiovascular Society Consensus Conference assessment of the cardiac patient for fitness to drive: Drive subgroup executive summary" Simpson C., **Dorian P.**, Gupta A., Hamilton R., Hart S., Hoffmaster B., Klein G., Krahn A., Kryworuk P., Mitchell L.B., Poirier P., **Ross H.**, Sami M., Sheldon R., Stone J., Surkes J., Brennan F.J., *Can J Cardiol*, 20:(13), 1314-20, 2004

"The Canadian stroke quality of care study: Establishing indicators for optimal acute stroke care" Lindsay M.P., Kapral M.K., Gladstone D., Holloway R., **Tu J.V.**, Laupacis A., Grimshaw J.M., *CMAJ*, 172:363-365, 2005

"Cancer of the heart: Epidemiology and management of primary tumors and metastases" Sarjeant J.M., **Butany J.**, Cusimano R.J. *Am J Cardiovasc Drugs*, 3(6):407-2, 2003

"The cardiac atria are chambers of active remodelling and dynamic collagen turnover during evolving heart failure" Khan A., Moe G.W., Nili N., Rezaei E., Eskandarian M., **Butany J.**, **Strauss B.H.** *J Am Coll Cardiol*, 43(1):68-76, 2004

"Cardiac hemochromatosis in an HFE His63Asp (187C-G) heterozygote" Winer D., Silversides C., Israel ShN., Rinne C., Chang W.S., **Butany J.**, *Can J Cardiol*, 20:(10), 971-972, 2004

"Cardiac procedures after an acute myocardial infarction across nine Canadian provinces" Pilote L., Merrett P., Karp I., Alter D., Austin P.C., Cox J., Johansen H., Ghali W., **Tu J.V.** *Can J Cardiol*, 20:491-500, 2004

"Cardiac remodelling and failure: From molecules to man (Part I)", Fedak P.W.M., **Verma S., Weisel R.D., Li R.K.**, *Cardiovasc Pathol*, 14:1-11, 2005

"Cardiac remodelling and failure: From molecules to man (Part II)", Fedak P.W.M., **Verma S., Weisel R.D., Li R.K.**, *Cardiovasc Pathol*, 14:45-60, 2005

"Cardiac remodelling and failure: From molecules to man (Part III)", Fedak P.W.M., **Verma S., Weisel R.D., Li R.K.**, *Cardiovasc Pathol*, 14(3):109-19, 2005

"Cardiac restoration: Frontier or fantasy?", Fazel S., Angoulvant D., Desai N., Yang S., **Weisel R.D., Li R.K.**, *Can J Cardiol*, 21:355-359, 2005

"Cardiac sarcoplasmic reticulum calcium release and load are enhanced by subcellular cAMP elevations in PI3Kg-deficient mice", Kerfant B.G., Gidrewicz D., Sun H., Oudit G.Y., Penninger, J.M., **Backx P.H.**, *Circ Res*, 97:235-243, 2005

"Cardiac-specific overexpression of Sarcolipin inhibits SERCA2a activity and impairs cardiac function in mice", Asahi M., Otsu K., Nakayama H., Hikoso S., Takeda T., Gramolini A. O., Trivieri M. G., Oudit G. Y., Morita T., Kusakari Y., Hirano S., Hongo K., Hirotsu S., Yamaguchi O., Peterson A., **Backx P.**, Kurihara S., Hori M., **MacLennan D. H.**, *Proc Natl Acad Sci USA*, 101:9199-9204, 2004

"Cardiac tumors: Diagnosis and management", **Butany J.**, Nair V., Naseemuddin A., Nair G.M., Catton C., **Yau T.**, *Lancet Oncol*, (6): 219-228, 2005

"Cardiovascular adaptations to short-term intensive aerobic training", **Goodman J.M.**, Green H.J., **Liu P.P.**, *Journal of Applied Physiology*, 98:454-460, 2005

"Cardiovascular effects of frequent intensive hemodialysis", **Chan C.T.**, *Seminars in Dialysis*, 17:99-103, 2004

"Cardiovascular pharmacology and possible clinical applications of adenosine, ATP and diadenosine polyphosphates in humans", van Ginneken E.E.M., **Floras J.S.**, Smits P., Rongen G.A., *Current Topics in Pharmacology*, 8:121-136, 2004

"Cardiovascular risk factor modification with quotidian hemodialysis", Nesrallah G.E., **Chan C.T.**, Buoncristiani, U., *Contrib Nephro*, 145:55-62, 2004

"Cardiovascular tissue engineering therapy: So near, so far?", Tang G.H., Fazel S., **Weisel R.D.**, Van Arsdell G.S., **Li R.K.**, *Ann Thorac Surg*, 79:1831-1833, 2005

"CCS Consensus Conference 2003: Assessment of the cardiac patient for fitness to drive and fly - Executive summary", Simpson C., Ross D., **Dorian P.**, Essebag V., Gupta A., Hamilton R., Hart S., Hoffmaster B., Klein G., Krahn A., Kryworuk P., Mitchell L.B., Poirier P., **Ross H.**, Sami M., Sestier F., Sheldon R., Soder C., Stone J., Surkes J., Thibeault C., Tyrrell M., Wielgosz A., Akhtar J., Borts D., Braithwaite J., **Cohen E.**, Cost L., Hirsh J., Kafka H., Niznick J., Swirsky N., Talajic M., Tessier D., Tremblay G., *Can J Cardiol*, 20:(13), 1313, 2004

"Cell transplantation for heart disease: The clinical perspective", Yang S., Fazel S., Angoulvant D., **Weisel R.D., Li R.K.**, *Evidence-based Cardiovas Med*, 9:2-7, 2005

"Central core disease mutations R4892W, I4897T and G4898E in the ryanodine receptor isoform 1 reduce the Ca²⁺ sensitivity and amplitude of Ca²⁺-dependent Ca²⁺ release", Du G. G., Khanna V. K., Guo X., **MacLennan D.H.**, *Biochem J*, 382:557-564, 2004

"Changing trends in mechanical circulatory assistance: Experience with 131 consecutive Thoratec HeartMate VE LVADs", **Rao V.**, Oz M.C., Flannery M.A., Catanese K.A., Argenziano M., Edwards N.M., Naka Y. *J Cardiac Surg*, 19:361-366, 2004

"Chronic O₂ exposure in the newborn rat results in decreased pulmonary arterial nitric oxide release and altered smooth muscle response to isoprostane", **Belik J.** Jankov R.P., Pan J., Yi M., Chaudhry I., Tanswell A.K., *Journal of Applied Physiology*, 96:725-730, 2004

"Chronic in ovo hypoxia decreases pulmonary arterial contractile reactivity and induces biventricular cardiac enlargement in the chicken embryo"; Villamor E., Kessels C.G., Ruijtenbeek K., Van Suylen J., **Belik J.**, De Mey J.G., Blanco C.E., *Am J Physiol Regul Integr Comp Physiol*, 287:R642-R651, 2004

"Chronic paravalvular abscess following aortic valve replacement"; Chamchad D., Karski J., Djaiani G., **Butany J.W.**, Klein A., David T.E., *J Cardiothorac Vasc Anesth*, 18:(6), 820-2, 2004

"Circulating awareness of adverse effects of Propofol"; Belanger M.P., Askin N., Bandali K., Wallen W.J., **Wittnich C.** *J Amer Vet Med Assoc*, 223(6):781, 2003

"Clinical decision making for endovascular repair of abdominal aortic aneurysm"; Al-Omran M., **Verma S., Lindsay T.F., Weisel R.D.**, Sternbach Y., *Circulation*, 110:e517-e523, 2004

"Clinical trial-derived risk model may not generalize to real-world patients with acute coronary syndrome"; Yan A.T., Jong P., Yan R.T., Tan M., Fitchett D., Chow C.M., Roe M.T., Pieper K.S., **Langer A., Goodman S.G.**, for the Canadian Acute Coronary Syndromes (ACS) Registry Investigators, *Am Heart J*, 148:1020-27, 2004

"Clinician guide to angiogenesis"; Fam N., **Verma S.**, Kutryk M., **Stewart D.J.** *Circulation*, 208:2613-2618, 2003

"Codistribution analysis of elastin and related fibrillar proteins in early vertebrate development"; Visconti R.P., Barth J.L., **Keeley F.W.**, Little C.D. *Matrix Biology*, 22:109-121, 2003

"Combined cardiac surgery and excision of a retrosternal thyroid mass: A case report"; Tang G.H.L., Feindel C.M., Gullane P.J., **Butany J.**, *J Card Surg*, 20:1-2, 2005

"Combined effects of a dietary portfolio of plant sterols, vegetable protein, viscous fibre and almonds on LDL particle size"; Lamarche B., Desroches S., Jenkins D.J.A., Kendall C.W.C., Marchie A., Faulkner D., Vidgen E., Lapsley K.G., Trautwein E.A., Parker T.L., Josse R.G., Leiter L.A., **Connelly P.W.**, *Brit J Nut*, 92:657-663, 2004

"Combined endothelial and myocardial protection by endothelin antagonism enhances transplant allograft preservation"; Fedak P.W.M., **Rao V., Verma S.**, Ramzy D., Tumati L., Miriuka S., Boylen P., **Weisel R.D.**, Feindel C.M., *J Thorac Cardiovasc Surg*, 129:407-415, 2005

"Community factors, hospital characteristics and inter-regional outcome variations following acute myocardial infarction in Canada"; Alter D.A., Austin P.C., **Tu J.V.**, *Can J Cardiol*, 21:247-255, 2005

"Comparison of coding of heart failure and comorbidities in administrative and clinical data for use in outcomes research"; Lee D.S., Donovan L., Austin P.C., Gong Y., **Liu P.P.**, Rouleau J.L., **Tu J.V.**, *Med Care*, 148:1041-1046, 2004

"Comparison of matched-filtered 2D projection and elliptical centric-ordered 3D contrast-enhanced MR angiography"; Huang Y., Merchant N., **Wright G.A.**, *Journal of Magnetic Resonance Imaging*, 20:(3), 435-442, 2004

"A comparison of several regression models for analysing cost of CABG surgery"; Austin P.C., Ghali W.A., **Tu J.V.** *Stat Med*, 22:2799-815, 2003

"Complement C5a receptor antagonist attenuates multiple organ dysfunction following ruptured abdominal aortic aneurysm"; Harkin D.W., **Rubin B.B.**, Romaschin A., **Lindsay T.F.**, *Journal of Vascular Surgery*, 39:(1), 196-206, 2004

"Conditional cardiac over-expression of endothelin-1 induces inflammation and dilated cardiomyopathy in mice"; Yang L.L., Gross R., Kabir G.M., Sadi A., **Gotlieb A.I., Husain M., Stewart D.J.**, *Circulation*, 109:255-261, 2004

"Conduction through the inward rectifier potassium channel, Kir21, is increased by negativity charged extracellular residues"; D'Avanzo N., Cho H.C., Tolokh I.I., Pekhletski R., Tolokh I.S., Gray C., Goldman S., **Backx P.H.**, *J. Gen Physiol*, 125:1-13, 2005

"Connexin 40, a target of transcription factor Tbx5, patterns wrist, digits and sternum"; Pizard A., Burgon P.G., Paul D.L., **Bruneau B.G.**, Seidman C.E., Seidman J.G., *Molecular and Cellular Biology*, 25:5073-5083, 2005

"Constrictive pericarditis: Case presentation and a review of the literature", **Butany J.**, El Demellawy D., Collins M.J., Nair V., Israel N.S., Woo A., Cusimano R.J., *Can J Cardiol*, (11):1137-44, 2004

"Contemporary trends in aortic valve surgery: A single centre 10-year clinical experience", Hanayama N., Fazel S., Goldman B.S., Mitoff P.R., Sever J., **Fremes S.E.**, *Journal of Cardiac Surgery*, 19(6), 552-8, 2004

"Continuous therapy with nitroglycerin impairs endothelium-dependent dilation but does not cause tolerance in conductance arteries: A human in vivo study", Gori T., Harvey P., **Floras J.S., Parker J.D.** *Journal of Cardiovascular Pharmacology*, 44:601-606, 2004

"C-reactive protein activates the nuclear factor-kappaB signal transduction pathway in saphenous vein endothelial cells: Implications for atherosclerosis and restenosis", **Verma S.**, Badiwala M.V., **Weisel R.D.**, Li S.H., Wang C.H., Fedak P.W.M., **Li R-K., Mickle D.A.G.** *J Thorac Cardiovasc Sur*, 126:1886-1891, 2003

"C-reactive protein attenuates endothelial progenitor cell survival, differentiation and function. Further evidence of a mechanistic link between C-reactive protein and cardiovascular disease", **Verma S.**, Li S-H., Kuliszewski M.A., Szmítko P.E., Zucco L., Wang C-H., Badiwala M.V., **Mickle D.A.G., Weisel R.D., Fedak P.W.M., Stewart D.J.**, Kutryk M.J.B. *Circulation*, 109:2058-2067, 2004

"C-reactive protein upregulates complement inhibitory factors in endothelial cells", **Verma S., Mickle D.A.G., Li R-K.**, Fedak P.W.M., Wang C-H., **Weisel R.D.**, Szmítko P.E., Li S-H. *Circulation*, 7:833-6, 2004

"Cross-linking vasomotor and vascular remodelling: A novel function for tissue transglutaminase", **Langille B.L.**, Dajnowiec D. *Circ Res*, 96:9-11, 2005

"Current status of cellular therapy for ischemic heart disease", Fazel S., Tang G.H., Angoulvant D., Cimini M., **Weisel R.D., Li R.K., Yau T.M.**, *Ann Thorac Surg*, 79:S2238-S2247, June 2005

"Day/night rhythms in gene expression of the normal murine heart", Martino T., Arab S., **Belsham D.D., Liu P.P., Straume M., Sole M.J.**, *J Mol Med*, 82:256-264, 2004

"DeBakey Surgitool mechanical heart valve prosthesis, explanted at 32 years", **Butany J.**, Naseemuddin A., Nair V., Feindel C.M., *Cardiovasc Pathol*, 13:(6), 345-6, 2004

"Defective lung morphogenesis and fatal respiratory distress in endothelial NO-synthase deficient mice", Han R.N.N., Babaei S., Robb M., Lee T., Ridsdale R., Ackerley C., Post M., **Stewart D.J.** *Circulation Research*, 94:1115-23, 2004

"Design of the SHock Inhibition Evaluation with Azimilide (SHIELD) study: A novel method to assess antiarrhythmic drug effect in patients with an implantable cardioverter-defibrillator", Pratt C.M., **Dorian P.**, Al-Khalidi H.R., Brum J.M., Borggreffe M., Tatla D.S., Brachmann J., Myerburg R.J., Cannom D.S., Holroyde M.J., van der Laan M., Hohnloser S.H., on behalf of the SHIELD Investigators, *Am J Cardiol*, 95:274-6, 2005

"Developing risk-adjusted 30-day hospital mortality rates", Tourangeau A.E., **Tu J.V.** *Res Nurs and Health*, 26:483-96, 2003

"Differences in phenotypic modulation, proliferation and matrix protein synthesis in venous and arterial-derived smooth muscle cells: Potential role of decorin", Wong A.P., Nili N., **Strauss B.H.**, *Cardiovasc Res*, 65:(3), 702-10, 2005

"Direct comparison of a dietary portfolio of cholesterol lowering foods with a statin in hypercholesterolemic participant", Jenkins D.J.A., Kendall C.W.C., Marchie A., Faulkner D.A., Wong J.M.W., de Souza R., Emam A., Parker T.L., Vidgen E., Trautwein E.A., Lapsley K.G., Josse R.G., Leiter L.A., Singer W., **Connelly P.W.**, *Am J Clin Nutr*, 81:380-387, 2005

"Disruption of pancreatic β -cell lipid rafts modulates Kv2.1 channel gating and insulin exocytosis", Xia F., Gao X., Kwan E., Lam P.P., Chan L., Sy K., Sheu L., Wheeler M.B., Gaisano H.Y., **Tsushima R.G.** *J Bio Chem*, 279:24685-24691, 2004

"Distinct functions of junD in cardiac hypertrophy and heart failure"; Ricci R., Eriksson U., Oudit G.Y., Eferl R., Akhmedov A., Sumara I., Sumara G., Kassiri Z., David J.P., Bakiri L., Sasse B., Idarraga M.H., Rath M., Kurz D., Theussl H.C., Perriard J.C., **Backx P.H.**, Penninger J.M., Wagner E.F., *Genes Dev*, 15;19:(2), 208-13, 2005

"Does 24-hour ST-segment resolution postfibrinolysis add prognostic value to a Q wave? An ASSENT 2 electrocardiographic substudy"; Lockwood E., Fu Y., Wing B., Van de Werf F., Granger C.B., Armstrong P.W., **Goodman S.G.** for the ASSENT-2 Investigators. *Am Heart J*, 146:640-5, 2003

"Does coronary artery revascularization before major vascular surgery benefit patients with coronary artery disease?"; **Rubin B.B.**, Beattie S., *Nature Clinical Practice Cardiovascular Medicine*, 2:190-191, 2005

"Does the baseline ECG add value to time to treatment in predicting successful reperfusion after fibrinolysis?"; Insight from ASSENT-3 and ASSENT 3+; Al-Kurtass S., Fu Y., Wagner G., **Goodman S.G.**, Granger C.B., Wallentin L., Van de Werf F., Armstrong P.W., *Can J Cardiol*, 20:(Suppl D), 108D, 2004

"Does ischemic preconditioning afford clinically relevant cardioprotection?"; Mikhail P., **Verma S.**, Fedak P.W.M., **Weisel R.D.**, **Li R-K.** *Am J Cardiovasc Drugs*, 3:1-11, 2003

"Donor-specific B cell tolerance after ABO-incompatible infant heart transplantation"; Fan X., Ang A., Pollock-Barziv S.M., Dipchand A.I., Ruiz P., Wilson G., Platt J.L., **West L.J.**, *Nature Medicine*, 10:(11), 1227-1233, 2004

"Downregulation of eNOS mRNA expression by TNF": Identification and functional characterization of RNA-protein interactions in the 3'UTR; Lai P.F.H., Mohamed F., Monge J.C., **Stewart D.J.** *Cardiovasc Res*, 59(1):160-168, 2003

"Downward delegation of implantable cardioverter defibrillator decision-making in a restricted resource environment: The pitfalls of bedside rationing"; Simpson C.S., Hoffmaster B., **Dorian P.** *Can J Cardiol*, 21:595-9, 2005

"Dynamic real-time architecture in magnetic resonance coronary angiography (MRCA) - A prospective clinical trial"; Yang P., Santos J.M., Nguyen P., Scott G., Engvall J., McConnell M., **Wright G.A.**, Nishimura D., Pauly J., Hu B. *Cardiovascular Magnetic Resonance*, 6:(4), 885-894, 2004

