

**Annual Report**  
**Division of Cardiology**  
**Department of Medicine - Jewish General Hospital**  
**January 1 - December 31, 2013**

## **SUMMARY**

### **Introduction**

The year 2013 saw consolidation and growth in core clinical and research programs, coupled with innovation in our core teaching, clinical and research missions. A major highlight was the change in Divisional leadership, with Dr. David Langleben stepping down after 14 years as Director. Dr. Lawrence Rudski, an internationally recognized authority in echocardiography of the right heart, assumed the role as Divisional Director.

### **Clinical Services**

**Cardio-Oncology:** The Jewish General Hospital's Cardio-Oncology Program has continued to grow. In addition to division members seeing patients in the oncology department with chemotherapy-related cardiovascular issues we have initiated a joint clinical research program with a Fellow dedicated to this track.

**Pacemaker:** 100% of the pacemakers are now being done in the cardiac catheterization laboratory. Nearly all of the venous access for pacemakers is done with ultrasound guidance. This has resulted in significant improvement in time to access & markedly reduced access related complications.

**Pericardial Disease:** In 2013, first line treatment for patients requiring pericardial drainage has been a pigtail catheter with extended drainage inserted percutaneously. This is done in the CCU. We have demonstrated a low complication rate, low recurrence rate and less invasive therapies for the patients. A pericardial service to perform both acute interventions and post-discharge follow-up has been established by Dr. Vartan Mardigyan of our division, and Dr. Jed Lipes of the Department of Critical Care, with assistance from our imaging lab.

**Heart Failure Palliative Care Program:** The Cardiac Palliative Care Service formalized its association with the Division of Palliative at the JGH and now has a dedicated Palliative Care Nurse. Supportive Care Clinics and a multidisciplinary approach aim to provide optimum care to patients and their families. The HF Palliative Care Service has presented its research at international conferences.

**Percutaneous Coronary Intervention – CTO Program:** The JGH cath lab has developed into a Canadian leader in the treatment of patients with chronic occlusions with expertise in clinical and research arenas. We have formed a partnership with the CHUM (Dr. Joyal of JGH and Dr. Mansour of CHUM) to increase our shared experience and patient pool to improve clinical outcomes and to collaborate in a research program.

**Three-Dimensional Trans-esophageal Echocardiography at the JGH:** All patients undergoing valvular surgery are now benefitting from 3D technology to guide the surgeon pre-operatively. In addition, Dr. Sebag led the introduction of 3-dimensional echocardiography into

routine clinical practice to more accurately evaluate left-ventricular function, particularly in the setting of chemotherapy patients and patients with coronary disease. Other novel techniques such as deformation imaging are also used in a routine fashion in patients receiving chemotherapy, valvular heart disease and cardiomyopathies.

## 1) Research and publications:

### JGH Research Highlights

Key areas of research in 2013 focused around pulmonary hypertension, clinical epidemiology and trials, congenital heart diseases, and the cardiac effects of hormones in rat models. Dr. David Langleben performed studies to evaluate pulmonary capillary recruitment in response to exercise and published a clinical trial on the effects of Riociguat in pulmonary hypertension in the NEJM. Dr. Mark Eisenberg published his ZESCA trial on the use of Zyban for smoking cessation post-myocardial infarction. Dr. Jonathan Afilalo continued in his ground-breaking research on the use of frailty to stratify risk peri-operatively as well as for TAVR procedures. Dr. Judith Therrien recruited over 70 patients as Canada-wide principal investigator of a CIHR-funded study evaluating the effects of angiotensin receptor blockers and beta blockers in patients with bicuspid aortic valves, while collaborating with the Faculty of Engineering in the design of a novel percutaneously placed device aimed to replace complex congenital surgery in high risk patients. Dr. Igal Sebag continued his collaborative efforts in Cardio-Oncology Imaging with the Massachusetts General Hospital.

During the period April 2012 to March 2013, the total amount of research funding in the Division of Cardiology recorded at the Lady Davis Institute for Research amounted to approximately \$860,000.

Dr. Mark Eisenberg – CIHR grant -Evaluating the Efficacy E-Cigarette Use for Smoking Cessation (E3) Trial

The most noteworthy publications of the division are:

Ghofrani HA, Galiè N, Grimminger F, Grünig E, Humbert M, Jing ZC, Keogh AM, **Langleben D**, Kilama MO, Fritsch A, Neuser D, Rubin LJ; PATENT-1 Study Group. Riociguat for the treatment of pulmonary arterial hypertension. *N Engl J Med*. 2013 Jul 25;369(4):330-40.

**Eisenberg MJ**, Grandi SM, Gervais A, O'Loughlin J, Paradis G, Rinfret S, Sarrafzadegan N, Sharma S, Lauzon C, Yadav R, Pilote L; ZESCA Investigators. Bupropion for smoking cessation in patients hospitalized with acute myocardial infarction: a randomized, placebo-controlled trial. *J Am Coll Cardiol*. 2013 Feb 5;61(5):524-32.

**Afilalo J**, Flynn AW, Shimony A, Rudski LG, Agnihotri AK, Morin JF, Castrillo C, Shahian DM, Picard MH. Incremental value of the preoperative echocardiogram to predict mortality and major morbidity in coronary artery bypass surgery *Circulation*. 2013 Jan 22;127(3):356-64.

Lancellotti P, Nkomo VT, Badano LP, Bergler J, Bogaert J, Davin L, Cosyns B, Coucke P, Dulgheru R, Edvardsen T, Gaemperli O, Galderisi M, Griffin B, Heidenreich PA, Nieman K, Plana JC, Port SC, Scherrer-Crosbie M, Schwartz RG, **Sebag IA**, Voigt JU, Wann S, Yang PC; European Society of Cardiology Working Groups on Nuclear Cardiology and Cardiac Computed

Tomography and Cardiovascular Magnetic Resonance; American Society of Nuclear Cardiology, Society for Cardiovascular Magnetic Resonance, and Society of Cardiovascular Computed Tomography. Expert consensus for multi-modality imaging evaluation of cardiovascular complications of radiotherapy in adults: a report from the European association of cardiovascular imaging and the American society of echocardiography. J Am Soc Echocardiogr 2013; 26(9):1013-32.

**Rudski L.** Point/Counterpoint Editorial Debate - "Can Doppler echocardiography estimates of pulmonary artery systolic pressures be relied upon to accurately make the diagnosis of pulmonary hypertension?" Pro-side in support of echocardiography – Chest. 2013 Jun 1;143(6):1533-6

## **2. Teaching and learning (undergraduate and graduate):**

Teaching at the JGH continues to be a strong point under the leadership of Dr. Regina Husa, co-Program Director for the McGill Adult Cardiology Training Program. We continue leading the McGill Echocardiography rounds, which are now disseminated to sites outside of the McGill RUIS, and host the annual JGH-McGill Imaging Symposium. This symposium had more than 200 registrants from across Quebec and beyond, highlighting the presentation and imaging skills of JGH and MUHC staff, as well as invited speakers from Quebec, Ontario, and Europe. All division members participated and excelled in teaching activities at all levels.

### **Annabel Chen-Tournoux, MD**

Undergraduate:

-EKG II, EKG III, and Cardiovascular physical exam: 5 hours

Postgraduate:

-CCU/2NE 4 weeks, 4 fellows

-Consult service: 10 fellows

-Echo lab: 4 echo fellows

Other

-JGH Cardiology Division Journal Club: 1 hour

-McGill/JGH Echo Symposium

-American Society of Echocardiography Scientific Sessions

-JGH Dept of Family Medicine Grand Rounds

-Post AHA Evening Conference sponsored by Bayer Healthcare

### **Mark J. Eisenberg, MD MPH FACC FAHA**

-Undergraduate: -Evidenced-Based Medicine Small Groups (8 hrs)

-Postgraduate: Electrocardiogram Interpretation for Cardiology Residents (3 hrs)

-Clinical Teaching

Cardiac Catheterization Laboratories (>160 hrs/year) – Cardiology Fellows

-Treadmill/nuclears: Train general internal medicine fellows, (>140 hrs/year)

Consultations (>120 hrs/year) – Cardiology Fellows, Residents, Medical Students

Supervision:

-Research Supervision of Cardiology Fellows, Medical Residents, Postdoctoral fellows, Graduate Students, Thesis Internal Examiner, and Medical Students

Other

-Chair of Program Advisory Committee of the Young Investigators Forum for the Institute of Cardiovascular and Respiratory Health of the CIHR