"Effect of antibiotics as cholesterol-lowering agents"; Jenkins D.J.A., Kendall C.W.C., Hamidi M., Vidgen E., Faulkner D., Parker T., Irani N., Wolever T.M.S., Fong I., Kopplin P., **Connolly P.W.**, Onderdonk A., Rao A.V., *Metabolism*, 54:103-112, 2005

"Effectiveness of statins for secondary prevention in elderly patients after acute myocardial infarction: An evaluation of class effect"; Zhou Z., Rahme E., **Tu J.V.**, Humphries K., Eisenberg M., Abrahamowicz M., Austin P., Pilote L., *CMAJ*, 172:1187-1194, 2005

"Effects of a diet high in plant sterols, vegetable proteins, and viscous fibers on circulating sterol levels and red cell fragility in hypercholesterolemic subject"; Jones P.J., Raeini-Sarjaz M., Jenkins D.J.A., Kendall C.W.C., Vidgen E., Trautwein E.A., Lapsley K.G., Marchie A., Cunnan, S.C., **Connolly P.W.**, *Lipids*, 40:169-174, 2005

"Effects of folic acid fortification and multivitamin therapy on homocysteine and vitamin B(12) status in cardiac transplant recipients"; Miriuka S., Langman L., Miner S., Delgado D., **Ross H.**, Cole D. *J Heart Lung Trans*, 23:405-412, 2004

"Effects of hypoxia on rat airway smooth muscle cell proliferation"; Cogo A., Napolitano G., Michoud M.C., Ramos Barbon D., **Ward M.E.**, Martin J.G. *J Applied Physiol*, 94:1403-1409, 2003

"Effects of nifedipine GITS on sympathetic activity in young and older patients with hypertension"; Ruzicka M., Coletta E., **Floras J.**, Leenen F.H.H. *J Hypertension*, 22:1039-1044, 2004

"Effects of pre, peri and postmyocardial infarction treatment with losartan in rats: Effect of dose on survival, ventricular arrhythmias, function and remodelling"; Pourdjabbar A., **Parker T.G.**, Nguyen K.T., Desjardins J.F., Lapointe N., Tsoporis J.N., Rouleau J.L., *Am J Physiol*, 88(4), H1997-2005, 2005

"Effects of the vasopeptidase inhibitor omapatrilat on peri- and postmyocardial infarction in Zucker lean rats", Lapointe N., **Parker T.G.**, Tsoporis J.N., Nguyen K.T., Marcotte F., Adam A., Lou I., Rouleau J.L., *Can J Cardiol*, 21:(3), 291-7, 2005

"Efficacy and bleeding complications among patients randomized to Enoxaparin or unfractionated heparin for antithrombin therapy in non-ST-segment elevation acute coronary syndromes: A systematic overview", Petersen J.L., Mahaffey K.W., Hasselblad V., Antman E., Cohen M., **Goodman S.G.**, **Langer A.**, Blazing M.A., LeMoigne-Amrani A., DeLemos J.A., Nessel C.C., Harrington R.A., Ferguson J.J., Braunwald E., Califf R.M., *JAMA*, 292:89-96, 2004

"Elafin over-expressing mice have improved cardiac function after myocardial infarction", Ohta K., Nakajima T., Cheah A.Y., Zaidi S.H., Kaviani N., Dawood F., You X.M., **Liu P.P.**, **Husain M.**, Rabinovitch M., *Am J Physiol Heart Circ Physiol*, 287:(1), H286-92, 2004

"Electrophysiological profiling of cardiomyocytes in embryonic bodies derived from human embryonic stem cells: Therapeutic implications", Vanderlaan R.D., Oudit G.Y., **Backx P.H.** *Circ Res*, 93:1-3, 2003

"Elevated leukocyte count and adverse hospital events in patients with acute coronary syndromes: Findings from the Global Registry of Acute Coronary Events (GRACE)", Furman M.I., Gore J.M., Anderson F.A., Budaj A., **Goodman S.G.**, Avezum A., López-Sendón J., Klein W., Mukherjee D., Eagle K., Dabbous O.H., Goldberg R.J., for the GRACE Investigators *Am Heart J*, 147:42-8, 2004

"Elevated troponin-I after percutaneous coronary interventions: Incidence and risk factors", Segev A., Goldman L.E., Cantor W.J., Barr A., **Strauss B.H.**, Winegard L.D., Kim A., Bowman K.A., Robert J., Chisholm R.J., *Cardiovasc Radiat Med*, 5:(2), 59-63, 2004

"Endothelial nitric oxide synthase: A new paradigm for gene regulation in the injured blood vessel", Tai S.C., Robb G.B., **Marsden P.A.** *Arterioscler Thromb Vasc Biol*, 24:405-412, 2004

"Enhanced IGF-1 expression improves smooth muscle cell engraftment after cell transplantation", Liu T.B., Fedak P.W.M., **Weisel R.D.**, Yasuda T., Kiani G., **Mickle D.A.G.**, Jia Z.Q., **Li R.K.**, *Am J Physiol*, 287:H2840-H2849, 2004

"Enoxaparin and percutaneous coronary intervention: A Canadian perspective", Fitchett D., Welsh R., **Langer A.**, **Goodman S.**, *Can J Cardio*, 21:(6), 501-07, 2005

"Estradiol induces discordant angiotensin and blood pressure responses to orthostasis in healthy postmenopausal women", Harvey P.J., Morris B.L., Miller J.A., **Floras J.S.**, *Hypertension*, 45:399-405, 2005

"Evaluation of a community-based inner-city disease management program for postmyocardial infarction patients: A randomized controlled trial", Young W., Rewa G., **Goodman S.G.**, Jaglal S.B., Cash L., Lefkowitz C., Coyte P.C. *CMAJ*, 169(9):905-10, 2003

"Evaluation of prolonged antithrombotic pretreatment ("cooling-off" strategy) before intervention in patients with unstable coronary syndromes: A randomized controlled trial", **Goodman S.G.**, *JAMA*, 24:290(12):1593-9, 2003

"Excessive tumor necrosis factor activation post-infarction contributes to susceptibility to myocardial rupture and left ventricular dysfunction", Sun M., Dawood F., Wen W.H., Chin M.Y., Kirshenbaum L., **Liu P.P.**, *Circulation*, 110:3221-8, 2004

"Exercise as an alternative to oral estrogen for amelioration of endothelial dysfunction in postmenopausal women", Harvey P.J., Picton P.E., Su W.S., Morris B.L., Notarius C.F., **Floras J.S.**, *American Heart Journal*, 149:291-297, 2005

"Explanation of a mechanical assist device: Assessment of myocardial recovery", Delgado D.G.H., **Rao V.**, Miriuka S.G., Al-Hesayan A., McIver J., Feindel C.M., Cusimano R.J., **Ross H.J.**, *J Card Surg*, 19:(1), 47-50, 2004

"Expression of gClq-R/p33 and gClq-R/p33 ligands in human atherosclerotic lesions", Peerschke E.I.B., Minta J., Zhou S.Z., McCaffrey T.A., **Gotlieb A.I.**, Ghebrehiwet B., *Molecular Immunology*, 41:759-766, 2004

"Expression of S100B post coronary artery ligation regulates remodelling of mouse myocardium," Tsoporis J.N., Marks A., Haddad A., Dawood F., Liu P., **Parker T.G.**, *Circulation*, 111:(5), 598-606, 2005

"Expression of matrix metalloproteinase -2 and -9 in exudates associated with polydimethyl siloxane and gelatin tubes implanted in mice," Xu P. **Sefton M.V.**, *J Biomed Mater Res*, 71A:226-232, 2004

"Factors associated with access blood flow in native vessel arteriovenous fistulae," Tonelli M., Hirsch D.J., **Chan C.T.**, Marryatt J., Mossop P., Wile C., Jindal K., *Nephrology, Dialysis and Transplantation*, 19:2559-2563, 2004

"Factors that influence the decision to proceed to carotid endarterectomy," Hill M.D., Foss M.M., **Tu J.V.**, Feasby T.E. *Neurology*, 62:803-5, 2004

"Fatal severe acute respiratory syndrome is associated with multiorgan involvement by coronavirus," Farcas G.A., Poutanen S.M., Mazzulli T., Willey B.M., **Butany J.**, Asa S.L., Faure P., Akhavan P., Low D.E., Kain K.C., *J Infect Dis*, 191:(2), 193-7, 2005

"Feasibility of implantable cardioverter defibrillator use in elderly patients: A case series of octogenarians," Noseworthy P.A., Lashevsky I., **Dorian P.**, Greene M., Cvitkovic S., Newman D. *Pacing Clin Electrophysiol*, 27:373-8, 2004

"The fetal cardiovascular response to antenatal steroids in severe early-onset intrauterine growth restriction," Simchen M.J., **Adamson S.L.**, Alkazaleh F., Windrim R., Telford J., Beyene J., Kingdom J. *Am J Obstet Gynecol*, 190(2):296-304, 2004

"Fibronectin deposition by cardiac valvular interstitial cells is increased in response to injury," Fayet C., **Bendeck M.**, **Gotlieb A.**, *Cardiovascular Pathology*, 13:S135, 2004

"First experience with direct, selective factor Xa inhibition in patients with non-ST-elevation acute coronary syndromes: Results of the XaNADU-ACS Trial," Alexander J.H., Yang H., Becker R.C., Kodama K., **Goodman S.G.**, Dyke C.K., Kleiman N.S., Hochman J.S., Berger P.B., **Cohen E.A.**, Lincoff A.M., Burton J.R., Bovill E.G., Kawai C., Armstrong P.W. Harrington R.A., on behalf of the XaNADU-ACS Investigators, *Journal of Thrombosis Haemostasis*, 3:439-47, 2005

"Fluctuations of intracellular iron modulate elastin production," Bunda S., Kaviani N., **Hinek A.**, *J Biol Chem*, 280:2341-2351, 2005

"Folie a deux: An old diagnosis with a new technology," Cervini P., Newman D., **Dorian P.**, Edwards J., Greene M., Bhalerao S. *Can J Cardiol*, 19:1539-40, 2003

"Functional inhibition of secreted angiopoietin: A novel role for angiopoietin 1 in coronary vessel patterning," Ward N.L., Van Slyke P., **Dumont D.J.**, *Biochemical and Biophysical Research Communications*, 232:937-946, 2004

"The functional landscape of mouse gene expression," Zhang W., Morris Q., Chang R., Shai O., Bakowski M.A., Mitsakakis N., Mohammad N., Robinson M., Zirnglibi R., Somogyi E., Laurin N., Eftekharpour E., Sat E., Grigull J., Pan Q., Peng W.T., Krogan N., Greenblatt J., Fehlings M., van der Kooy D., Aubin J., **Bruneau B.G.**, Rossant J., Blencowe B., Frey B.J., Hughes T.R., *Journal of Biology*, 3:21, 2004

"G-protein signalling participates in the development of diabetic cardiomyopathy," Harris I.S., Treskov I., Rowley M.W., **Heximer S.**, Kaltenbronn K., Finc, B.N., Gross R.W., Kelly D.P., Blumer K.J., Muslin A.J., *Diabetes*, 53:(12), 3082-90, 2004

"Gender bias in cardiovascular advertisements," Ahmed S.B., **Grace S.L.**, Stelfox H.T., Tomlinson G., **Cheung A.M.**, *Journal of Evaluation in Clinical Practice*, 10:(4), 531-538, 2004

"Gender differences in health information needs and decisional preferences in patients recovering from an acute ischemic coronary event," **Stewart D.E.**, Abbey S.E., Shnek Z.M., **Irvine J.**, **Grace S.L.** *Psychosom Med*, 66(1):42-48, 2004

"Gender differences in predictors of illness intrusiveness one year after a cardiac event," Franche R.L., Abbey S., **Irvine J.**, Shnek Z., Grace S.L., Devins G., **Stewart D.E.** *J Psychosom Res*, 56:125-132, 2004

"Genetic heterogeneity of the vasculogenic phenotype parallels angiogenesis: Implications for cellular surrogate marker analysis of antiangiogenesis"; Shaked Y, Bertolini F, Man S, Roger M.S., Cervi D, Foutz T., Rawn, K., Voskas D., **Dumont D.J.**, Ben-David Y, Lawier J., Henkin J., Huber J., Hicklin D.J., D'Amato R.J., Kerbel R.S., *Cancer Cell*, 7:101-111, 2005

"Genetic polymorphisms predisposing to hyperhomocysteinemia in cardiac transplant patients"; Miriuka S.G., Langman L.J., Evrovski J., Miner S.E.S., D'Mello N., Delgado D.H., Wong B.Y.L., **Ross H.J.**, Cole D.E.C., *Trans Int*, 18:29-35, 2005

"Gender differences in health information needs and decisional preferences in patients recovering from an acute ischemic coronary event"; **Stewart D.E.**, Abbey S.E., Shnek Z.M., **Irvine J.**, **Grace S.L.**, *Psychosom Med*, 66:(1), 42-48, 2004

"Gender differences in predictors of illness intrusiveness one year after a cardiac event"; Franche R.L., Abbey S., Irvine J., Shnek Z., **Grace S.L.**, Devins G., **Stewart D.E.**, *J Psychosom Res*, 56:125-132, 2004

"Generation of a phenotypic array of hypothalamic neuronal cell models to study complex neuroendocrine disorders"; **Belsham D.**, Cai F., Cui H., Smukler S.R., Salapatek A.M.F., Shkreta L., *Endocrinology*, 145:393-400, 2004

"Global patterns of use of antithrombotic and antiplatelet therapy in patients with acute coronary events: Insights from the Global Registry of Acute Coronary Events (GRACE)"; Budaj A., Brieger D., Steg P.G., **Goodman S.G.**, Fox K.A.A., Avezum A., Cannon C.P., Mazurek T., Flather M., Dabbous O.H., Van de Werf F., for the GRACE Investigators, *Am Heart J*, 146:999-1006, 2004

"H3 domain of syntaxin 1A inhibits KATP channels by its actions on the sulfonylurea receptor 1 nucleotide-binding folds-1 and -2."; Cui N., Kang Y., He Y., Leung Y.M., Xie H., Pasyk E.A., Gao X., Sheu L., Hansen J.B., Wahl P., **Tsushima R.G.**, Gaisano H.Y., *J Biol Chem*, 279:(51), 53259-65, 2004

"Heart cell implantation after myocardial infarction"; Sam J., Angoulvant D., Fazel S., **Weisel R.D.**, **Li R.K.**, *Coron Artery Dis*, 16:85-91, 2005

"Heart rate variability biofeedback as a behavioural neurocardiac intervention to enhance vagal heart rate control"; Nolan R.P., Kamath M.V., **Floras J.S.**, Stanley J., Pang C., Picton P., Young Q.R., *American Heart Journal*, 149:1137.e1-1137.e7, 2005

"Hemodilution during cardiopulmonary bypass is an independent risk factor for acute renal failure in adult cardiac surgery"; Karkouti K., Beattie W.S., Wijeyesundera D.N., **Rao V.**, **Chan C.**, Dattilo K.M., Djaiani G., Ivanov J., Karski J., David T.E., *J Thorac Cardiovasc Surg*, 129:391-400, 2005

"Hemodynamic after-effects of acute dynamic exercise in sedentary normotensive postmenopausal women"; Harvey P.J., Morris B.L., Kubo T., Picton P., Su W., Notarius C.F., **Floras J.S.**, *Journal of Hypertension*, 23:285-292, 2005

"The high risk of stroke immediately after transient ischemic attack: A population-based study"; Hill M.D., Yiannakoulis N., Jeerakathil T., **Tu J.V.**, Svenson L.W., Schopflocher D.P., *Neurology*, 62:2015-2020, 2004

"Honeycomb-like healed abscess: An unusual complication of infective endocarditis"; **Butany J.**, Nair V., Ahluwalia M., Woo A., Graba J., David T.E., *J Card Surg*, 20:(1), 81-4, 2005

"Hospitalization rates and length of stay for cardiovascular diseases in Canada 1994-1999"; Hall R.E., **Tu J.V.** for the Canadian Cardiovascular Outcomes Research Team, *Can J Cardiol* 19:1123-31, 2003

"How does the prognosis of diabetes compare with that of established vascular disease? Insights from the Canadian Vascular Protection (VP) Registry"; Hackam D.B., Tan M.K.K., Honos G.N., Leite, L.A., **Langer A.**, **Goodman S.G.**, for the Vascular Protection (VP) Registry Investigators, *Am Heart J*, 148:1028-33, 2004

"HSP70 binds to the fast-twitch skeletal muscle sarco(endo)plasmic reticulum Ca²⁺-ATPase (SERCA1a) and prevents thermal inactivation"; Tupling A.R., Gramolini A.O., Duhamel T.A., Kondo H., Asahi M., Tsuchiya S.C., Borrelli M.J., Lepock J.R., Otsu K., Hori M., **MacLennan D.H.**, Green H.J., *J Biol Chem*, 279:52382-52389, 2004