**Regina Husa, MD**

- Undergraduate: Chief tutor, Cardiac Physiology Small Groups, 10 hours and design/prep (med students), ECG course for students, Simulation Centre teaching procedural skills
  - Medical Education Elective (research)
  - Supervised 3 electives
  - Academic Half Day teaching and curriculum design in Cardiology & Internal Medicine
  - PGY4 Introduction to Cardiac Procedures Course ½ day simulation
- Clinical supervision:
- 6-7 weeks CCU/year
  - Consult service 1 day/2 weeks
  - 1-2 outpatient clinics/week
  - 0.5-1 days echo
  - RGP, 1 month
  - Royal College Surveyor (National) evaluating residency programs.

**Joyal, Dominique, MD**

Undergraduate: Teaching medical students on consult service

Postgraduate: Teaching residents on consult service and cath lab

**Langleben, David**

Undergraduate: 4-6 hours, Evaluation of Chest pain and ECG basics

Graduate (residents and fellows) 8 or more hours per year

Postgraduate: Teaching to residents on PH 12 hours per year

- Teaching on wards and CCU 6 weeks/year
- Teaching in Pulmonary Hypertension clinic: 20 hours/year (Fellows)
- Clinical Supervision: Consults 2-3 weeks/year; OPD clinic 4-4.5 half days per week
- Supervision: PhD student in lab

**Vartan Mardigyan, MD**

-Undergraduate: 1 hr of small group talks on ECG interpretation with medical students.

-Postgraduate: 2 hrs of didactic teaching to cardiology fellows during a dedicated pacemaker half-day with hands on teaching of the pacemaker interrogation process; 3 hrs of didactic teaching to internal medicine and cardiology fellows on other subjects (ACS, ECGs, Constrictive Pericarditis).

- 4 weeks of CCU
- Total of 2 weeks of Cardiology Consult Service
- Supervision and teaching of pericardiocentesis and pericardial drain placement (15 to 20 cases with Cardiology and Echocardiography fellows).

Other:

- 5 hours of teaching to Family Doctors on the management of Atrial Fibrillation
- 3 hours of talks to the Cardiology group at the JGH (includes 1 hrs of Journal Club)

**Lawrence Rudski, MD**

Undergraduate: 4.5 - senior physician rounds and EKG rounds;

Postgraduate: 6 hours - cardiology and echo rounds

Supervision:

- 4 weeks CCU, approx. 4 weeks consults, 4 half-days per week echocardiography teaching of PGY 4-7 residents
- Supervision of Dr. Nimrod Blank, a post-doctoral fellow and cardiologist from Israel

Other:

- JGH-McGill 4<sup>th</sup> Annual Cardiovascular Imaging Symposium – Co-Director
- Royal College of Physicians and Surgeons of Canada, member in the AFC Adult Echocardiography working group tasked to design and write a curriculum leading to a "Diplomate in Echocardiography"
- Participant in course of leadership training, American Society of Echocardiography
- Provided expert echocardiography interpretation for MUHC - Lachine Campus
- Led the introduction of the JGH Cardiology Division into the HOPS program. This program, run by the English Montreal School Board, allows exceptional secondary 5 high school students to spend a half day per week rotating through different hospital departments.

### **Caroline Michel, MD**

- Undergraduate: 20 hours, Osler fellow; 5 hours, cardio lectures in hospital
- Postgraduate: Cardio fellow ½ day 1 hrs; lectures for academic half day in Internal and Family Medicine and Simulation Centre 50=6- hours
- Clinical Supervision: Consults 160 hours, CCU, 320 hours, Echo Lab 500 hours; Heart Failure Clinic 20 hours

### **Igal Sebag, MD**

- Undergraduate: 2 hours
- Postgraduate: 14 hours
- Advanced Training in Echocardiography (Fellowship and Teaching Director in Echocardiography)
- McGill-trained (Cardiology, Internal Medicine or Intensive Care Unit trained) 4 Echocardiography Fellows; 2 National/International Echocardiography Fellows  
Clinical Teaching
- Echocardiography Laboratory (100 hours/year) - Echocardiography Fellows and Core Cardiology Fellows
- Coronary Care Unit and Consultation Service (>75 hours/year) - Medical students, Residents and Cardiology Fellows
- McGill Representative on the Scientific Program Committee of the Quebec Cardiologists' Association (3 conferences/year) 10 meeting hours/year
- Program Committee Member for the Annual Meeting of the Canadian Society of Echocardiography (and member of the Board of Directors of the Canadian Society of Echocardiography), Contribution to designing the scientific content of this Canadian-wide meeting (400 attendees from across the country)
- Fourth Annual McGill / Jewish General Hospital Echocardiography Scientific Symposium (in partnership with the McGill Faculty for Continuing Medical Education)
- Co-Director, Title: Update in Echocardiography with a Focus on M (120 attendees from across Quebec)
- Co-Director of the McGill / Jewish General Hospital Post-Graduate Echocardiography Course.

### **Richard Sheppard, MD**

#### **Undergraduate:**

- Osler Fellowship (includes simulation center) 4 year program, 6 two hour meetings per year
- Wards/CCU teaching medical students (4-5 weeks per year)
- Consult Service teaching medical students (5-6 weeks total per year (all day))
- Lectures on chest pain and palpitations 1-2 hours per year

### **Postgraduate:**

- Academic Half Day for Internal Medicine Residents (3 hours)
- Clinical supervision on wards (4-5 weeks per year)

- Clinical supervision on CCU (4-5 weeks per year)
- Clinical supervision on consult service (4-5 weeks per year)
- Supervision of Cardiology Residents during Longitudinal Clinic

#### Other:

- Participation in admissions committee, interviewing and participating in the process of choosing medical students among applicants.
- Work on service at Lakeshore General Hospital 4 weeks per year

### **Judith Therrien, MD**

- Undergraduate: 2 hours ECG lecture
- Postgraduate: 4 hours of lectures

#### Clinical Supervision:

- 4 weeks/year CCU
- 4 weeks/year consult
- 2 ½ days/week ACHD fellowship teaching
- 1 day/week echo teaching to fellows

#### Other:

- 1 hour lecture on ACHD for general practitioners
- Talks at international conferences

### **Ann Walling, MD**

- Undergraduate: 25 hours
- Postgraduate: 3 days per week in Echo Lab (400 hours); Academic half-day 2 hours

#### Clinical Supervision:

- 4-6 weeks/year on CCU and consults (daily rounds with extensive teaching) (1-2 days/month);
- 4-5 half days/week for 35 weeks out-patient clinic
- CCU rounds on stress test, 12 hours/year

#### Other:

- McGill cardio and echo rounds, 2 hours

### **3. Involvement in the community:**

The JGH Division of Cardiology participated in community activities, including organizing and speaking at patient support groups for pulmonary hypertension, as well as public lectures at community events. The JGH Cardiology Division began participating in the HOPS program. This program, run by the English Montreal School Board, allows exceptional secondary 5 high school students to spend a half day per week rotating through different hospital departments.

### **4. Partnerships:**

The division collaborates with the McGill University Health Centre in key areas of congenital and structural heart disease, heart failure, arrhythmia and imaging and several key research arenas. We established a joint program with the CHUM to treat patients with chronic total coronary occlusions using innovative catheterization techniques.

## **5. Milestones:**

Dr. Lawrence Rudski assumed the position of Divisional Director

## **6. Honours, awards, and prizes:**

Dr. Mark Eisenberg received the Award for Excellence in Psychosocial or Clinical Research of the Board of Governors, Jewish General Hospital. He was elected Fellow of the Canadian Academy of Health Sciences.

Dr. Lawrence Rudski represented Canada in the 2<sup>nd</sup> World Echo Summit in Delhi, speaking in the opening plenary session. He also spoke in a joint Canadian Cardiovascular Society –Israel Heart Society symposium in Jerusalem, in honor of the IHS's 60<sup>th</sup> anniversary.

## **7. Fundraising:** None reported

# **SECTION I - DIVISION STATUS UPDATE**

## **1. Mission and objectives of the Division**

The JGH will use the upcoming year to develop its leadership in advanced cardiovascular imaging. We will continue to work with government agencies as well as our hospital partners to improve access to and quality of cardiac MRI services to the patients of the McGill RUIS. We will further advance our collaboration with the cardiovascular surgery program, which will culminate in a fused patient-centered service in 2015. Continued research into the importance of “Frailty”, as well as clinical and research programs in Cardio-Oncology will be advanced. We will also establish a joint Cardiology-Emergency Medicine Research Unit. Cross appointments with other McGill clinicians and investigators will serve to further develop our programs in tertiary and quaternary cardiology such as our internationally-recognized Center for Pulmonary Vascular Diseases.