- "Human saphenous vein coronary artery bypass graft morphology, geometry and hemodynamics", Leask R.L., **Butany J.**, Johnston K.W., **Ethier C.R.**, Ojha M., *Ann Biomed Eng*, 33:(3), 301-9, 2005
- "Hyperhomocysteinemia in heart transplantation: From bench to bedside", Miriuka S., Delgado D.H., Cole D.E.C., **Rao V.**, **Ross H.J.** *J Heart Lung Transplant*, 22:1069-1081, 2003
- "Hyperoxia causes oxygen free radical mediated membrane injury and alters myocardial function and hemodynamics in the newborn", Bandalí K.B., Belanger M.P., **Wittnich C.**, *American Journal of Physiology - Heart and Circulation*, 287:H553-559, 2004
- "Hypersensitivity myocarditis complicating hypertrophic cardiomyopathy heart", **Butany J.**, Nair V., Ahluwalia M.S., Graba J., Demellawy D.E., **Rao V.**, **Ross H.**, *Can J Cardiol*, 20:(9), 911-4, 2004
- "Identification of biochemical adaptations in hyper- or hypocontractile hearts from phospholamban mutant mice by high-performance gel-free proteome profiling", Pan Y., Kislínger T., Gramolini A.O., Zvaritch E., Kranias E.G., **MacLennan D.H.**, **Emili A.** *Proc. Natl. Acad. Sci., USA* 101:2241-2246, 2004
- "Images in cardiovascular medicine: Mediastinal thymoma", **Butany J.**, Nair V., Ahluwalia M.S., El Demellawy D., Chamberlain D.W., Feindel C. *Circulation*, 109(1):e1-2, 2004
- "Impact of an exercise program on arterial stiffness and insulin resistance in hemodialysis patients", Mustata S., **Chan C.**, Lai V., Miller J.A., *Journal of the American Society of Nephrology*, 15:2713-2718, 2004
- "Impact of nocturnal hemodialysis on the variability of heart rate and duration of hypoxemia during sleep", Chan C.T., Hanly P., Gabor J., Picton P., Pierratos A., **Floras J.S.** *Kidney International*, 65:661-665, 2004
- "Impaired elastogenesis and development of the non-atherosclerotic occlusive arterial diseases in children", **Hinek A.** *Ann Diag Ped Pathol*, 7(1-2):7-14, 2003
- "Implanted cardioverter defibrillators for the prevention of sudden death", **Dorian P.**, Talajic M., Tang A., *Can J Cardiol*, 21:(Suppl A), 31-6, 2005
- "Impracticability of informed consent in the Registry of the Canadian Stroke Network", **Tu J.V.**, Willison D.J., Silver F.L., Fang J., Richards J., Laupacis A., Kapral M., for the Investigators in the Registry of the Canadian Stroke Network. *N Engl J Med*, 350:1414-1421, 2004
- "Improved blood pressure control with nocturnal hemodialysis: Review of clinical observations and physiologic mechanisms", McCormick B.B., **Chan C.T.**, *Current Hypertension Report*, 6:140-4, 2004
- "Improvement in Cheyne-Stokes respiration following cardiac resynchronization therapy", Gabor J.Y., Newman D.M., Barnard-Roberts V., Korley V., Mangat I., **Dorian P.**, Hanly P.J., *Eur Respir J*, 26:95-100, 2005
- "An incidental calcified right atrial mass", Mikhail P., Silversides C., **Rao V.**, **Butany J.** *Can J Cardiol*, 19(13):1551-3, 2003
- "Increased cell death in osteopontin-deficient cardiac fibroblasts occurs by a caspase 3-independent pathway", Zohar R., Zhu B., **Liu P.**, Sodek J., McCulloch C.A., *Am J Physiol (Heart and Circ)*, 287:H1730-9, 2004
- "Increased myofibrillar protein phosphatase-1 activity impairs rat aortic smooth muscle activation after hypoxia", Teoh H., Zacour M., Wener A., Gunaratnam L., **Ward M.E.** *Am J Physiol (Heart Circ. Physiol)*, 284:(4), H1182-1189, 2003
- "Increasing access to cardiac rehabilitation: Automatic referral to the program closest to home", **Grace S.L.**, Evindar A., Kung T., Scholey P., **Stewart D.E.** *J Cardiopulm Rehabil*, 24:171-174, 2004
- "Increasing patient-initiation of cardiac rehabilitation referral in female percutaneous coronary intervention patients", **Grace S.L.**, Evindar A., **Brooks D.**, Jaglal S., Abramson B., Nolan R.P., *Canadian Journal of Cardiovascular Nursing*, 15:(1), 23-27, 2005

- "Incremental value of parametric quantitative assessment of myocardial perfusion by triggered low power myocardial contrast echocardiography", Yu E.H.C., Skyba D.M., Leong-Poi H., Sloggett C.E., Jamorski M., Garg R., Iwanochko R.M., **Siu S.C.** *J Am Coll Cardiol*, 43:1807-1813, 2004
- "The independent association of massive blood loss with mortality in cardiac surgery", Karkouti K., Wijesundera D.N., **Yau T.M.**, Beattie S., Abdelnaem E., McCluskey S.A., Ghannam M., Yeo E., Djaiani G., Karski J., *Transfusion*, 44:(10),1453-1462, 2004
- "Induction of xenogeneic neonatal tolerance to transgenic human leukocyte antigen class I grafts", Borenstein S.H., Tao K.S., Hu N., **West L.J.**, Chamberlain J.W., *Transplantation*, 78:(6), 844-852, 2004
- "Infective endocarditis in a Hancock bioprosthetic heart valve", **Butany J.W.**, Naseemuddin A., Nair V., Borger M.A., Daniel L., *J Card Surg*, 20:(4), 389-92, 2005
- "Inflammation, cytokines and post-myocardial infarction remodelling", Nian M., Lee P., **Liu P.**, *Circ Res*, 94:1543-53, 2004
- "Informatics platform for global proteomic profiling and biomarker discovery using liquid chromatography-tandem mass spectrometry", Radulovic D., Jelveh S., Ryu S., Hamilton T.G., Foss E., Mao Y., **Emili A.**, *Mol Cell Proteomics*, 3:(10), 984-97, 2004
- "Inhibition of awake sympathetic nerve activity of heart failure patients with obstructive sleep apnea by nocturnal continuous positive airway pressure", Usui K., **Bradley T.D.**, Spaak J., Ryan C.M., Kubo T., Kaneko Y., **Floras J.S.**, *Journal of the American College of Cardiology*, 45:2008-2001, 2005
- "Inhibition of Tie-2 signalling induces endothelial cell apoptosis, decreases Akt signalling, and induces endothelial cell expression of the endogenous anti-angiogenic molecule, thrombospondin-1", Niu Q., Perruzzi C., Voska, D., Lawle, J., **Dumont D.J.**, Benjamin L.E., *Cancer Biol Ther*, 4:402-405, 2004
- "Inhibitory profile of SEA0400 assessed on the cardiac Na⁺-Ca²⁺ exchanger, NCX1.1", Lee C., Dhalla N.S., Le H.D., Isaac M., Choptiany P., **Gross G.**, Omelchenko A., Matsuda T., Baba A., Takahashi K., Hnatowich M., Hryshko L.V., *Journal of Pharmacology and Experimental Therapeutics*, 311:748-57, 2004
- "Integrating gene and protein expression data: Pattern analysis and profile mining", Cox B., Kislinger T., **Emili A.**, *Methods*, 35:(3), 303-14, 2005
- "Interaction between endothelial heme oxygenase-2 and endothelin-1 in altered aortic reactivity after hypoxia in rats", Govindaraju V., Teoh H., Hamid Q., Cernacek P., **Ward M.E.**, *American Journal of Physiology (Heart Circ. Physiol)*, 288:H962-70, 2005
- "Interaction network containing conserved and essential protein complexes in Escherichia coli", Butland G., Peregrin-Alvarez J.M., Li J., Yang W., Yang X., Canadien V., Starostine A., Richards D., Beattie B., Krogan N., Davey M., Parkinson J., Greenblatt J., **Emili A.**, *Nature*, 433:(7025). 531-7, 2005
- "Intimal thickness is not associated with wall shear stress patterns in the human right coronary artery", Joshi A.K., Leask R.L., Myers J.G., Ojha M., **Butany J.**, **Ethier C.R.**, *Arterioscler Thromb Vasc Biol*, 24:(12), 2408-13, 2004
- "Investigation of recombinant human elastin polypeptides as non-thrombogenic coatings", Woodhouse K.A., Klement P., Chen V., Gorbet M.B., **Keeley F.W.**, Stahl R., Fromstein J.A., Bellingham C.M. *Biomaterials*, 25:4543-53, 2004
- "In vivo MRI measurement of blood oxygen saturation in children with congenital heart disease", Nield L., Macgowan C., Valsangiaco E., **Wright G.A.**, Hornberger L., Qi X., Yoo S.J., *Pediatric Radiology*, 35:(2), 179-85, 2005
- "In vivo recognition by the host adaptive immune system of microencapsulated xenogeneic cells", Jones K., **Sefton M.V.**, Gorczynski R., *Transplantation*, 78:(10),1454-1462, 2004
- "Inward remodelling of the rabbit aorta is blocked by the MMP inhibitor doxycycline", **Courtman D.W.**, Franco C., Meng Q.H., **Bendeck M.P.**, *Journal of Vascular Research*, 41:157-165, 2004

"The *Iroquois* homeobox gene *lrx2* is not essential for normal development of the heart and midbrain/hindbrain boundary in mice"; Lebel M., Agarwal P., Cheng C.W., Kabir M.G., Chan T.Y., Thanabalasingham V., Zhang X., Cohen D.R., **Husain M.**, Cheng, S.H., **Bruneau B.G.**, Hui C-C., *Molecular and Cell Biol*, 23:8216-8225, 2003

"Is all endoplasmic reticulum created equal? The effects of the heterogeneous distribution of endoplasmic reticulum Ca²⁺ handling proteins"; Papp S., Dziak E., Michalak M., **Opas M.**, *J. Cell Biol*, 160:475-479, 2003

"Issues influencing development of a Cardiovascular Information Network"; Davies R.A., Abdullah S., Cohen E., Knudtson M., Collins-Nakai R., Lacroix C., Taylor G., **Tu J.V.**, Wilson E., and the Canadian Cardiovascular Information Network Investigators. *Can J Cardiol*, 20:637-641, 2004

"The Janus faces of iNOS"; Mungrue I.N., **Stewart D.J.**, **Husain M.** *Circulation Research*, 93(7):e74, 2003

"A large left atrial myxoma"; **Butany J.**, El Demellawy D., Collins M.J., Israel N.Sh., Graba J., David T.E., *J Card Surg*, 19(6), 547-51, 2004

"A large lipoma of the ascending aorta"; Davierwala P.M., David T.E., **Butany J.** *Ann Thorac Surg*, 77(3):1079-80, 2004

"Late outcomes of mitral valve repair for floppy valves: Implications for asymptomatic patients"; David T.E., Ivanov J., Armstrong S., **Rakowski H.** *J. Thorac Cardiovasc Surg*, 125(5):1143-52, 2003

"Left ventricular reconstruction: Early and late results"; Mickleborough L.L., Merchant N., Ivanov J., **Rao V.**, Carson S. *J Thorac Cardiovasc Surg*, 128:27-37, 2004

"Leptin increases cardiomyocyte hyperplasia via ERK-and PI 3-kinase-dependent signalling pathways"; Tajmir P., Ceddia R.B., **Li R-K.**, Coe I.R., Sweeney G. *Endocrinology*, 145:1550-5, 2004

"Limitations to antiarrhythmic drug use in patients with atrial fibrillation"; Humphries K.H., Kerr C.R., Steinbuch M., **Dorian P.**, for the Canadian Registry of Atrial Fibrillation (CARAF) Investigators, *Can Med Assoc J*, 171:741-5, 2004

"Lipid metabolism, bimonthly update"; **Lewis G.F.**, *Curr.Opinion in Lipidol*, (Editorial/review), 15:(1), 85-87, 2004

"Long-term comparison of the implantable cardioverter defibrillator versus amiodarone: Eleven year follow-up of a subset of patients in the Canadian Implantable Defibrillator Study (CIDS)"; Bokhari F., Newman D., Greene M., Korley V., Mangat I., **Dorian P.** *Circulation*, 110:112-6, 2004

"Long-term outcomes of cardiac pacing in the adult with congenital heart disease"; Walker F., **Siu S.C.**, Woods S., Cameron D.A., Webb G.D., Harris L. *J Am Coll Cardiol*, 43:1894-1901, 2004

"Long-term results of aortic valve replacement with the St. Jude Toronto stentless porcine valve"; Desai N.D., Merin O., Cohen G.N., Herman J., Mobilos S., Sever J.Y., **Fremes S.E.**, Goldman B.S., Christakis G.T., *Annals of Thoracic Surgery*, 78:(6), 2076-83, 2004

"Longitudinal course of depressive symptomatology following a cardiac event: Effect of gender and cardiac rehabilitation"; **Grace S.L.**, Abbey S., Pinto R., Shnek Z., **Irvine J.**, **Stewart D.E.**, *Psychosomatic Medicine*, 67:52-58, 2005

"Management and outcomes of transient ischemic attacks in Ontario"; Gladstone D.J., Kapral M.K., Fang J., Laupacis A., **Tu J.V.** *Can Med Assoc J*, 170:1099-1104, 2004

"Matrix, matrix metalloproteinases and smooth muscle cell function in atherosclerosis"; **Bendeck M.P.**, Hou G., Chen J., Nejat S., Adiguzel E., *International Congress Series*, 1262, 486-489, 2004

"Meeting highlights of the 14th annual scientific sessions of the American Society of Echocardiography: June 11 to 14, in Las Vegas, Nevada"; Gillam L.D., Geva T., Gorcsan J., Kaul S., **Rakowski H.** *J Am Coll Cardiol*, 42(12):2149-55, 2003

- "A mesh updating scheme for hemodynamic simulations in vessels undergoing large deformations"; Zeng D., **Ethier C.R.** *J Eng Math*, 47:405-418, 2003
- "Meta-analysis of the effects of endothelin receptor blockade on survival in experimental heart failure"; Lee D.S., Nguyen Q.T., Lapointe N., Austin P.C., Ohlsson A., **Tu J.V., Stewart D.J.**, Rouleau J.L. *J Card Fail*, 9:368-374, 2003
- "Michaelis-Menten kinetics model for conductance of low-conductance potassium ion channels"; Tolokh I.S., Tolokh I.I., Cho H.C., D'Avanzo N., **Backx P.H.**, Goldman S., Gray C.G., *Non-Phys Rev E (Stat Nonlin Soft Matter Phys)*, 71:021912, 2005
- "Microtubules regulate aortic endothelial cell actin microfilament reorganization in intact and repairing monolayers"; Lee J., **Gotlieb A.I.**, *Histology Histopathology*, 20:455-465, 2005
- "Mitral repair versus replacement for ischemic mitral regurgitation"; Al-radi O., Austin P.C., **Tu J.V.**, David T.E., **Yau T.M.**, *Annals of Thoracic Surgery*, 79:1260-1267, 2005
- "Mitral valve prolapse: An atypical variation of the anatomy"; **Butany J.**, Privitera S., David T.E. *Can J Cardiol*, 19(12):1367-73, 2003
- "A monoclonal antibody against cytokin-Induced Neutrophil chemo attractant attenuates injury in the small intestine in a model of ruptured abdominal aortic aneurysm"; Mbachu E., Klein L.V., **Lindsay T.F., Rubin B.B.**, *Journal of Vascular Surgery*, 39(5), 1104-11, 2004
- "Multidimensional protein identification technology (MudPIT): Technical overview of a profiling method optimized for the comprehensive proteomic investigation of normal and diseased heart tissue"; Kislinger T., Gramolini A. O., **MacLennan D. H., Emili A.**, *J Am Soc Mass Spectrom*, 16:1207-1220, 2005
- "Multidimensional protein identification technology: Current status and future prospects"; Kislinger T., **Emili A.**, *Expert Rev Proteomics*, 2:(1), 27-39, 2005
- "Myocardial protection in reoperative coronary artery bypass grafting: Toward decreasing morbidity and mortality"; Fazel S., Borger M.A., **Weisel R.D.**, Cohen G., Pelletier M.P., **Rao V., Yau T.M.**, *J Card Surg*, 19:291-295, 2004
- "Myocardial contrast echocardiography in chronic ischemic and nonischemic cardiomyopathies"; Monakier D., Woo A., Vannan M.A., **Rakowski H.** *Cardiol Clin*, 22(2):269-82, 2004
- "Myocardial protection in reoperative coronary artery bypass grafting: Toward decreasing morbidity and mortality"; Fazel S., Borger M.A., **Weisel R.D.**, Cohen G., Pelletier M.P., **Rao V., Yau T.M.**, *J Card Surg*, 19:1-5, 2004
- "Myocardial storage of chondroitin sulfate-containing moieties in Costello Syndrome patients with severe hypertrophic cardiomyopathy"; **Hinek A.**, Titell M., Schoyer L., Allen W., Gripp K.W., Hamilton R., Weksberg R., Lin A.E., *Am J Med Genet*, 133A:1-12, 2005
- "Navigating the chaperone network: An integrative map of physical and genetic interactions mediated by the hsp90 chaperone"; Zhao R., Davey M., Hsu Y.C., Kaplanek P., Tong A., Parsons A.B., Krogan N., Cagney G., Mai D., Greenblatt J., Boone C., **Emili A.**, Houry W.A., *Cell*, 120:(5), 715-27, 2005
- "Neovascularization derived from cell transplantation in ischemic myocardium"; Angoulvant D., Fazel S., **Li R.K.**, *Molecular and Cellular Biochemistry*, 264:133-142, 2004
- "New insights into the regulation of HDL metabolism and reverse cholesterol transport "; **Lewis G.F.**, Rader D., Invited review for *Circulation Research*, 96:1221-1232, 2005
- "Nitric oxide promotes in vitro interstitial cell heart valve repair"; Durbin A., Nadir N.A., Rosenthal A., **Gotlieb A.I.**, *Cardiovascular Pathology*, 15:12-18, 2005
- "Novel approaches for the treatment of chronic total occlusions"; Segev A., **Strauss B.H.**, *J Interven Cardiol*, 17:(6), 411-416, 2004

"Novel cardioprotective effects of pravastatin in human cardiomyocytes subjected to anoxia and reoxygenation: Implications for cardiac surgery"; **Verma S., Rao V., Weisel R.D.,** Hong-Li S., Fedak P.W.M., Miriuka S., **Li R.K.** *J Surg Res*, 119:66-71, 2004

"A novel technique to assess flow-mediated vasodilation"; Fazel S., **Weisel R.D., Verma S.,** *J Am Coll Cardiol*, 44:1478-1480, 2004

"Off-pump coronary artery bypass surgery: Fundamentals for the clinical cardiologist"; **Verma S.,** Fedak P.W.M., **Weisel R.D.,** Szmítko P.E., Badiwala M.V., Bonneau D., Latter D., Errett L., LeClerc Y. *Circulation*, 109:1206-1211, 2004

"One-year outcome of patients after acute coronary syndromes (from the Canadian Acute Coronary Syndromes Registry)"; Ya A.T., Tan M., Fitchett D., Chow C.M., Fowles R.A., McAviney T.G., Roe M.T., Peterson E.D., **Tu J.V., Langer A., Goodman S.G.,** for the Canadian Acute Coronary Syndromes Registry Investigators, *Am J Cardiol*, 94:25-29, 2004

"Optimization of 3D contrast-enhanced pulmonary MR angiography in pediatric patients with cardiovascular disease"; Macgowan C.K., Al-Kwif O., Varohayan F., Yoo S.J., **Wright G.A.,** Kellenberger C.J., *Magnetic Resonance in Medicine*, 54:(1), 207-212, 2005

"Optimizing the immunosuppressive regimen in heart transplantation"; Eisen H.J., **Ross H.,** *J Heart Lung Transplant*, 23:(suppl5S), 207-213, 2004

"Outcomes and alternative techniques for device closure of the large secundum atrial septal defect"; Varma C., Benson L.N., Silversides C., Yip J., Warr M.R., Webb G., **Siu S.,** McLaughlin P.R., *Catheter Cardiovasc Interv*, 61:131-9, 2004

"Overexpression of elastin in infarcted myocardium prevents scar expansion and heart dysfunction"; Mizuno T., **Mickle D.A.G.,** Kiani C.G., **Li R.K.,** *American Journal of Physiology*, 288:(6), H2819-27, 2005