## **2. A nominative list of academic staff, their academic rank**

The following full-time members of the Division are all active:

- Afilalo, Dr. Jonathan, Assistant Professor, Faculty of Medicine, McGill University (GFT-U)
- Chen-Tournoux, Dr. Annabel, Assistant Professor, Faculty of Medicine, McGill University (GFT-H)
- Eisenberg, Dr. Mark, Professor, Faculty of Medicine, McGill University (GFT-U),
- Husa, Dr. Regina, Assistant Professor, Faculty of Medicine, McGill University (GFT-H)
- Joyal, Dr. Dominique, Assistant Professor, Faculty of Medicine, McGill University (GFT-H)
- Langleben, Dr. David, Professor, Faculty of Medicine, McGill University (GFT-H),
- Mardigyan, Dr. Vartan, Assistant Professor, Faculty of Medicine, McGill University (GFT-H)
- Michel, Dr. Caroline, Assistant Professor, Faculty of Medicine, McGill University (GFT-H)
- Rudski, Dr. Lawrence, Associate Professor, Faculty of Medicine, McGill University (GFT-H),  
Chief, Division of Cardiology
- Schlesinger, Dr. Robert D, Assistant Professor, Faculty of Medicine, McGill University (GFT-H)
- Sebag, Dr. Igal, Associate Professor, Faculty of Medicine, McGill University (GFT-H)

-Sheppard, Dr. Richard, Assistant Professor, Faculty of Medicine, McGill University (GFT-H)  
-Therrien, Dr. Judith, Associate Professor, Faculty of Medicine, McGill University (GFT-H)  
Walling, Dr. Ann, Associate Professor, Faculty of Medicine, McGill University (GFT-H)

## **SECTION II - GRANTS, PUBLICATIONS, AND SERVICE OUTSIDE OF MCGILL**

### **1. Grants and awards received**

#### **Afilalo, J**

Canadian Institutes for Health Research 2012-2016  
Measurement of Frailty to Identify High-Risk Elderly Patients Referred for Surgical and Transcatheter Aortic Valve Replacement

Canadian Institutes for Health Research 2013-2014  
PI, Proof-of- Principle Phase I, Buccal Lamin A as a Novel Biomarker for Frailty

Fonds de recherche Québec – Santé 2014-2016  
Subvention d'établissement de jeune chercheur  
Mesure de la fragilité pour identifier les patients âgés à haut risque de complications après un remplacement valvulaire aortique chirurgical ou percutané

Heart & Stroke Foundation Canada Fellowship 2012-2014  
Measurement of Frailty to Identify High-Risk Elderly Patients Referred for Surgical and Transcatheter Aortic Valve Replacement

#### **Boutet, K**

Millennium Pharmaceutical Inc  
Randomized, Double-Blind, Placebo-Controlled, Multi-Centre, Multi-National Study to Evaluate the Efficacy and Safety of Oral Bay 63-2521 (1 Mg, 15 Mg, 2 Mg, or 25 Mg Tid) in Patients with Symptomatic Pulmonary Arterial Hypertension (Study 12934)

Actelion Pharmaceuticals Canada Inc  
A Multicenter, Double-Blind, Placebo-Controlled Phase 3 Study to Demonstrate the Efficacy and Safety of Act-293987 in Patients with Pulmonary Arterial Hypertension

#### **Chen-Tournoux, A**

Department of Medicine, JGH  
Echocardiographic quantification of epicardial fat and its implications for cardiovascular risk

#### **Eisenberg, M**

17 grants in 2013: \$401,537

#### Current Funding - Peer-Reviewed Grants

-Principal Investigator, CIHR Knowledge Synthesis Grant. The efficacy and safety of smoking cessation interventions in patients with cardiovascular disease: A meta-analysis of randomized controlled trials. \$99,959/year, 2013-2014



-Principal Investigator, CIHR Knowledge Synthesis Grant. A Systematic Review and Meta-Analysis of Combination Therapies for Smoking Cessation. \$97,988/year.