"An overview of the types of physicians treating acute cardiac conditions in Canada"; Tu K., Gong Y., Austin P.C., Jaakimani L., **Tu J.V.** *Can J Cardiol*, 20:282-291, 2004

"Papillary fibroelastoma of the interatrial septum"; **Butany J.,** Nair V., Ahluwalia M.S., El Demellwy D., **Siu S.,** Fiendel C., *J Card Surg*, 19:(4), 349-53, 2004

"Partial off-loading of longitudinal tension induces arterial tortuosity"; Jackson Z., Dajnowiec D., **Gotlieb A.I., Langille B.L.,** *Atherosclerosis, Thrombosis, and Vascular Biology*, 25:957-62, 2005

"Pathologic high shear stress induces apoptosis events in human platelets"; **Leytin V.,** Allen D.J., Mykhaylov S., Mis L., Lyubimov E., Garvey B., Freedman J., *Biochem Biophys Res Commun*, 320:303-310, 2004

"Patient preferences for home-based versus hospital-based cardiac rehabilitation"; **Grace S.L.,** McDonald J., Fishman D., Caruso V., *Journal of Cardiopulmonary Rehabilitation*, 25:24-29, 2005

"Pediatric cardiac transplantation across ABO blood type barriers: A case study"; Rodriguez R.J., Addonizio L.J., Lamour J.M., Mital S., Mosca R., **West L.J.,** Nova J.C., Hsu D.T., *Progress in Transplantation*, 15:(2), 161-165, 2005

"Peroxynitrite inhibits relaxation and induces pulmonary artery muscle contraction in the newborn rat"; **Belik J.,** Jankov R.P., Tanswell A.K., *Free Radical Biology and Medicine*, 37:1384-1392, 2004

"Pharmacological treatment of congestive heart failure in Canada: A description of care in five provinces"; Cox J.L., Ramer S.A., Lee D.S., Humphries K., Pilote L., Svenson L., **Tu J.V.,** for the Canadian Cardiovascular Outcomes Research Team Investigators, *Can J Cardiol*, 21:337-343, 2005

"The phosphoinositide 3-kinase inhibitor LY294002 enhances cardiac myocyte contractility via a direct inhibition of $I_{k,slow}$ currents"; Hui S., Oudit G.Y., Ramirez R.J., Costantini D., **Backx P.H.,** *Cardiovascular Research*, 62:(3), 509-20, 2004

"Physician management preferences for cardiac patients: Factors affecting referral to cardiac rehabilitation"; **Grace S.L.,** Evindar A., Abramson B.L., **Stewart D.E.,** *Canadian Journal of Cardiology*, 20:(11), 1101-1107, 2004

"PI 3Kinase deficient mice are protected from isoproterenol-induced heart failure", Oudit G.Y., Crackower M.A., Eriksson U., Sarao R., Kozieradzki I., Sasaki T., Irie-Sasaki J., Gidrewicz D., Rybin V.O., Wada T., Steinberg S.F., **Backx P.H.**, Penninger J.M., *Circulation*, 108:2147-52, 2003

"Pilot evaluation of an internet heart failure disease management tool", Wu R.C., Delgado D., Costigan J., MacIver J., **Ross H.**, *J Med Internet Res*, 26:7(1), e8, 2005

"Placebo-controlled, randomized clinical trial of azimilide for prevention of ventricular tachyarrhythmias in patients with an implantable cardioverter defibrillator", **Dorian P.**, Borggrefe M., Al-Khalidi H.R., Hohnloser S.H., Brum J.M., Tatl, D.S., Brachmann J., Myerburg R.J., Cannom D.S., van der Laan M., Holroyde M.J., Singer I., Pratt C.M., on behalf of the SHock Inhibition Evaluation with azimilide (SHIELD) Investigators, *Circulation*, 110:3646-54, 2004

"Poly(methylidene malonate 2.1.2) nanoparticles: A biocompatible polymer that enhances peri-adventitial adenoviral gene delivery", Qiang B., Segev A., Beliard I., Nili N., **Strauss B.H.**, **Sefton M.V.**, *J Contr Rel*, 98:447-455, 2004

"Portrayal of female physicians in cardiovascular advertisements", Ahme S.B., **Grace S.L.**, Stelfo H.T., Tomlinso G., **Cheung A.**, *Canadian Journal of Cardiology*, 20:(13), 1351-354, 2004

"Postimplantation changes in a composite pericardium-vein graft", **Butany J.**, Mahendran R., Nair V., **Lindsay T.**, *Cardiovasc Pathol*, 13:(4), 237-9, 2004

"Practice guidelines of the European Society of Hypertension for clinic, ambulatory, and self blood pressure measurement", O'Brien E., Asmar R., Beilin L., Imai Y., Mancina G., Mengden T., **Myers M.G.**, et al. *J Hyperten*, 23:697-701, 2005

"Pre-coronary artery bypass graft measures and enrollment in cardiac rehabilitation", Brady S., **Thomas S.**, **Nolan R.**, **Brooks D.**, *Journal of Cardiopulmonary Rehabilitation*, 25(6), 343-9, 2005

"Predicting mortality among patients hospitalized for heart failure: Derivation and validation of a clinical model", Lee D.S., Austin P.C., Rouleau J.L., **Liu P.P.**, Naimark D., **Tu J.V.**, *JAMA*, 290:2581-7, 2003

"Pregnancy in adult patients with congenital heart disease", Colman J.M., **Siu S.C.**, *Prog Ped Cardiol*, 17:53-60, 2003

"Preprocedural plasma levels of C-reactive protein and interleukin-6 do not predict late coronary angiographic restenosis after elective stenting", Segev A., Kassam S., Buller C.E., Lau H.K., Sparkes J.D., **Connelly P.W.**, Seidelin P.H., Natarajan M.K., Cohen E.A., **Strauss B.H.**, *Eur Heart J*, 25:1029-1035, 2004

"Presentation, delay and contraindication to thrombolytic treatment in females and males with myocardial infarction", **Grace S.L.**, Abbey S.E., Bisailon S., Shnek Z.M., **Irvine J.**, **Stewart D.E.** *Womens Health Issues*, 13:214-221, 2003

"Prevalence and correlates of successful transfer from pediatric to adult health care among a cohort of young adults with complex congenital heart defects", Reid G.J., **Irvine M.J.**, McCrindle B.W., Sananes R., Ritvo P.G., **Siu S.C.**, Webb G.D., *Pediatrics*, 113:(3 PT 1), e107-205, 2004

"Prevention and management of deep sternal wound infection", Tang G.L., Maganti M., **Weisel R.D.**, Borger M.A. *Seminars in Thorac Cardiovasc Surg*, 16:62-69, 2004

"Primary pulmonary hypertension in families with hereditary hemorrhagic telangiectasia", Abdalla S.A., Gallione C.J., Barst R.J., Horn E.M., Knowles J.A., Marchuk D.A., **Letarte M.**, Morse J.H., *Eur Respir J*, 23:373-377, 2004

"Primary stenting of bilateral radiation induced external iliac stenoses", Baerlocher M., Rajan D., Ing D., **Rubin B.B.**, *Journal of Vascular Surgery*, 40:(5), 1028-30, 2004

"Probing nucleotide binding effects on backbone dynamics and folding of the N- domain of the sarco(endo)plasmic reticulum Ca²⁺-ATPase", Abu-Abed M., Millet O., **MacLennan D.H.**, Ikura M. *Biochem J*, 379:235-242, 2004

"Prognostic differences between atrial fibrillation and atrial flutter"; LeLorier P, Humphries K.H., Krahn A., Connolly S.J., Talajic M., Green M., Sheldon R., **Dorian P.**, Newman D., Kerr C.R., Yee R., Klein G.J. *Am J Cardiol*, 93:647-9, 2004

"Progress and highlights of the 7th Heart Failure Society of America meeting"; **Liu P.P.**, Konstam M., Force T., *J Am Coll Cardiol*, 43:1103-9, 2004

"Progression to chronic atrial fibrillation after the initial diagnosis of paroxysmal atrial fibrillation: Results from the Canadian Registry of Atrial Fibrillation (CARAF)"; Kerr C.R., Humphries K.H., Talajic M., Klein G.J., Connolly S.J., Green M., Boone J., Sheldon R., **Dorian P.**, Newman, D., *Am Heart J*, 149:489-96, 2005

"The promise of C2, simulect, and certican in heart transplantation"; Delgado D.H., **Ross H.J.**, *Trans Proc*, 36:(Suppl 2S), 504S-508S, 2004

"Prophylactic use of an implantable cardioverter-defibrillator after acute myocardial infarction"; Hohnloser S.H., Kuck K.H., **Dorian P.**, Roberts R.S., Hampton J.R., Hatala R., Fain E., Gent M., Connolly S.J., on behalf of the DINAMIT investigators, *N Engl J Med*, 351:2481-8, 2004

"Prospective evaluation of nocturnal oximetry for detection of sleep-related breathing disturbances in patients with chronic heart failure"; Series F, Kimoff J., Morrison D., Leblanc M.H., Smilovitch M., Howlett J., **Logan A.G.**, **Floras J.S.**, **Bradley T.D.**, *Chest*, 127:1507-1514, 2005

"Prospective examination of anxiety persistence, and its relationship to cardiac symptoms and recurrent cardiac events"; **Grace S.L.**, Abbey S.E., Shnek Z., **Irvine J.**, **Stewart D.E.**, *Psychotherapy and Psychosomatics*, 73:344-352, 2004

"Protective role for interferon-beta in coxsackievirus B3 infection"; Deonarain, R., Cerullo D., Fuse K., **Liu P.P.**, Fish E.N., *Circulation*, 110:3540-3, 2004

"Proteome dynamics during C2C12 myoblast differentiation"; Kislinger T., Gramolini A.O., Pan Y., Rahman K., **MacLennan D.H.**, **Emili A.**, *Mol Cell Proteomics*, 4:(7), 887-901, 2005

"A protocol for the sequence analysis of human RYR1 gene transcripts from peripheral white blood cells"; Kraev N., Loke J.C.P., Kraev A., **MacLennan D.H.** *Anesthesiology*, 99:289-296, 2003

"Pulmonary pathology of severe acute respiratory syndrome in Toronto"; Hwang D.M., Chamberlain D.W., Poutanen S.M., Low D.E., Asa S.L., **Butany J.**, *Mod Pathol*, 18:(1), 1-10, 2005

"Pulsatile motion effects on 3D magnetic resonance angiography: Implications for evaluating carotid artery stenoses"; Al-Kwafi O., Kim J.K., Stainsby J., Huang Y., Sussman M.S., **Wright G.A.**, *Magnetic Resonance in Medicine*, 52:(3), 605-611, 2004

"Quality of care of international and Canadian medical graduates in acute myocardial infarction"; Ko D.T., Austin P.C., Chan B.T.B., **Tu J.V.**, *Arch Intern Med*, 165:458-463, 2005

"Quality of life variables in the selection of rate versus rhythm control in patients with atrial fibrillation: Observations from the Canadian Trial of Atrial Fibrillation (CTAF)"; **Dorian P.**, Mangat I. *Card Electrophysiol*, 7:276-9, 2003

"A quadricuspid aortic valve"; **Butany J.**, Collins M.J., Duchnay M., El Demellawy D., Karski J., Ralph-Edwards A.C., *J Card Sur*, 20:(2), 193-197, 2005

"Quantitative analysis of survival of transplanted smooth muscle cells with real-time polymerase chain reaction"; Yasuda T., **Weisel R.D.**, Kiani C., **Mickle D.A.G.**, Maganti M., **Li R.K.**, *J Thorac Cardiovasc Surg*, 129:904-911, 2005

"Quotidian nocturnal hemodialysis improves cytokine profile and enhances erythropoietin responsiveness"; Yuen D., Richardson R.M.A., Fenton S.S.A., McGrath-Chong M., **Chan C.T.**, *ASAIO Journal*, 51:236-241, 2005

"Oxygen regulation of human aortic smooth muscle cell cycle associated gene expression"; Basu Ray J., Arab S., **Liu P.P.**, **Ward M.E.**, *Cardiovascular Pathology*, 13:S140 P382, 2004

"Radial vs. femoral access for rescue percutaneous coronary intervention with adjuvant glycoprotein IIb/IIIa inhibitor use", Kassam S., Cantor W.J., Patel D., Gilchrist I.C., Winegard L.D., Rea M.E., Bowman K.A., Chisholm R.J., **Strauss B.H.**, *Can J Cardiol*, 20:(14), 1439-42, 2004

"Randomized clinical trial of tacrolimus- vs cyclosporine-based immunosuppression in pediatric heart transplantation: Preliminary results at 15-month follow-up", Pollock-Barzi S.M., Dipchand A.I., McCrindle B.W., **West L.J.**, *The Journal of Heart and Lung Transplantation*, 24:(2), 190-194, 2005

"A randomized comparison of radial-artery and saphenous-vein coronary bypass grafts", Desai N.D., **Cohen E.A.**, Naylor C.D., **Fremes S.E.**, Radial Artery Patency Study Investigators, *New England Journal of Medicine*, 351:(22), 2302-9, 2004

"Randomized controlled study of detection enhancements versus rate-only detection to prevent inappropriate therapy in a dual-chamber implantable cardioverter-defibrillator", **Dorian P.**, Philippon F., Thibault B., Kimber S., Sterns L., Greene M., Newman D., Gelaznikas R., Barr A., for the ASTRID Investigators, *Heart Rhythm*, 1:(5), 540-7, 2004

"A rapid, reliable method to isolate high quality endothelial RNA from small spatially-defined locations", **Simmons C.A.**, Zilberberg J., Davies P.F., *Ann Biomed Eng*, 32:1453-59, 2004

"Reactive oxygen species and insulin action on angiotensinogen gene expression in proximal tubular cells", Hsieh T.J., Fustier P., Wei C.C., Zhang S.L., Filep J.G., Tang S.S., Ingelfinger J.R., **Fantus I.G.**, Hamet P., Chan J.S.D., *Endocrinology*, 183:535-550, 2004

"Real-time magnetic resonance with physiologic monitoring for improved scan localization", Stainsby J.A., Sussman M.S., Flexman M.L., **Wright G.A.**, *Magnetic Resonance in Medicine*, 53:(4), 954-9, 2005

"Recombinant factor VIIA (RF-VIIA) for intractable blood loss after cardiac surgery: A propensity-score matched case-control analysis", Karkouti K., Beattie W.S., Wijeyesundera D.N., **Yau T.M.**, McCluskey S.A., Ghannam M., Sutton D., van Rensburg A., Karski J., *Transfusion*, 45:26-34, 2005

"Reciprocal regulation of angiotensin-1 and angiotensin-2 following myocardial infarction in the rat", Sandhu R., Teichert-Kuliszewski K., Nag S., Robb M., Campbell A., Kuliszewski M.A., Kutryk M.J.B., **Stewart D.J.** *Cardiovas Res*, 1:64(1):115-24, 2004

"Recombinant human elastin polypeptides self-assemble into biomaterials with elastin-like properties", Bellingham C.M., Lillie M.A., Gosline J.M., **Wright G.M.**, Starcher B.C., Bailey A.J., Woodhouse K.A., **Keeley F.W.** *Biotopolymers*, 70:445-455, 2003

"Recommendations for evaluation of the severity of native valvular regurgitation with two-dimensional and Doppler echocardiography", Zoghbi W.A., Enriquez-Sarano M., Foster E., Grayburn P.A., Kraft C.D., Levine R.A., Nihoyannopoulos P., Otto C.M., Quinones M.A., **Rakowski H.**, Stewart W.J., Waggoner A., Weissman N.J., *J Am Soc Echocardiogr*, 16(7):777-802, 2003

"Reduced detection of triple vessel and left main coronary artery disease with attenuation corrected myocardial perfusion imaging", Emmett L., **Husain M.**, Lee D.S., Petrovici R.L., Freeman M., Barolet A., Iwanochko R.M., *World J Nuc Med*, 3:41-48, 2004

"Regional outcomes of heart failure in Canada", Lee D.S., Johansen H., Gong Y., Hall R.E., **Tu J.V.**, Cox J.L. *Can J Cardiol*, 20:599-607, 2004

"Regional variations in cardiovascular mortality in Canada", Filate W.A., Johansen H., **Tu J.V.** *Can J Cardiol*, 19:1241-8, 2003

"Registered Nurses' experiences with an evidence-based home care pathway for myocardial infarction clients", Young W., McShane J., O'Connor T., Rewa G., **Goodman S.G.**, Jaglal S.B., Cash L., Coyte P.C., O'Connor T. *Can J Cardiovasc Nursing*, 14(3):24-31, 2004

"The remote ischemic preconditioning stimulus modifies inflammatory gene expression in humans", Konstantinov I.E., Arab S., Kharbada R.K., Li J., Cheung M.M., Cherepanov V., Downey G.P., **Liu P.P.**, Cukerman E., Coles J.G., Redington A.N., *Physiol Genomics*, 19:143-50, 2004

"Resistin promotes endothelial cell activation: Further evidence of an adipokine-endothelial interaction," **Verma S.**, Li S-H., **Weisel R.D.**, Wang C-H., Fedak P.W.M., **Li R-K.**, **Mickle D.A.G.** *Circulation*, 108(6):736-740, 2003

"Results of surgery for aortic root aneurysm in patients with the Marfan syndrome," De Oliveria C., David T.E., Ivanov J., Armstrong S., Eriksson M.J., **Rakowski H.**, Webb G. *J Thorac Cardiovasc Surg*, 125:789-96, 2003

"Retrieval of the Bard recovery filter from the superior vena cava," Sniderman K., **Rubin B.B.**, Rajan D., *Interventional Radiology*, 15:(10), 1169-71, 2004

"Retrovirally mediated overexpression of versican V3 reverses impaired elastogenesis and heightened proliferation exhibited by fibroblasts from Costello Syndrome and Hurler disease patients," **Hinek A.**, Braun K.R., Liu K., Wang Y., Wight T.N. *Am J Pathol*, 164(1):119-131, 2004

"RGS2-mediated regulation of Gqalpha," **Heximer S.P.**, *Methods Enzymol*, 390:65-82, 2004

"Rising to the challenge: Transforming the treatment of ST-segment elevation myocardial infarction," Ghali W.A., Donaldson C.R., Knudtson M.L., Lewis S.J., Maxwell C.J., **Tu J.V.** *CMAJ*, 169:35-37, 2003

"Risk factors for cardiovascular disease in homeless men," Lee T.C., Hanlon J.G., Ben-David J., Booth G.L., Cantor W.J., **Connelly P.W.**, Hwang S.W., *Circulation*, 111:2629-2635, 2005

"Risk factors for death or stroke after carotid endarterectomy: Observations from the Ontario Carotid Endarterectomy Registry," **Tu J.V.**, Wang H., Bowyer B., Green L., Kucey D. for the Participants in the Ontario Carotid Endarterectomy Registry. *Stroke*, 34:2568-73, 2003

"Role of amiodarone in the era of the implantable cardioverter defibrillator," **Dorian P.**, Mangat I. *J Cardiovasc Electrophysiol*, 14(Suppl 9):S78-S81, 2003

"A role for endoglin in coupling eNOS activity and regulating vascular tone revealed in hereditary hemorrhagic telangiectasia," Toporsian M., Gros R., Kabir M.D.G., Vera S., Govindaraju K., Eidelman D.H., Husain M., **Letarte M.**, *Circ Res*, 96:(6), 684-92, 2005

"The role of endothelin-1 in myocarditis and inflammatory cardiomyopathy: Old lessons and new insights," Yang L.L., Arab S., **Liu P.P.**, **Stewart D.J.**, **Husain M.**, *Can J Physiol Pharmacol*, 83:(1), 47-62, 2005

"The role of perlecan in arterial injury and angiogenesis," Segev A., Nili N., **Strauss B.H.**, *Cardiovasc Res*, 63:(4), 603-10, 2004

"The role of phosphoinositide-3 kinase and PTEN in cardiovascular physiology and disease" Oudit G.Y., Sun H., Kerfant B.G., Crackower M.A., Penninger J.M., **Backx P.H.**, *Journal of Molecular and Cellular Cardiology*, 37:(2), 449-71, 2004

"A role for TGF- β and endoglin in eNOS coupling revealed in hereditary hemorrhagic telangiectasia," Toporsian M., Gros R., Kabir M.G., Vera S., Govindaraju K., Eidelman D.H., Husain M., **Letarte M.**, *Circ Res*, 96:684-692, 2005

"Role of matrix metalloproteinase-2 in altered aortic reactivity after hypoxia," He J. Z., Quan A., Xu Y., Davidge S.T., **Ward M.E.**, *Proc Am Thor Soc*, 2:A, 714, 2005

"Role of platelet surface glycoprotein Iba and P-selectin in the clearance of transfused platelet concentrates," **Leytin V.**, Allen D., Gwozdz A., Garvey B., Freedman J., *Transfusion*, 44:1487-1495, 2004

"Role of rho-associated kinase in impaired vascular smooth muscle contractility after hypoxia," Glatt E., Wener A., Teoh H., **Ward M.E.**, *Cardiovascular Pathology*, 13:S140 P385, 2004

"Role of the sequence surrounding predicted transmembrane helix M4 in membrane association and function of the Ca²⁺ release channel of skeletal muscle sarcoplasmic reticulum (ryanodine receptor isoform 1)," Du G. G., Avila G., Sharma P., Khanna V. K., Dirksen R. T., **MacLennan D. H.**, *J Biol Chem*, 279:37566-37574, 2004

"Role of the 3'-untranslated region of human endothelin-1 in vascular endothelial cells: Contribution to transcript lability and the cellular heat shock response," Mawji I.A., Robb G.B., Tai S.C., **Marsden P.A.** *J Biol Chem*, 279:8655-8667, 2004

"Roles of conserved P-domain residues and Mg²⁺ in ATP binding in the ground and Ca²⁺-activated states of sarcoplasmic ReticulumCa²⁺-ATPase", McIntosh D. B., Clausen J. D., Woolley D. G., **MacLennan D. H.**, Vilsen B., Andersen J. P., *Biol Chem*, 279:32515-32523, 2004

"Rosiglitazone facilitates angiogenic progenitor cell differentiation towards endothelial lineage: A new paradigm in glitazone pleiotropy", Wang C-H., Ciliberti N., Li S-H., Szmítko P.E., **Weisel R.D.**, Fedak P.W.M., Al-Omran M., Cherng W.J., **Li R-K.**, Stanford W.L., **Verma S.** *Circulation*, 109:1392-1400, 2004

"Rosiglitazone improves intestinal lipoprotein overproduction in the fat-fed syrian golden hamster, an animal model of nutritionally-induced insulin resistance", Leung N., Naples M., Uffelman K., Szeto L., **Adeli K.**, **Lewis G.F.** *Atherosclerosis*, 43:6734-6744, 2004

"Ruptured synthetic expanded polytetrafluoroethylene chordae tendinae", **Butany J.**, Collins M.J., David T.E. *Cardiovasc Pathol*, 13(3):182-4, 2004

"The safety of antithrombin therapy in non-ST-segment elevation acute coronary syndrome patients: Results from the CRUSADE initiative", Singh K.P., Roe M.T., Peterson E.D., Chen A.Y., Mahaffey K.W., **Goodman S.G.**, Harrington R.A., Ohman E.M., Gibler B., Pollack C.V., *JACC*, 45:(Suppl A), 233A, 2005

"Safety and efficacy of intravenously administered tedisamil for rapid conversion of recent-onset atrial fibrillation or atrial flutter", Hohnloser S.H., **Dorian P.**, Straub M., Beckmann K., Kowey P. *J Am Coll Cardiol*, 44:99-104, 2004

"S100A6 is a negative regulator of the induction of cardiac genes by trophic stimuli in cultured rat myocytes", Tsoporis J.N., Marks A., Haddad A., O'Hanlon D., Jolly S., **Parker T.G.**, *Exp Cell Res*, 3031(2), 471-481, 2005

"Sarcolipin retention in the endoplasmic reticulum depends on its C-terminal RSYQY sequence and interaction with the sarco(endo)plasmic reticulum Ca²⁺ ATPase Proc", Gramolini A. O., Kislinger T, Asahi M., Li W. **Emili A.**, **MacLennan D. H.**, *Natl Acad Sci USA*, 101:16807-16812, 2004

"Secondary prevention after acute myocardial infarction in four Canadian provinces, 1997-2000", Pilote L., Beck C.A., Karp I., Alter D., Austin P., Cox J., Humphries K., Jackevicius C., Richard H., **Tu J.V.** *Can J Cardiol*, 20:61-7, 2004

"Selective induced nitric oxide inhibition attenuates neutrophil mediated acute lung injury in a model of ruptured abdominal aortic aneurysm", Harkin D.W., **Rubin B.B.**, **Lindsay T.F.**, *Journal of Surgical Research*, 120:(2), 230-41, 2004

"Selective inhibition of inward rectifier K⁺ channels (Kir2.1) abolish protection by ischemic preconditioning in rabbit ventricular cardiomyocytes", Diaz R.J., Zobel C., Cho H.C., Batthish M., **Hinek A.**, **Backx P.H.**, *Circ Res*, 95:(3), 325-32, 2004

"Selective versus nonselective beta-adrenoceptor blockade in heart failure: Differential effects on myocardial energy substrate utilization", Al-Hesayen A., Azevedo E.R., **Floras J.S.**, Hollingshead S., Lopaschuk G.D., **Parker J.D.**, *European Journal of Heart Failure*, 7:618-623, 2005

"Self-ordered polymerization of elastin-based biomaterials", Bellingham C.M., **Keeley F.W.**, *Current Opinions in Solid State and Materials Science*, 8:135-39, 2004

"Septal ethanol ablation for hypertrophic obstructive cardiomyopathy: Early and intermediate results of a Canadian referral centre", Bhagwandeem R., Woo A., Ross J., Wagle E.D., **Rakowski H.**, Kwinter J., Eriksson M., Schwartz L. *Can J Cardiol*, 19(8):912-917, 2003

"Sequence and structure determinants for the self-aggregation of recombinant polypeptides modeled after human elastin", Miao M., Bellingham C.M., Stahl R., Sitarz E., Lane C., **Keeley F.W.** *J Bio Chem*, 278:48553-48562, 2003

"Serum response factor, an enriched cardiac mesoderm obligatory factor, is a downstream gene target for Tbx genes", Barron M.R., Belaguli N.S., Trinh M., Iyer D., Lough J.W., Parmacek M.S., **Bruneau B.G.**, Schwartz R.J., *Journal of Biological Chemistry*, 280(12), 11816-28, 2005

"Severe multivalvular heart disease: A new complication of the ergot derivative dopamine agonists", Horvath J., Fross R.D., Kleiner-Fisman G., Lerch R., Stalder H., Liaudat S., Raskoff W.J., **Rakowski H.**, Pache J.C., Burkhard P.R., Lang A.E. *Movement Disorders*, 19(6):656-62, 2004

"Sex differences in predictors of illness intrusiveness one year after a cardiac event", Franche R.L., Abbey S., **Irvine J.**, Shnek Z., **Grace S.L.**, **Stewart D.E.**, *Journal of Psychosomatic Research*, 56:(1), 125-132, 2004

"Sex differences in stroke presentation and management: Results from the Registry of the Canadian Stroke Network", Kapral M.K., Fang J., Hill M.D., Silver F., Richards J., Jaigobin C., **Cheung A.M.**, for the Investigators of the Registry of the Canadian Stroke Network, *Stroke*, 36:809-814, 2005

"Shear-induced reorganization of endothelial cell cytoskeleton and adhesion complexes", McCue S., Noria S., **Langille B.L.**, *Trends Cardiovas Med*, 14:143-151, 2004

"Short-term blood pressure, noradrenergic, and vascular effects of nocturnal hemodialysis", **Chan C.T.**, Harvey P.J., Picton P., Pierratos A., Miller J.A., **Floras J.S.** *Hypertension*, 42:925-931, 2003

"Should radial arteries be used routinely for coronary artery bypass grafting?", **Verma S.**, Szmítko P.E., **Weisel R.D.**, Bonneau D., Latter D., Errett L., LeClerc Y., **Fremes S.E.**, *Circulation*, 110:e40-e46, 2004

"Sirolimus immunosuppression in pediatric heart transplant recipients: A single-center experience", Lobach N.E., Pollock-BarZiv S.M., **West L.J.**, Dipchand A.I., *Journal of Heart and Lung Transplantation*, 24:(2), 184-189, 2005

"Six-month outcomes in a multinational registry of patients hospitalized with an acute coronary syndrome (The Global Registry of Acute Coronary Events [GRACE])", Goldberg R.J., Currie K., Sadiq I., Brieger D., Steg P.G., **Goodman S.G.**, Gore J.M. *Am J Cardiol*, 93:288-93, 2004

"Skeletonization of bilateral internal thoracic artery grafts lowers the risk of sternal infection in diabetic patients", Peterson M.D., Borger M.A., **Rao V.**, Peniston C.M., Feindel C.M. *J Thorac Cardiovasc Surg*, 126:1314-1319, 2003

"Skin tissue cholesterol (SkinTc) is related to angiographically-defined cardiovascular disease", Sprecher D.L., **Goodman S.**, Kannampuzha P., Pearce G.L., **Langer A.** *Atherosclerosis*, 171:255-8, 2003

"Smooth muscle cell growth in monolayer and aortic organ culture is promoted by a non-heparin binding endothelial cell derived soluble factor", Lubymov E., **Gotlieb, A.I.**, *Cardiovasc Pathol*, 13:139-145, 2004

"Spatial heterogeneity of endothelial phenotypes correlates with site-specific vulnerability to calcification in normal porcine aortic valves", **Simmons C.A.**, Grant G.R., Manduchi E., Davies P.F., *Circ Res*, 96:792-9, 2005

"Specific ablation of the apoptotic functions of cytochrome c reveals a differential requirement for cytochrome c and Apaf-1 in apoptosis", Ha, Z., Duncan G.S., Chang C.C., Elia A., Fang M., Wakeham A., Okada H., Calzascia T., Jang A.Y.T., **Yeh W.C.**, Ohashi P., Wang X., Mak T.W., *Cell*, 121:579-591, 2005

"ST segment resolution in ASSENT 3: Insights into the role of three different treatment strategies for acute myocardial infarction", Armstrong P.W., Wagner B., **Goodman S.G.**, Van de Werf F., Granger G., Wallentin L., Fu Y., for the ASSENT 3 Investigators *Eur Heart J*, 24:1515-22, 2003

"Statistical and computational methods for comparative proteomic profiling using liquid chromatography-tandem mass spectrometry", Listgarten J., **Emili A.**, *Mol Cell Proteomics*, 4:(4), 419-34, 2005

"Stem cells in clinical practice", Evers B.M., Weissman I.L., Flake A.W., Tabar V., **Weisel R.D.** *J Am Coll Surg*, 197:458-478, 2003

"Stents coated with a perlecan-inducing compound significantly reduce intimal hyperplasia in a rabbit iliac instent restenosis model: Novel insights into the diverse biological effects of perlecan", Segev A., Nili N., Qiang B., Wong A., Pasterkamp G., Pillarisetti S., Virmani R., **Strauss B.H.**, *Circulation*, 110:III-219, 2004

"Stroke care delivery in institutions participating in the Registry of the Canadian Stroke Network", Kapral M.K., Laupacis A., Phillips S.J., Silver F.L., Hill M.D., Fang J., Richards J., **Tu J.V.** *Stroke*, 35:1756-62, 2004

"Structural determinants of self-organization behaviour of recombinant human elastin polypeptides"; **Keeley F.W.**, Miao M., *Matrix Biology*, 23:393-415, 2004

"Subaortic stenosis: Recurrence of a fibrous ring after 28 years"; Ahluwalia M.S., **Butany J.**, Silversides C., Fayet C., Williams W.G. *Can J Cardiol*, 19(10):1189-91, 2003

"Syntaxin-1A inhibits cardiac KATP channels by its actions on nucleotide binding folds 1 and 2 of sulfonylurea receptor 2A"; Kang Y., Leung Y.M., Manning-Fox J.E., Xia F., Xie H., Sheu L., **Tsushima R.G.**, Light P.E., Gaisano H.Y., *J Biol Chem*, 279:(45), 47125-31, 2004

"A systematic evaluation of the determinants of defibrillation efficacy"; Nanthakumar K., Newman D., Paquette M., **Dorian P.**, *Heart Rhythm*, 2:36-41, 2005

"Targeted anticytokine therapy in patients with chronic heart failure: Results of the randomized etanercept worldwide evaluation (RENEWAL)"; Mann D.L., McMurray J.J., Packer M., Swedberg K., Borer J.S., Colucci W.S., Djian J., Drexler H., Feldman A., Kober L., Krum H., **Liu P.**, Nieminen M., Tavazzi L., Van Veldhuisen D.J., Waldenström A., Warren M., Westheim A., Zannad F., Fleming T., *Circulation*, 109:1594-602, 2004

"Targeting antibody-mediated rejection in the setting of ABO-incompatible infant heart transplantation: Graft accommodation vs. B cell tolerance"; **West L.J.**, *Current Drug Targets - Cardiovascular and Hematological Disorders*, 5:(3), 223-232, 2005

"Taurine supplementation reduces oxidative stress and improves cardiovascular function in an iron-overload murine model"; Oudit G.Y., Trivieri M.G., Khaper N., Husain T., Wilson G.J., **Liu P.P.**, **Sole M.J.**, **Backx P.H.**, *Circulation*, 109:1877-85, 2004

"The T-Box transcription factor TBX5 is required for the patterning and maturation of the murine cardiac conduction system"; Moskowitz I.P.G., Pizard A., Patel V.V., **Bruneau B.G.**, Kim J.B., Kupersmidt S., Roden D., Berul C.I., Seidman C.E., Seidman J.G., *Development*, 131:4107-4116, 2004

"Tbx1 has a dual role in the morphogenesis of the cardiac outflow tract"; Xu H., Morishima M., Wylie J.N., Schwartz R.J., **Bruneau B.G.**, Lindsay E.A., Baldini A. *Development*, 131:3217-3227, 2004

"TBX5 mutations and congenital heart disease: Holt-Oram Syndrome revealed"; Mori A.D., **Bruneau B.G.** *Current Opinion in Cardiology*, 19:211-215, 2004

"Tbx20 dose-dependently regulates transcription factor networks required for mouse heart and motor neuron development"; Takeuchi J.K., Mileikowska M., Koshiba-Takeuchi K., Heidt A.B., Mori A.D., Arruda E.P., Gertsenstein M., Georges R., Davidson L., Mo R., Hui C.-c., Henkelman R.M., Nemer M., Black B.L., Nagy A., **Bruneau B.G.**, *Development*, 132:2463-2474 (accompanied by editorial), 2005

"Temporal response and localization of integrins $\beta 1$ and $\beta 3$ in the heart following myocardial infarction: Regulation by cytokines"; Sun M., **Opavsky A.**, **Stewart D.J.**, Rabinovitch M., Dawood F., Wen W.H., **Liu P.P.** *Circulation*, 107:1046-1052, 2003

"Terminal complement blockade with pexelizumab during coronary artery bypass graft surgery requiring cardiopulmonary bypass"; Verrier E.D., Sherman S.K., Taylor K.M., Van de Werf F., **Newman M.F.**, Chen J.C., Carrier M., Haverich A., Malloy K.J., Adams P.X., Todaro T.G., Mojcik C.F., Rollins S.A., Levy J.H., for the PRIMO-CABG Investigators, *JAMA*, 291:2319-2327, 2004

"Tetrahydrobiopterin deficiency exaggerates intimal hyperplasia after vascular injury"; Wang C.H., Li S.H., **Weisel R.D.**, Fedak P.W.M., Hung A., **Li R.K.**, **Rao V.**, Hyland K., Cherng W.J., Errett L., Leclerc Y., Bonneau D., Latter D.A., **Verma S.**, *Am J Physiol*, 289:(2), R299-304, 2005

"Tetrahydrobiopterin prevents cyclosporine induced vasomotor dysfunction"; Ramzy D., **Rao V.**, Tumiati L.C., Xu N., Miriuka S., Delgado D., Ross H.J., *Transplantation*, 79:(8):876-881, 2005

"Thiazolidinedione-induced congestive heart failure: Case reports and review of the literature"; Cheng A.Y.Y., **Fantus I.G.**, *Annals of Pharmacotherapy*, 38:817-820, 2004

"Thr325Ile polymorphism of the TAFI gene is related to TAFI antigen plasma levels and angiographic restenosis after percutaneous coronary interventions"; Segev A., Hegele R.A., Lau H.K., Sparkes J.D., Teitel J.M., Chisholm R.J., **Strauss B.H.**, *Thromb Res*, 114:(2), 137-41, 2004

"Tied down by shear force: A role for Tie1 in postnatal vascular remodelling?"; **Stewart D.J., Langille B.L.**, *Circ Res*, 94:271-272, 2004

"Time-related mortality for women after coronary artery bypass graft surgery: A population-based study"; Guru V., **Fremes S.E., Tu J.V.** *J Thoracic Cardiovasc Surg*, 127:1158-1165, 2004