-Co-Investigator, CIHR Open operating grant. A pilot randomized controlled trial of Ip(a) lowering for the prevention of aortic valve disease - Translating genomic Research contract knowledge for cardiovascular prevention. \$138,397/year; my part: \$0/year. Principal Investigator: George Thanassoulis, 2013-2018

-Co-Investigator, CIHR Open operating grant. Cardiac troponins and sex differences in outcomes. \$58,187/year; my part: \$0/year. Principal Investigator: Karin Humphries, 2013-2015

-Co-Investigator, CIHR, Open operating grant. Drospirenone-containing combined oral contraceptives and the risk of arterial thrombosis. \$77,265/year; my part: \$0/year. Principal Investigator: Kristian Filion, Oct. 2012 - Sept. 2014

-Principal Investigator, LDI Clinical Research Pilot Project (CLiPP) Funding Initiative. Administration of fixed dose versus weight-based dose of heparin in patients with ST-segment elevation myocardial infarction prior to primary percutaneous coronary intervention. \$12,268/year, Sept. 2012 - Aug. 2014.

-Co-Investigator, FRQS, Recherches en sante des populations. Le cancer et les procedures medicales causant (l'ionisation dans les patients atteints de cardiopathies congénitales). \$79,419/year; my part : \$0/year. Principal Investigator: Ariane Marelli, May 2012-April 2015.

-Co-Investigator, CIHR, Open operating grant. Cancer and procedure-related ionization in congenital heart disease patients. \$70,218/year; my part: \$0/year. Co- Principal Applicants: Ariane Marelli, Louise Pilate, Apr. 2012 - Mar. 2014

-Co-Investigator, Heart and Stroke Foundation of Canada (HSFC) Grant-in-aid. GENESIS PRAXY (GENdEr and Sex deternlnantS of cardiovascular disease: from bench to beyond PRemature Acute Coronary SYndrome). \$176,174/year; my part: 0\$/year. Principal Investigators: Louise Pilote, Igor Karp, Apr. 2011 - Mar. 2014

#### Current Funding – Non-Peer Reviewed (industry)

-Principal Investigator, Pfizer Canada. Evaluation of Varenicline (Champix™) in smoking cessation for paTients post-Acute coronary syndrome (EVITA) trial. \$131,572/year. Jul. 2008 - Jun. 2014

-Site Investigator, Canadian Heart Research Center/Eli Lilly. Canadian Observational Antiplatelet study. \$6,000/year, Dec. 2011 - May 2014

#### Past Funding - Non-Peer-Reviewed (Industry)

-Principal Investigator, CIHR, Café scientifique program. Butting out: Seeing through the smoke. \$3,000/year, Sept. 2012 - Aug. 2013.

-Co-Investigator, CIHR, Catalyst Grant - Drug Safety & Effectiveness in Underrepresented

Population. A population based study of adherence to atrial fibrillation therapies. \$99,850/year; my part: \$0/year. Co-Principal Investigators: Louise Pilote, Cynthia Jackevicius, Mar. 2012 - Feb. 2013.

-Principal Investigator, CIHR, Open operating grant. The safety of combined oral contraceptives: A systematic review and meta-analysis. \$47,250/year, Oct. 2012 - Sept. 2013

-Co-Investigator, Canadian Institutes of Health Research (CIHR) Operating Grant: Secondary Analysis of Databases. Cancer and procedure-related ionization in congenital heart disease. \$48,193/year; my part: \$0/year. Principal Investigator: Ariane Marelli, Oct. 2011 - Sep. 2013

-Co-Investigator, CIHR Operating Grant. Quantification of the effect of SMOKing on arterial stiffness (SMOKELESS). \$124,957/year; my part: \$0/year. Principal Investigator: Styliani Stella Daskalopoulou. Apr. 2010 - Mar. 2013

### **Joyal, D**

Treatment of complex coronary lesions  
Department of Medicine, JGH

### **Langleben, D**

Actelion Pharmaceuticals Canada Inc.  
Ac-066A301/Epitome-2: a Multicenter, Single-Arm, Open-Label, Phase 3B Study to Assess the Effects of Switching from Flolan to Act-385781A in Patients with Pulmonary Arterial Hypertension (PAH) Ac-066A302/Epitome-2 Extension: An Open-Label Extension of St