"TIMP-3 deficiency leads to dilated cardiomyopathy"; Fedak P.W.M., Smookler D.S., Kassiri Z., Ohno N., Leco K.J., **Verma S., Mickle D.A.G.**, Watson K.L., Hojilla C.V., Cruz W., **Weisel R.D., Li R.K.**, Khokha R.T., *Circulation*, 10:2401-2409, 2004

"Tissue-engineered grafts matured in the right ventricular outflow tract"; Ozawa T., **Mickle D.A.G., Weisel R.D.**, Matsubayashi K., Fujii T., Fedak P.W.M., Koyama N., Ikada Y., **Li R.K.** *Cell Transplan*, 13:169-177, 2004

"Transcatheter cryoablation of tachyarrhythmias in children: Initial experience from an international registry"; Kirsh J.A., **Gross G.J.**, O'Connor S., Hamilton R.M., *Journal of the American College of Cardiology*, 45:133-6, 2005

"Translational control of apolipoprotein B mRNA: Regulation via cis-elements in the 5' and 3' untranslated regions"; Pontrelli L., Sidiropoulos G., Chen B., **Adeli K.** *Biochemistry*, 43:6734-6744, 2004

"Trends in cardiovascular drug utilization and drug expenditures in Canada between 1996 and 2001"; Jackevicius C.A., Tu K., Filate W.A., Brien S.E., **Tu J.V.** *Can J Cardiol*, 19:1359-66, 2003

"Trends in heart failure outcomes and pharmacotherapy: 1992 to 2000"; Lee D.S., Mamdani M.M., Austin P.C., Gong Y., **Liu P.P., Rouleau J.L., Tu J.V.**, *Am J Med*, 116:581-9, 2004

"Troponin is more useful than creatine kinase in predicting one-year mortality among acute coronary syndrome patients"; Yan A.T., Yan R.T., Tan M., Chow C.M., Fitchett D., Stanton E., **Langer A., Goodman S.G.**, for the Canadian Acute Coronary Syndromes (ACS) Registry Investigators, *Eur Heart J*, 25:2006-2012, 2004

"True versus false left ventricular aneurysm: Differentiation with MR imaging—Initial experience"; Konen E., Merchant N., Gutierrez C., Provost Y., Mickleborough L., Paul N.S., **Butany J.**, *Radiology*, 236:(1), 65-75, 2005

"The two-minute walk test as a measure of functional capacity in cardiac surgery patients"; **Brooks D.**, Parsons J., Tran D., Jeng B., Gorczyca B., Newton J., Lo V., Dear C., Silaj E., Hawn T., *Archives of Physical Medicine and Rehabilitation*, 85:1525-1530, 2004

"Umbilical vein and placental vessels from newborns with hereditary hemorrhagic telangiectasia type 1 genotype are normal despite reduced expression of endoglin"; Chan N.L.M., Bourdeau A., Vera S., Abdalla A., Gross M., Wong J., Cymerman U., Paterson A., Mullen B., **Letarte M.** *Placenta*, 25:208-217, 2004

"Unbalance of the physiological system may cause trouble – the other side of the story from a very successful drug VIOXX"; Sun H.S., **Feng Z.P.**, *J Chin Pharmaceut Sci*, 13:(4), 282-284, 2004

"Update on advanced life support and resuscitation techniques"; Hong M.F., **Dorian P.**, *Curr Opin Cardiol*, 20:1-6, 2005

"Use of angiotensin-converting enzyme inhibitor therapy and dose-related outcomes in patients with heart failure"; Rochon P.A., Sykora K., Bronskill S.E., Mamdani M., Anderson G.M., Gurwitz J.H., Gill S., **Tu J.V.**, Laupacis A. *J Gen Intern Med*, 19:676-683, 2004

"Use of basiliximab and cyclosporine in heart transplant patients with pre-operative renal dysfunction"; Delgado D.H., Miriuka S.G., Cusimano R.J., Feindel C., O'Grady C., McCurdy C., **Rao V., Ross H.J.**, *J Heart Lung Transplant*, 24:(2), 166-9, 2005

"Use of implantable cardioverter defibrillators after out-of-hospital cardiac arrest: A prospective follow-up study"; Parkash R., Tang A., Wells G., Blackburn J., Stiell I., Simpson C., **Dorian P.**, Yee R., Cameron D., Connolly S., Birnie D., Nichol G., *CMAJ*, 71:(9), 1053-6, 2004

"The use of the propensity score for estimating treatment effects: Administrative versus clinical data," Austin P.C., **Tu J.V.**, Daly P.A., Alter D.A., *Statist Med*, 24:791-816, 2005

"A validated prediction model for all forms of acute coronary syndromes: Estimating the risk of six-month post-discharge death in the global registry of acute coronary events (GRACE)," Eagle K.A., Lim M.J., Dabbous O.H., Pieper K.S., Goldberg R.J., Van de Werf F., **Goodman S.G.**, Granger C.B., Steg P.G., Gore J.M., Budaj A., Avezum A., Flather M.D., Fox K.A.A., for the GRACE Investigators, *JAMA*, 291:2727-33, 2004

"Vascular endothelial growth factor receptor upregulation in response to cell-based angiogenic gene therapy," **Yau T.M.**, Li G., Zhang Y., **Weisel R.D.**, **Mickle D.A.G.**, **Li R.K.**, *Ann Thorac Surg*, 79:2056-2063, 2005

"Vascular endothelial growth factor and acute lung injury," Mura M., Santos C., **Stewart D.J.**, Liu M. *J App Physio*, 97(5):1605-17, 2004

"Vascular endothelial growth factor transgene expression in cell-transplanted hearts," **Yau T.M.**, Li G., **Weisel R.D.**, Reheman A., Jia J.Q., **Mickle D.A.G.**, **Li R.K.**, *Journal of Thoracic and Cardiovascular Surgery*, 127 1180-1187, 2004

"Ventricular rate determines early bradycardic electrical remodelling," Suto F., Zhu W., Cahil, S.A., Greenwald I., Navarro A.C., **Gross G.J.**, *Heart Rhythm*, 2:293-300, 2005

"Viability of HEMA-MMA microencapsulated PC12 cells after omental pouch implantation within agarose gels," Fleming A.J., **Sefton M.V.** *Tissue Engineering*, 9:1023-36, 2003

"Vitronectin stabilizes thrombi and vessel occlusion but plays a dual role in platelet aggregation," Reheman A., Gross P., Yang H., Chen P., Allen D., **Leytin V.**, Freedman J., **Ni H.**, *Journal of Thrombosis and Haemostasis*, 3:875-883, 2005

"Why do strokes outnumber myocardial infarctions in antihypertensive treatment trials?" **Floras J.S.**, *Hypertension Canada*, 80:4-6, 2004

"Why is off-pump coronary surgery uncommon in Canada?" Desai N.D., Pelletie, M.P., Cohen G., Christakis G.T., Goldman B.S., **Fremes S.E.**, *Circulation*, 110:(11), 117-12, 2004

SELECTED GRANTS OBTAINED BY MEMBERS

The following is a list of 275 cardiovascular-related, peer-reviewed research grants reported to the Centre by 74% of members. These grants were held between July 2003 and June 2005, and over the *entire* funding period of the grants listed, total more than \$240 million dollars in support. 51 of these 275 peer-reviewed grants (19%) were collaborative efforts between two or more members of the Centre.

Adamson S.L., Rossant J., Osborne L., **Bruneau B.G.**, *Canadian Institutes of Health Research*, 'Generation and physiological analysis of genome-wide mutations in mice', 2004-2009

Adamson S.L., *Canadian Institutes of Health Research*, 'Cardiovascular phenotyping in embryonic and newborn mice', 2004-2008

Adamson S.L., *Canadian Institutes of Health Research*, 'Genes regulating cardiovascular function during pregnancy in mice', 2001-2004

Adamson S.L., *Canadian Institutes of Health Research*, 'Cardiovascular phenotyping of juvenile mice using ultrasound biomicroscopy', 2000-2004

Adamson S.L., *Canadian Institutes of Health Research*, 'Generation and physiological analysis of genome-wide mutations in mice, 1999-2004

Adeli K., *Heart and Stroke Foundation of Ontario*, 'Mechanisms and regulation of apolipoprotein B degradation', 2005-2009

Adeli K., *Heart and Stroke Foundation of Ontario*, 'Mechanisms of VLDL overproduction in insulin resistance', 2004-2007

Adeli K., *Natural Sciences and Engineering Council of Canada*, 'Translational control of apolipoprotein B mRNA', 2002-2006

Backx P.H., *Heart and Stroke Foundation of Ontario*, 'Role of inward rectifier K⁺ channels in heart', 2005-2008

Backx P.H., *Canadian Institutes of Health Research*, 'Modulation of cardiac function by thyroid hormone', 2004-2009

Backx P.H., *Canadian Institutes of Health Research*, 'Role of ACE2 in cardiac and vascular function', 2003-2008

Backx P.H., *Heart and Stroke Foundation of Ontario*, 'Myocardial preconditioning: Role of cell volume regulation', 2002-2007

Backx P.H., *Heart and Stroke Foundation of Ontario*, 'Role of inward rectifier K⁺ channels in heart', 2002-2005

Backx P.H., *Heart and Stroke Foundation of Ontario*, 'Role of cardiac inward rectifiers in heart', 2002-2005

Backx P.H., *Canadian Institutes of Health Research*, 'Iron overload cardiomyopathy: A unique heart failure model of calcium dysregulation and oxidative stress', 2001-2006

Backx P.H., *Canadian Institutes of Health Research*, 'Role of K⁺ channels and Ca²⁺ in heart disease', 2000-2005

Belik J., *Canadian Institutes of Health Research*, 'Airway modulation of pulmonary vascular tone during development and following pulmonary hypertension', 2004-2009

Belik J., *Canadian Institutes of Health Research*, 'Myosin light chain phosphatase and the control of pulmonary and systemic vascular resistance from fetal to adult life', 2001-2004

Belsham D.D., *Heart and Stroke Foundation of Ontario*, 'Circadian rhythms in the heart', 2003-2006

Belsham D.D., *Natural Sciences and Engineering Research Council*, 'Molecular analysis of the role of melatonin and circadian rhythm proteins in the control of GnRH neuronal function', 2002-2006

Bendeck M., *Heart and Stroke Foundation of Ontario*, 'The effect of doxycycline on the smooth muscle cell response to injury', 2004-2007

Bendeck M., *Canadian Institutes of Health Research*, 'The role of discoidin domain receptors in atherosclerosis', 2003-2007

Bendeck M., Langille L., *Heart and Stroke Foundation of Ontario*, 'Cadherins and regulation of smooth muscle function', 2004-2007

Bendeck M., Langille B.L., Cybulsky M., Husain M., Gotlieb A., Marsden P., Stewart D., Strauss B.H., Ward M., *Heart and Stroke Foundation of Ontario*, 'The cell biology of atherosclerosis group grant', 2000-2005

Brooks D., McIlroy W., *Canadian Institutes of Health Research Operating Grant*, 'Early exercise intervention after stroke: Influence on functional capacity, sensorimotor recovery and risk of future strokes', 2003-2008

Brooks D., Grace S., *Canadian Health Services Research Foundation/Canadian Institutes of Health Research*, 'An evidence-based health services evaluation of information and management continuity in heart patients', 2003-2006

Bruneau B.J., *The March of Dimes Birth Defects Foundation*, 'Dissecting the transcriptional basis of congenital heart disease', 2005-2008

Bruneau B.J., *Canadian Institutes of Health Research*, 'Role of Iroquois transcription factors in heart development and function', 2004-2009

Bruneau B.J., *Heart and Stroke Foundation of Ontario*, 'Role of T-box in heart development and disease', 2004-2008

Butany J., Fedak P., *Physicians Services Incorporated*, 'Matrix remodelling and ascending aortic aneurysm', 2005

Butany J., Leask R., *National Science and Engineering Council/CHIR*, 'Local tissue changes in dilated ascending aortas', 2005-2008

Chan C., Floras J.S., Pierratos A., Miller J.A., *Canadian Institutes of Health Research*, 'By what mechanisms does conversion from conventional intermittent hemodialysis to nocturnal hemodialysis lower blood pressure?', 2002-2005

Chan C., Perratos A., Kaysen G., *Baxter Extramural Grant Program*, 'Impact of nocturnal hemodialysis on the malnutrition – inflammation – atherosclerosis axis', 2002-2005

Chan C., Beattie S., Rao V., Wijeyesundera D.N., Ivanov J., *Heart and Stroke Foundation of Ontario*, 'The PRIME (Perioperative Renal Insufficiency Management) study: A randomized, double-blinded, placebo-controlled trial of N-acetylcysteine for preventing renal injury after cardiac surgery', 2003-2005

Chan C., Verma S., *Heart and Stroke Foundation of Canada*, 'Impact of uremia on endothelial progenitor cells', 2005-2007

Chan C., Floras J.S., Bradley T.D., Dzavik V., *Canadian Institutes of Health Research*, 'Cardiovascular, autonomic and neurohormonal impact of nocturnal hemodialysis', 2005-2010

Connelly P., *Heart and Stroke Foundation of Ontario*, 'Identification of the mechanisms of oxidation of high density lipoproteins in vivo in the mouse', 2005

Connelly P., *Heart and Stroke Foundation of Ontario*, 'Comparative studies of paraoxonase 1 and paraoxonase 3', 2005-2008

Courtman, D. W., Stewart D.J., *Heart and Stroke Foundation of Ontario*, 'Arterial remodelling: Regulation of aneurysm growth', 2005-2007

Courtman, D. W., Stewart, D.J. *Canadian Institutes of Health Research*, 'Microvascular endothelial cell loss in pulmonary hypertension', 2002-2010

Dorian P., Slutsky A., *National Institutes of Health*, 'Resuscitation outcomes consortium (ROC)', 2004-2008

Dorian P., Irvine J., *Heart and Stroke Foundation of Ontario*, 'Psychological support for implantable defibrillator patients', 2003-2006

Dorian P., *Heart and Stroke Foundation of Ontario*, 'Optimizing ACLS: Prolonging action potential duration and preventing cell injury in experimental cardiac arrest', 2003-2005

Dorian P., L'Esperance F., *Canadian Institutes of Health Research*, 'A randomized controlled trial of interpersonal psychotherapy and citalopram for depression in coronary artery disease (CREATE)', 2001-2005

Dorian P., Roy D., *Canadian Institutes of Health Research*, 'Atrial fibrillation and congestive heart failure trial (AF-CHF)', 2000-2005

Dumont D. J., *Canadian Institutes of Health Research*, 'Biochemical and genetic characterization of the Tek/Tie2 signalling pathway', 2001-2006

Dumont D. J., *National Cancer Institutes of Canada*, 'Defining the role of the angiopoietins in angiogenesis', 2003-2006

Dumont D. J., *National Institute of Health*, 'Genetic control of vascular remodelling', 2001-2005

Dumont D. J., Alitalo K., *Human Frontier Science Program Organization*, 'Molecular controls of lymphangiogenesis and angiogenesis', 2001-2004

Dumont D. J., Stewart D., *Canada Foundation for Innovation*, 'Cardiovascular gene therapy initiative', 2000-2004

Dumont D. J., Kerbel R., *Canada Foundation For Innovation*, 'The Toronto Angiogenesis Research Centre(TARC)', 2000-2006

Dumont D. J., *Heart and Stroke Foundation of Canada*, 'Molecular studies examining the role of lymphangiogenic signalling in heart disease', 2004-2007

Dumont D. J., *McLaughlin Centre for Molecular Medicine/Sunnybrook and Women's Research Institute mAB initiative*, 'High-throughput mono antibody facility', 2005-2007

Emili A., Greenblatt J., Parkinson J., *Canadian Institutes of Health Research*, 'Genome-wide analysis of networks of protein complexes in E. coli: Systematic affinity purification, Mass spectrometry characterization, and comparative genomics', 2005-2008

Emili A., Mao Y., *Canadian Institute of Health Research*, 'Informatics platform for proteomic profiling and biomarker discovery', 2004-2007

Emili A., Liu P., MacLennan, D., *Genome Canada*, 'Protein expression profiling platform for heart disease biomarker discovery', 2004-2007

Emili A., Fish, E., Siminovitch K., Sekaly, *Genome Canada*, 'Functional genomics, pharmacogenomics and proteomics of the immune response in health and immune related disorders', 2002-2005

Emili A., Drucker D., Fish E., Siminovitch K., *McLaughlin Centre of Molecular Medicine*, 'Biomarker discovery in autoimmune inflammatory disease', 2004-2005

Ethier C.R., *Canadian Institutes of Health Research*, 'Fundamental ultrasound studies', 2002-2006

Ethier C.R., *Connaught Foundation*, 'Development and application of LES algorithms for simulation of turbulent flows', 2002-2005

Ethier C.R., *Natural Sciences and Engineering Research Council of Canada*, 'Computational hemodynamics', 2001-2005

Floras J.S., Beanlands R., Haddad H., Leech J., Burwash I.G., DaSilva J., deKemp, R.A., *Heart and Stroke Foundation of Ontario*, 'Effects of continuous positive airway pressure on myocardial energetics and sympathetic nerve function in patients with heart failure and obstructive sleep apnea', 2005-2007

Floras J.S., Parker J.D., Newton G.E., Bradley T.D., Chauhan V.J., *Heart and Stroke Foundation of Ontario*, 'Multidisciplinary group for the investigation and therapy of human cardiovascular disease', 2003-2007

Floras J.S., *Heart and Stroke Foundation of Ontario*, 'Cardiovascular regulation in men and women with heart failure and hypertension', 2002-2007

Floras J.S., *Canadian Institutes of Health Research*, 'Peptidergic and purinergic modulation of the autonomic nervous system in humans', 2002-2007

Floras J.S., *Heart and Stroke Foundation of Ontario*, 'Investigations concerning the control and modulation of cardiac and renal sympathetic activity in chronic heart failure', 2001-2004

Floras J.S., Bradley T.D., *Medical Research Council of Canada/Canadian Institutes of Health Research*, 'Cardiopulmonary interactions in health and disease', 2000-2005

Floras J.S., *Canadian Institutes of Health Research*, 'Multi-centre trial of continuous positive airway pressure (CPAP) for chronic therapy of heart failure', 1998-2004

Fremes S.E., *Canadian Institutes of Health Research*, 'Multicentre radial artery patency study: 5 year results', 2002-2007

Fremes S.E., Tu J.V., *The Heart and Stroke Foundation of Ontario*, 'Understanding the link between quality of care and outcomes report cards from coronary artery bypass graft (CABG) surgery in Ontario', 2004-2006

Fremes S.E., Tu J.V., *Canadian Institutes of Health Research*, 'Quality control in cardiac surgery – How do clinical outcomes relate to quality of care?', 2002-2006

Fremes S.E., *University of Calgary*, 'Women's recovery from sternotomy (WREST)', 2003-2006

Fremes S.E., Guru V., Naimark D., *Physicians Services Incorporated Foundation Resident Research Grant*, 'A randomized placebo controlled trial of intravenous N_Acetylcysteine (NAC) as a renal protective agent for prevention of renal dysfunction following cardiopulmonary bypass (CPB)', 2003-2004

Fremes S.E., Desai N.D., Cohen G.N., Christakis G.T., Goldman B.S., Pelletier M.P., *Physicians Services Incorporated*, 'Intraoperative patency assessment of vascular anastomoses', 2003-2005

Fremes S.E., Rowlands J., Keep D., Burns P., Chauhan V., **Cohen E.**, Fort S., Foster S., **Stewart D.**, Wilson B., Wright G.A., *Canada Foundation for Innovation*, 'Imaging research centre for cardiac intervention – IRCCI', 2002-2005

Fremes S.E., *Canadian Institutes of Health Research*, 'Blood conservation using antifibrinolytics: A randomized trial in high risk cardiac surgery', 2002-2005

Giacca A., *Heart and Stroke Foundation of Canada*, 'Metabolic determinants of vascular damage', 2002-2005

Giacca A., *Heart and Stroke Foundation of Canada*, 'Anti-atherogenic effect of insulin', 2005-2008

Goodman J., *Toronto Rehabilitation Institute*, 'Aerobic and resistance exercise in coronary artery disease patients', 2004-2008

Goodman J., *Toronto Rehabilitation Institute*, 'Exercise training in cardiac patients: Resistance and aerobic interventions', 2004-2005

Goodman J., *Heart and Stroke Foundation of Ontario*, 'Physical activity in youth', 2002-2007

Goodman J., *Heart and Stroke Foundation of Ontario*, 'Barriers to physical activity in youth', 2001-2005

Goodman J., *Arthur E. Thorton Foundation*, 'Cardiovascular impact of amenorrhea in young adult female athletes', 2001-2004

Goodman S., *Canadian Institutes of Health Research*, 'Trial of routine angioplasty and stenting after fibrinolysis to enhance reperfusion in acute myocardial infarction – The TRANSFER-AMI trial', 2004-2006

Gotlieb A. I., Sefton M., Yeo E., *National Institutes of Health (US)*, 'Modular tissue engineering components for vascularized constructs', 2002-2005

Gotlieb A. I., Bendeck M., *Heart and Stroke Foundation of Ontario*, 'Heart valve repair: Regulation by cell and matrix', 2002-2004

Gotlieb A. I., Langille B.L., *Heart and Stroke Foundation of Ontario*, 'The endothelium in atherogenesis: Influences of hemodynamic stresses', 2001-2006

Gotlieb A., Langille B.L., Husain M., Bendeck M., Cybulsky M., Marsden P., Strauss B.H. *Heart and Stroke Foundation of Ontario*, 'Cell biology of atherosclerosis', 2000-2005

Gotlieb A., Husain M., Bendeck M., Courtman D., Cybulsky M., Heximer S., Marsden P., Stewart D.J., Strauss B., Ward M., *Heart and Stroke Foundation of Ontario*, 'Cell biology of atherosclerosis', 2005-2010

Grace S.L., Stewart D., Suskin N., Alter D., Higginson L., *Canadian Institutes of Health Research*, 'Contribution of patient and physician factors to cardiac rehabilitation referral and participation: A prospective multi-level study', 2005-2008

Grace S.L., *York University Internal Grant*, 'Patient, provider and health system factors affecting referral to cardiac rehabilitation', 2004

Gross G., *Heart and Stroke Foundation of Canada*, 'Ventricular repolarization in complete heart block', 2004-2005

Heximer S., *Heart and Stroke Foundation of Ontario*, 'Defining the role of RGS proteins as mediators of vascular function', 2004-2006

Heximer S., *Ontario Innovation Trust Infrastructure Award*, 'Defining the role of RGS proteins function during the regulation of vasoconstrictor signalling in the cardiovascular system', 2003-2005

Heximer S., *Canada Foundation for Innovation Infrastructure Award*, 'Defining the role of RGS proteins function during the regulation of vasoconstrictor signalling in the cardiovascular system', 2003-2005

Hinek A., Liu P.P., *Canadian Heart and Stroke Foundation*, 'Aldosterone receptor and non-receptor based mechanism of repair and remodelling following cardiac injury', 2004-2007

Hinek A., *Heart and Stroke Foundation of Ontario*, 'Elastin and elastin receptor in control of cellular proliferation', 2003-2008

Hinek A., *Canadian Institutes of Health Research*, 'Elastin receptor in pathobiology of arterial thickening', 2001-2006

Hinek A., *Canadian Institutes of Health Research*, 'Pathobiology of intimal plaques', 2001-2006

Husain M., *Canadian Institutes of Health Research*, 'The role of plasma membrane Ca²⁺-ATPase isoforms in vascular smooth muscle cell biology', 2003-2008

- Husain M.**, *Heart and Stroke Foundation of Canada*, 'The role of plasma membrane Ca²⁺-ATPase isoforms in vascular pathophysiology', 2003-2006
- Husain M.**, *Canadian Institutes of Health Research*, 'c-Myb-dependent vascular smooth muscle cell proliferation', 2001-2004
- Husain M.**, *Canadian Institutes of Health Research*, 'c-Myb-dependent vascular smooth muscle cell proliferation', 2004-2009
- Husain M., Stewart D.J.**, *Canadian Institutes of Health Research*, 'Pathophysiological relevance of endothelin-1', 2005-2010
- Husain M., Stewart D.J.**, *Heart and Stroke Foundation of Ontario*, 'Targeted over-expression of inducible NO synthase: Relevance for the pathogenesis of cardiovascular disease', 2005-2008
- Husain M., Backx P.H.**, *Canadian Institutes of Health Research*, 'Role of ACE2 in the regulation of cardiac and vascular function', 2003-2008
- Husain M., Stewart D.J.**, *Heart and Stroke Foundation of Ontario*, 'Targeted over-expression of inducible NO synthase: Relevance for the pathogenesis of cardiovascular disease', 2002-2005
- Husain M., Stewart D.J.**, *Canadian Institutes of Health Research*, 'Pathophysiological relevance of endothelin-1 over-expression', 2001-2004
- Husain M., Liu P., Backx P., MacLennan D., Parker T., Sole M.J., Stewart D.J.**, *Canadian Institutes of Health Research*, 'Determinants of host susceptibilities of heart failure', 2003-2008
- Husain M.**, Rabinovitch M., **Keeley F., Bruneau B., Hinek A.**, Wilson G., *Canadian Institutes of Health Research*, 'Interdisciplinary program in cardiovascular development and disease', 2000-2005
- Irvine J.**, *Heart and Stroke Foundation of Ontario*, 'Physician and patient surveys of home self-blood pressure monitoring', 2005-2006
- Irvine J.**, *Ontario Ministry of Health, Primary Health Care Transition Fund*, 'Developing and testing a comprehensive telemanagement system to improve chronic disease treatment in primary health care: A demonstration project in diabetic patients with uncontrolled hypertension', 2005-2006
- Irvine J.**, *Heart and Stroke Foundation of Ontario*, 'Psychological support for patients with an implantable cardioverter defibrillator', 2003-2006
- Keeley F.W.**, *Heart and Stroke Foundation of Ontario*, 'Recombinantly expressed polypeptides of human elastin as a novel tool for investigations of the structure and assembly of elastin', 2004-2009
- Keeley F.W.**, Parkinson J., *Heart and Stroke Foundation of Ontario*, 'A combined theoretical/experimental approach to understanding sequence-structure-function relationships in elastin and elastin-like peptides', 2005-2007
- Keeley F.W.**, *Canadian Institutes of Health Research*, 'Post-transcriptional regulation of vascular Elastin synthesis in development and disease', 2001-2006
- Langille B.L.**, *Heart and Stroke Foundation of Ontario*, 'Arterial responses to hemodynamic stresses', 2002-2007
- Langille B.L.**, *Canadian Institutes of Health Research*, 'Developmental arterial remodelling: Influence of shear stress', 2000-2005
- Langille B.L.**, *Canadian Institutes of Health Research*, 'Development and fetal health', 2000-2005
- Letarte M.**, *Heart and Stroke Foundation of Ontario*, 'The role of endoglin in the normal vasculature and in the pathology of hereditary hemorrhagic telangiectasia', 2005-2009

- Letarte M.**, *Heart and Stroke Foundation of Ontario*, 'Role of endoglin in mammalian cardiovascular development', 2004-2006
- Letarte M.**, *Canadian Institutes of Health Research*, 'A molecular diagnostic test for hereditary hemorrhagic telangiectasia', 2004-2005
- Letarte M.**, *National Institute of Health*, 'Physiology of systemic and pulmonary microangiectasias', 2003-2007
- Letarte M.**, *Heart and Stroke Foundation of Canada*, 'The role of endoglin in the normal vasculature and in the pathology of hereditary hemorrhagic telangiectasia', 2002-2005
- Letarte M.**, *Canadian Institutes of Health Research*, 'Structure and function of endoglin', 2000-2007
- Letarte M.**, *Canadian Institutes of Health Research*, 'Shared flow cytometry facility', 2000-2005
- Letarte M.**, *March of Dimes, Birth Defects*, 'Molecular analysis of HHT will permit detection in newborns, genotype/phenotype correlations, and insights into mechanisms and management of the disorder', 1999-2004
- Lewis G.**, *Canadian Institutes of Health Research*, 'Determining the mechanisms of hepatic and intestinal lipoprotein overproduction in insulin resistant states', 2004-2007
- Lewis G.**, *Heart and Stroke Foundation of Ontario*, 'Regulation of HDL metabolism', 2005-2008
- Lewis G.**, *Heart and Stroke Foundation of Ontario*, 'Mechanisms of insulin sensitization with vasopeptidase inhibitors', 2003-2006
- Leytin, V.**, Freedman J., *Heart and Stroke Foundation of Canada* 'Platelet apoptosis *in vitro* and in the circulation', 2003-2005
- Leytin, V.**, Freedman J., Semple J., Lazarus A., Lau H., **Ni H.**, *Canadian IVIG Steering Committee*, 'Investigations of novel mechanisms of IVIG function using a murine model of idiopathic thrombocytopenic purpura (ITP)', 2004-2005
- Leytin, V.**, Gross P. *Heart and Stroke Foundation of Canada*, 'Platelet apoptosis induced by chemical agonists and shear stresses', 2005-2008
- Li R.K.**, Fazel S., *Canadian Institutes of Health Research*, 'The interplay of recruited stem cells and the matrix after myocardial infarction: Shifting the balance toward repair', 2004-2009
- Li R.K.**, Zu, *Natural Sciences and Engineering Research Council of Canada*, 'Development of a new, portable biomedical device for in vivo measurement of regional heart tissue elasticity', 2004-2007
- Li R.K.**, Fedak P.W., *Heart and Stroke Foundation of Ontario*, 'Gene-enhanced cell transplantation to reverse heart failure', 2004-2007
- Li R.K.**, *Canadian Institutes of Health Research*, 'Autologous tissue-engineered grafts for congenital heart surgery', 2003-2008
- Li R.K.**, *Heart and Stroke Foundation of Ontario*, 'Vasculogenesis induced by cell transplantation', 2003-2007
- Li R.K.**, *Ontario Ministry of Energy, Science and Technology*, 'Cell transplantation to improve heart function', 2001-2006
- Li R.K.**, *Heart and Stroke Foundation of Ontario*, 'Cell transplantation for cardiovascular disease', 2001-2006
- Lindsay T.F.**, *The Physicians' Services Incorporated*, 'Ruptured abdominal aortic aneurysm: Molecular mechanisms to clinical studies', 2004-2005
- Liu P.P.**, *Canadian Institutes of Health New Frontiers Program*, 'Cardiovascular complications in diabetes', 2005

- Liu P.P.**, *Canadian Institutes of Health*, 'Molecular mechanisms of viral myocarditis', 2004-2009
- Liu P.P.**, *Heart and Stroke Foundation*, 'The role of aldosterone in cardiovascular remodelling', 2004-2007
- Liu P.P.**, *Heart and Stroke Foundation*, 'Chlamydia and atherosclerosis: Immune insights', 2003-2008
- Liu P.P.**, *Heart and Stroke Foundation*, 'The role of inflammation in stem cell homing post cardiac injury', 2003-2006
- Liu P.P.**, *Canadian Institutes of Health*, 'CV Health research advancements molecule to populations (TACTICS)', 2002-2008
- Liu P.P.**, *Canadian Institutes of Health Interdisciplinary Health Research Program*, 'Gene-environment factors in heart failure (CHFNET)', 2002-2007
- Liu P.P.**, *Canadian Institutes of Health*, 'Cytokines in heart failure', 2001-2006
- Liu P.P.**, *Canadian Institutes of Health*, 'Oxidative stress and iron overload cardiomyopathy', 2001-2006
- MacLennan D.**, *Canadian Institutes of Health Research*, 'Structure, function and regulation of the Ca²⁺ ATPase', 2004-2009
- MacLennan D.**, *Canadian Institutes of Health Research*, 'Term grant - Ca²⁺ release channel', 2004-2009
- MacLennan D.**, *Canadian Institutes of Health Research*, 'Term grant Ca²⁺ -ATPase', 2004-2009
- MacLennan D.**, *Canadian Institutes of Health Research*, 'Structure, function and regulation of the Ca²⁺ release channel', 2004-2009
- MacLennan D., Liu P., Emili A.**, *Genome Canada*, 'Protein expression profiling platform for heart disease biomarker discovery', 2004-2007
- MacLennan D.**, *Canadian Institutes of Health Research*, 'Proof of principle grant', 2004-2005
- MacLennan D.**, *Heart and Stroke Foundation of Ontario*, 'Sites of interaction between phospholamban, sarcolipin and the cardiac calcium pump', 2002-2007
- MacLennan D.**, *Heart and Stroke Foundation of Ontario*, 'Term grant - (PLN, SLN)', 2002-2007
- MacLennan D.**, *Canadian Institutes of Health Research*, 'The pathophysiological and genetic basis of muscle disease resulting from calcium dysregulation', 2001-2006
- MacLennan D.**, *Canadian Institutes of Health Research*, 'Term grant – genetic diseases', 2001-2006
- Ni H.**, *Freedman J., Bayer/Canadian Blood Services (CBS)/Hema-Quebec/Canadian Institutes of Health Research*, 'Study of fetal and neonatal alloimmune thrombocytopenia in a novel mouse model and investigation of efficacy and mechanism of action of IVIG in these disorders', 2004-2005
- Ni H.**, *Freedman J., Canadian Institutes of Health Research*, 'Pathogenesis of fetal and neonatal alloimmune thrombocytopenia and mechanism of action of IVIG in a novel mouse model', 2004-2007
- Ni H.**, *Heart and Stroke Foundation of Canada*, 'Novel mechanisms of platelet aggregation: Roles of alternative ligands of b3 integrins in thrombosis and hemostasis', 2005-2008
- Opas M.**, *Canadian Institutes of Health Research*, 'The role of calreticulin in cardiac hypertrophy', 2002-2007
- Opas M.**, *Heart and Stroke Foundation of Canada*, 'Cardiac calreticulin: Cell and development biology', 2004-2007

Opavsky A., *Heart and Stroke Foundation of Ontario*, 'The coxsackie-adenovirus receptor: Function meets infection in viral myocarditis and dilated cardiomyopathy', 2005-2007

Opavsky A., *Heart and Stroke Foundation of Ontario*, 'The influence of coxsackie-adenovirus receptor on susceptibility to coxsackieviral myocarditis', 2003-2005

Parker T.G., *Canadian Institutes of Health Research*, 'Regulation of cardiac structure and function by the EF-hand proteins, S100A1 and S100A6', 2003-2006

Parker T.G., *Canadian Institutes of Health Research*, 'Inhibition of the cardiac hypertrophic phenotype by the calcium-binding protein, S100B', 2002-2005

Parker T.G., *Canadian Institutes of Health Research*, 'Role of S100B- dependent pathways in the cardiac response to disease', 2005-2010

Rakowski H., *American Society of Echocardiography*, 'Aortic cannulation guided by epiaortic and multiplane transesophageal echocardiography: Does it reduce cerebral embolism?', 2001-2003

Rakowski H., *Heart and Stroke Foundation of Ontario*, 'Molecular genetics of hypertrophic cardiomyopathy', 2000-2003

Rao V., Feindel C.M., *Heart and Stroke Foundation of Canada*, 'Hypertonic saline for cardiac transplantation', 2004-2006

Rao V., Karkouti K., Beattie W.S., **Chan C.**, Ivanov J., Wijeyesundera, *Earl Wynands Award in Cardiovascular Anaesthesia*, 'The RICH study (Renal insufficiency in cardiac surgery: Role of hemodilution)', 2004-2005

Rao V., *Canadian Institutes of Health Research*, 'Transplant vasculopathy: The role of endothelium', 2003-2008

Rao V., Beattie W.S., **Chan C.**, Wijeyesundera. *Heart and Stroke Foundation of Canada*, 'The PRIME (Perioperative Renal Insufficiency Management) study: A randomized, double-blind, placebo-controlled trial of N-Acetylcysteine for preventing renal injury after cardiac surgery', 2003-2005

Rao V., *Connaught Foundation*, 'Endothelial preservation for cardiac transplantation', 2002-2004

Rao V., Feindel C.M., *Heart and Stroke Foundation of Ontario*, 'Preservation of endothelial function following prolonged storage of cardiac allografts with shed donor blood', 2001-2004

Ross H., *Canadian Institutes of Health Research*, 'Seamless pharmaceutical care for patients with heart failure', 2003-2007

Ross H., *Heart and Stroke Foundation of Ontario*, 'CHOICES: Congestive heart failure offering individualized choice evaluation study', 2004-2006

Rubin B.B., Degousee N., *Heart and Stroke Foundation of Ontario*, 'Impact of mPGES-1 gene deletion on myocardial ischemia reperfusion injury', 2005-2007

Rubin B.B., *Physicians Services Incorporated Foundation*, 'Role of c-Jun N-terminal kinases in neutrophil activation and neutrophil mediated skeletal muscle ischemia reperfusion injury', 2003-2005

Rubin B.B., *Canadian Institutes of Health Research*, 'Molecular regulation of myocardial cyclooxygenase-2 expression and prostaglandin biosynthesis in neonatal rat myocytes', 2002-2007

Rubin B.B., Wijeyesundera D., *Toronto Academic Health Sciences Centre Harmonized Core Application*, 'The EPIC (evaluating peri operative ischemia reduction by Clonidine) study: A randomized, double blinded trial of clonidine for reducing cardiac morbidity and mortality following noncardiac surgery', 2005-2007

Rubin B.B., Homer Y., *Canadian Institutes of Health Research*, 'Peri-operative ischemic evaluation study', 2001-2004

- Rubin B.B.**, *Canadian Institutes of Health Research*, 'Magnetic resonance imaging for ischemia', 2000-2004
- Sefton M.**, Chan W., *Canadian Institutes of Health Research*, 'Quantum dot-based biomolecular imaging', 2005-2010
- Sefton M.**, *Networks of Centres of Excellence*, 'Canadian Regenerative Medicine Network', 2004-2009
- Sefton M.**, R. Gorczynski, J. Medin, *Canadian Institutes of Health Research*, 'Tissue engineering: Immune response and vascularization', 2004-2007
- Sefton M.**, Semple J., *Ontario Research and Development Challenge Fund*, 'Establishment of an advanced reconstructive tissue engineering centre', 2003-2008
- Sefton M.**, *Natural Sciences and Engineering Research Council*, 'Tissue engineering', 2003-2007
- Sefton M.**, Levy G., *Canadian Institutes of Health Research*, 'Training program in regenerative medicine', 2002-2007
- Sefton M.**, *National Institutes of Health*, 'Modular tissue engineering components for vascularized 3-D', 2002-2005
- Sefton M.**, *Ontario Innovation Trust*, 'McLaughlin Centre for Biomaterials and Tissue Engineering', 2001-2006
- Sefton M.**, Andrews B., *Canadian Foundation for Innovation*, 'Centre for Cellular and Biomolecular Research', 2000-2005
- Simmons C.A.**, *Connaught Foundation New Staff Matching Grant*, 'Systematic investigations of control strategies for stem cell-based osteochondral tissue engineering', 2005-2006
- Simmons C.A.**, *Connaught Foundation Start-up Award*, 'Novel devices for high throughput mechanobiology', 2005-2006
- Siu S.**, *American Society of Echocardiography*, 'Time effectiveness, diagnostic agreement, and reproducibility of digital vs. videotape acquisition of echocardiographic images', 2003-2004
- Siu S.**, *Canadian Institutes of Health Research*, 'Pregnancy and long term prognosis in women with heart disease', 2002-2005
- Siu S.**, *Heart and Stroke Foundation of Ontario*, 'Effect of ACEI therapy in patients with systemic right ventricles', 2002-2004
- Siu S.**, *Heart and Stroke Foundation of Ontario*, 'Long term outcomes in patients with repaired tetralogy', 2002-2004
- Sole M.**, *G.H. Wood Foundation*, 'Molecular cardiology', 2000-2005
- Sole M.**, *Canadian Institutes of Health Research*, 'Heart Failure', 2001-2004
- Sole M.**, *Canadian Institutes of Health Research*, 'Coordinated original research in elucidation of mechanisms of HR', 2003-2008
- Sole M.**, *Heart and Stroke Foundation of Ontario*, 'Circadian rhythms of the heart', 2003-2006
- Stewart D.E.**, *Canadian Institutes of Health Research*, 'Contribution of patient and physician factors to cardiac rehabilitation referral and participation: A prospective, multi-level study', 2004-2008
- Stewart D.E., Grace S.L.**, *Canadian Health Services Research Foundation*, 'An evidence-based health services evaluation of informational and management continuity in heart patients', 2003-2006
- Stewart D.E.**, Ruckholm E., *Heart and Stroke Foundation of Ontario*, 'Community outreach and heart health risk reduction trials (COHRT) component study 1: Efficacy of group outreach methodology', 2002-2006

Stewart D.E., Singer P., *Genome Canada*, 'Canadian program on genomics and global health: International and comparative perspectives on health systems and insurance implications of new genetic testing', 2001-2006

Stewart D.J., Husain M., Han R., *Heart and Stroke Foundation of Ontario*, 'NO-synthase in cardiovascular health and disease', 2005-2008

Stewart D.J., Keith M., *Canadian Institutes of Health Research*, 'Does nutrient supplementation influence cardiac structure and function following MI by altering energy metabolism?', 2005-2007

Stewart D.J., Galipeau, J., **Liu P.,** Lansdorp P.M., Karsan A., Megeney, L.A., *Canadian Institutes of Health Research*, 'Cardiovascular and respiratory stem cell plasticity – CARE Project', 2004-2009

Stewart D.J., Liu P., Backx P., Husain M., MacLennan D.H., Parker T., Sole M.J., *Canadian Institutes of Health Research*, 'Coordinated original research in elucidation of mechanisms in heart failure (CHF-CORE)', 2004-2009

Stewart D.J., Dick A., **Wright G.,** *Heart and Stroke Foundation of Ontario*, 'Delivery and tracking of stem cells in acute myocardial infarction', 2004-2006

Stewart D.J., Nag S., *Heart and Stroke Foundation of Ontario*, 'Regulation of cerebrovascular homeostasis and repair by angiogenic factors', 2004-2006

Stewart D.J., *Canadian Institutes of Health Research*, 'Mechanisms of angiogenesis: Biological and therapeutic potential of angiopoietins', 2003-2006

Stewart D.J., Leong-Poi H., *Canadian Institutes of Health Research*, 'Novel diagnostic and therapeutic applications of myocardial contrast echocardiography and targeted microbubbles for the therapeutic angiogenesis', 2003-2005

Stewart D.J., Courtman D., *Canadian Institutes of Health Research*, 'Microvascular endothelial cell loss in pulmonary hypertension', 2002-2006

Stewart D.J., *Canadian Institutes of Health Research*, 'Mechanisms of angiogenesis: Biological and therapeutic potential of angiopoietins', 2002-2006

Stewart D.J., *Canadian Institutes of Health Research*, 'Novel diagnostic and therapeutic applications of myocardial contrast echocardiography and targeted microbubbles for the therapeutic angiogenesis', 2002-2005

Strauss B. H., *Canadian Institutes of Health Research*, 'The role of adventitial angiogenesis in the arterial response to injury', 2002-2005

Strauss B. H., *Canadian Institutes of Health Research*, 'The role of perlecan in the pathophysiology of cardiovascular disease', 2004-2007

Strauss B. H., *Canadian Institutes of Health Research*, 'Role of matrix metalloproteinase in atrial remodelling in heart failure', 2004-2007

Thomas S.G., *Toronto Rehabilitation Institute, Toronto Cardiac Care Network*, 'Cardiac rehabilitation and readiness to return to work in patients with cardiovascular disease', 2002-2004

Thomas S.G., *TRI Research Fund*, 'Predicting participation in cardiac rehabilitation after coronary artery bypass surgery', 2002-2004

Tsushima R., Gaisano H., *Canadian Institutes of Health Research*, 'SNARE Protein regulation of voltage-gated potassium channels in neurosecretory cells (MOP-69083)', 2004-2007

Tsushima R., Gaisano H., *Heart and Stroke Foundation*, 'SNARE protein interactions with cardiac and vascular Kv channels (T 5343)', 2004-2006

- Tsushima R.**, *Heart and Stroke Foundation of Ontario*, 'Regulation of cardiac nonselective cation channels (T 4906)', 2002-2005
- Tu J. V.**, Aleter D.A., Austin P.C., Lee D.S., Ko D.T., Juurling D.A., Mamdami M.M., *Heart and Stroke Foundation of Ontario*, 'Improving the quality of acute myocardial infarction care in Canada', 2005-2008
- Tu J. V.**, Pilote L., Cox J.L., Ghali W.A., Humphries K.H., O'Loughlin J.L., et al., *Canadian Institutes of Health Research*, 'Gender and sex determinants of cardiovascular disease: From bench to beyond', 2004-2009
- Tu J. V.**, Zwarenstein M., Cox J., Chan B., Abrahams C., Sherrard H., Tepper J., *Canadian Health Services Research Foundation*, 'Demand of cardiovascular care in Canada: Modules to use available human resources to best deliver care', 2004-2007
- Tu J. V.**, Alter D., Austin P., Naylor C.D., Mustard C., Irvine M., Morgan C., Wheaton B., *Canadian Institutes of Health Research*, 'Socioeconomic status and outcomes after acute myocardial infarction', 2004-2007
- Tu J. V.**, Pilote L., Abrahamowicz M., Wisenberg M.J., Humphries K.H., Joseph L., Rahme E., *Canadian Institutes of Health Research*, 'A population-based analysis of the effectiveness and determinants of use of cardiac drugs for congestive heart failure', 2004-2007
- Tu J. V.**, Tu K., Hux J.E., Mamdani M., Jaakimaniemi L., Manuel D., *Ministry of Health and Long Term Care, Primary Care Transition Fund*, 'Evaluation project of primary health care payment and delivery models on screening, detection and control of hypertension', 2004-2006
- Tu J. V., Fremes S.E.**, Naylor C.D., Austin P.C., Anderson G.M., Feindel C.M., Novick R.J., *Heart and Stroke Foundation of Ontario*, 'Understanding the link between quality of care and outcomes report cards for coronary artery bypass graft surgery in Ontario', 2004-2006
- Tu J. V.**, Ivanov J., Borger M., David T., *Canadian Institutes of Health Research*, 'A propensity score, pair-matched study of late outcomes for off-pump versus on-pump coronary artery bypass surgery', 2004-2005
- Tu J. V.**, Austin P.C., Alter D.A., Stukel T., Naylor C.D., *Canadian Institutes of Health Research*, 'Improving the accuracy of health report cards', 2003-2005
- Tu J. V.**, Pilote L., Eisenberg M.J., *Heart and Stroke Foundation of Ontario*, 'Determinants of variation in the management of acute myocardial infarction (AMI)', 2002-2004
- Tu J. V.**, Kapral M.K., Laupacis A., *Heart and Stroke Foundation of Ontario*, 'Gender differences in stroke care and outcomes', 2002-2004
- Tu J. V.**, Ghali W.A., Faris P., Graham M., Knudtson M., *Canadian Institutes of Health Research*, 'Cardiac procedure waiting times: Exploratory analyses toward the development of national reporting standards', 2002-2004
- Tu J. V.**, Gjali W.A., Cox J.L., Knudtson M., Laupacis A., **Fremes, S.E.**, *Heart and Stroke Foundation of Canada*, 'Canadian Cardiovascular Outcomes Research Team (CCORT)', 2001-2005
- Tu J. V.**, Ghali W.A., Cox J.L., Knudtson M., Laupacis A., et al., *Canadian Institutes of Health Research*, Canadian cardiovascular outcomes research team, 2001-2005
- Tu J. V.**, *Canada Research Chair Canada Foundation for Innovation Physical Infrastructure Grant, University of Toronto*, 'Development of a Canadian cardiovascular outcome research centre', 2001-2005
- Tu J. V.**, Chan B., Naylor C.D., *Medical Research Council of Canada*, 'Quality of acute myocardial infarction care', 2000-2005
- Ward M.**, *Canadian Institutes of Health Research*, 'Mechanisms of impaired systemic vasoreactivity after hypoxia', 2004-2009

- Ward M.**, *Canadian Institutes of Health Research*, 'Role of matrix metalloprotease-2 in post translational regulation of ET-1 production after hypoxia', 2002-2007
- Ward M.**, *Heart and Stroke Foundation of Canada*, 'Cell biology of atherosclerosis – Programme grant', 2002-2005
- Weisel, R.**, Fazel S., *Heart and Stroke Foundation of Ontario*, 'Enhancing endogenous repair by cell therapy', 2005-2007
- Weisel, R., Verma S.**, Fazel S., *Heart and Stroke Foundation of Ontario*, 'Cardiac regeneration by cell transplantation', 2005-2006
- Weisel, R., Verma S.**, *Heart and Stroke Foundation of Ontario*, 'Modulating endothelial progenitor cells for myocardial regeneration: Role of PPAR', 2005-2006
- Weisel, R., Verma S., Yau T.M.**, *Heart and Stroke Foundation of Ontario*, 'Stem cells and restenosis: Defining the new paradigm', 2004-2005
- Weisel R., Yau T.M.**, *Heart and Stroke Foundation of Ontario*, 'Myocardial transgene expression in transplanted cells', 2002-2004
- Weisel R.**, *Heart and Stroke Foundation of Ontario*, 'Protection from perioperative ischemia' 2001-2004
- West L.J.**, *Physicians' Services Incorporated Foundation*, 'Investigation of neonatally-induced allograft acceptance in a mouse model', 2003-2005
- West L.J.**, *Heart and Stroke Foundation of Ontario*, 'Cardiac allograft tolerance induction during immaturity', 2003-2007
- West L.J.**, Dipchand A.I., McCrindle B., *The Hospital for Sick Children Seed Grant Competition*, 'Dobutamine/atropine stress echocardiography in paediatric heart transplant recipients for the assessment of post-transplant coronary artery disease', 2002-2004
- West L.J.**, Dipchand A.I., Hornberger L., *The Hospital for Sick Children Seed Grant Competition*, 'Assessment of anti-HLA antibody development in infants following the Norwood procedure', 2002-2004
- West L.J.**, *Canadian Institutes of Health Research*, 'Investigation of neonatal tolerance induced by ABO-incompatible infant heart transplantation', 2004-2007
- West L.J.**, *Heart and Stroke Foundation of Ontario*, 'Investigation of neonatal immune tolerance induced by ABO-incompatible heart transplantation in a murine model', 2004-2007
- West L.J.**, *Canada Foundation for Innovation*, 'Research hospital fund for level 3 immunodiagnostics and biotherapeutics facility', 2004-2007
- West L.J.**, *Canada Foundation for Innovation*, 'Research program in immune tolerance', 2004-2007
- Wittnich C.**, *Heart and Stroke Foundation of Ontario*, 'Impact of gender on myocardial pathology and ischemia/reperfusion', 2004-2007
- Wittnich C.**, *Heart and Stroke Foundation of Ontario*, 'Oxygen stress in newborn hearts', 2002-2006
- Wittnich C.**, *Heart and Stroke Foundation of Ontario*, 'Impact of gender on myocardial pathology and ischemia/reperfusion', 2001-2004
- Wright G.A., Strauss B.H., Dick A.J., Butany J.**, *Canadian Institutes of Health Research*, 'Microvessel formation in chronic total occlusions: Pathophysiology and role in successful guide-wire crossing', 2005-2008

Wright G.A., Cohen G., Alter D., Ivanov J., Macgowan C., Burns P., Dick A., Joyner C., *Heart and Stroke Foundation of Canada*, 'Left ventricular mass regression following aortic valve replacement with stentless versus stented valves: Follow-up of a randomized trial', 2004-2006

Wright G.A., Dick A. J., *Canadian Institutes of Health Research*, 'A 6-degree-of-freedom device for 3D navigation in real-time magnetic resonance imaging', 2004-2005

Wright G.A., Dick A., Merchant N., *Canadian Institutes of Health Research*, 'Magnetic resonance imaging for ischemic heart disease', 2003-2007

Wright G.A., *Canadian Institutes of Health Research*, 'Magnetic resonance imaging for ischemic heart disease', 2000-2006

Wright G.A., Prato F., *Ontario Research and Development Challenge Fund*, 'Ontario consortium for cardiac imaging', 2000-2006

Yau T.M., *Heart and Stroke Foundation of Ontario*, 'Myocardial transgene expression in transplanted cells', 2004-2006

Yau T.M., Fazel S., *Physicians Services Incorporated*, 'The role of stem cell factor receptor in cardiac remodelling after myocardial infarctions', 2004-2006

Yeh W.C., *Canadian Institutes of Health Research*, 'Effect of inflammatory signalling on apoptosis regulation and DNA damage responses', 2005-2010

Yeh W.C., *Canadian Institutes of Health Research*, 'Pathogenesis of viral myocarditis: Role of intrinsic innate immunity', 2004-2009

Yeh W.C., *Canadian Institutes of Health Research*, 'Studies of the signalling mechanisms mediated by toll-like receptor and IL-1', 2002-2005

ACKNOWLEDGEMENT OF SPONSORS AND SUPPORTERS

Many groups and institutions have contributed substantively to the ongoing development of the Centre. All manner of support is gratefully accepted and utilized. We would like to acknowledge here as many of these contributions as possible.

It is with great regret that we announce the passing of Mr. Stephan Lewar, and his wife, Mrs. Sophie Lewar. In honour of their son, the late Richard Lewar, Mr. and Mrs. Lewar have made several substantial donations to the Centre, and indeed, the Centre would not exist without their generosity. We are grateful to them for their continued support of research in the cardiovascular sciences.

The generous contributions of the Heart and Stroke Foundation of Ontario (HSFO) are gratefully acknowledged. The creation of this Centre would not have been possible without the combined support of the HSFO and the family of Richard Lewar. The ongoing support and advice of these groups, as well as the contributions of the members of the Donor's Due Diligence Committee, are also greatly appreciated.

The administrative and organizational support of the Faculty of Medicine, including the staff of the Dean's Office, the faculty's component departments, and University-wide departments more broadly. A special thanks to the University of Toronto's Innovation Foundation, the staff of the GRIP office (Government Research Infrastructure Programs) and the staff of the Faculty of Medicine's Advancement Office.

The many granting agencies that support all the investigators of the Centre with operating grants, and particularly the CIHR Institute of Circulatory and Respiratory Health, the Heart and Stroke Foundation of Canada, Genome Canada and the Ontario Genomics Institute which actively oversee some of the group grant programs and research projects that the Centre is involved in. Special thanks also to Roche Diagnostics GmbH.

In addition, we would like to acknowledge:

- The unrestricted educational grants from Sanofi Aventis Pharma for the TACTICS Strategic training program;
- Merck Frosst Canada and Co. and Astra Zeneca Canada for support of the Distinguished Visiting Professor Lecture Series;
- Astra Zeneca Canada, Jansen Ortho, Merck Frosst Canada and Co., Pfizer Canada, Roche Canada and Sanofi Aventis, for the Annual Cardiovascular Scientific Day; and,
- Merck Frosst Canada and Co., Pfizer Canada, Sanofi Aventis, and the Canadian Society for Atherosclerosis, Vascular Biology and Thrombosis, in addition to the CIHR and HSFC, for the New Frontiers Program on "Cardiovascular Complications in Diabetes".

Many thanks also to those members and staff whose participation in the Trainee Awards review, the Annual Cardiovascular Scientific Day, the Annual Strategic Planning retreat, Platform centered research programs, Group Grants, administrative committee meetings, and day-to-day administrative operations were critical to the ongoing success of the Centre.

Heart and Stroke/Richard Lewar Centre
of Excellence in Cardiovascular Research
University of Toronto
150 College Street, FitzGerald Building
Toronto, Ontario M5S 3E2
Tel: 416 946 8543
Fax: 416 946 7545

E-mail: hsrlcentre.excellence@utoronto.ca

For additional information, visit our web site at www.hsrlce.on.ca