Bayer AG  
Assessment of Recruitment of Functional Pulmonary Microvascular Surface Area in the Determination of Exercise Limitation in Patients with PAH

Bayer Inc. Health Care Division

Glaxosmithkline Inc. Canada  
AMB110094: a Post Marketing Observational Surveillance Programme for AM Brisentan (Vot)

Northern Therapeutics Inc  
The Phacet Trial, Pulmonary Hypertension Assessment of Cell Therapy

### **Michel, C**

Bayer Inc. Health Care Division  
Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multi-Center Study to Evaluate the Hemodynamic Effects of Riociguat (Bay 63-2521) as Well as Safety and Kinetics in Patients with Pulmonary Hypertension Associated with Left Ventricular Systoli

National Institutes of Health (USA) NIH  
Xanthine Oxidase Inhibition for Hyperuricemic Heart Failure Patients

## **Rudski, L**

Department of Medicine, JGH  
Echocardiography-based research on the right heart

Genzyme – Investigator – Initiated study. Screening for Anderson-Fabry Disease in Multiple high Risk Groups \$120,000.00

## **Sebag, I**

Massachusetts General Hospital  
Susan G Komen Breast Cancer - Early Detection and Prediction of Chemotherapy-Induced Cardiotoxicity in Breast Cancer Patients (Project)

Department of Medicine, JGH  
Assessment of reparability of mitral valve prolapse using real-time, trans-thoracic, three-dimensional echocardiography

## **Sheppard, R**

National Institutes of Health (USA) NIH  
Immune Activation and Myocardial Recovery in Peripartum Cardiomyopathy

Bayer  
ART-S-HF study of novel mineralocorticoid receptor in heart failure patients with renal dysfunction

Novartis Pharma Canada Inc.  
A Multicenter, Randomized, Double-Blind, Parallel Group, Active-Controlled Study to Evaluate the Efficacy and Safety of Lcz696 Compared to Enalapril on Morbidity and Mortality in Patients with Chronic Heart Failure and Reduced Ejection Fraction

Novartis Pharma Canada Inc.  
CSPP100A2368 - a Multicenter, Randomized, Double-Blind, Parallel-Group, Placebo-Controlled Study to Evaluate the 6 Months Efficacy and Safety of Aliskiren Therapy on Top of Standard Therapy, on Morbidity and Mortality When Initiated Early

## **Therrien, J**

Population Health Research Institute  
Bav (Beta-Blockers and Angiotensin Receptor Blockers in Bicuspid Aortic Valve Aortopathy

Department of Medicine, JGH  
Beta Blockers and Angiotensin Receptor Blockers in Bicuspid Aortic Valve Disease Aortopathy

## **2. Scholarly works published in the 2013 calendar year:**

### **Afilalo, Jonathan**

--**Afilalo J**, Alexander KP, Mack MJ, Maurer MS, Green P, Allen LA, Popma JJ, Ferrucci L, Forman DE. Frailty Assessment in the Cardiovascular Care of Older Adults. *J Am Coll Cardiol*. 2013 Nov 18 [Epub ahead of print].

--Opotowsky AR, Santos M, Maron BA, **Afilalo J**, Waxman AB, Landzberg MJ, Forfia PR. Towards Widespread Noninvasive Assessment of Pulmonary Vascular Resistance in Clinical Practice. *J Am Soc Echocardiogr*. 2013 Nov 23 [Epub ahead of print].

--Lawler PR, **Afilalo J**, Eisenberg MJ, Pilote L. Comparison of cancer risk associated with low-dose ionizing radiation from cardiac imaging and therapeutic procedures after acute myocardial infarction in women versus men. *Am J Cardiol*. 2013 Nov 15;112(10):1545-50. Epub 2013 Aug 22.

--Opotowsky AR, Clair M, **Afilalo J**, Landzberg MJ, Waxman AB, Moko L, Maron BA, Vaidya A, Forfia PR. A Simple Echocardiographic Method to Estimate Pulmonary Vascular Resistance. 2013 Sep 15;112(6):873-82. Epub 2013 Jun 1.

--**Afilalo J**, Williams JB, Alexander KP. Reply: To PMID 23245838. *Am J Cardiol*. 2013 Apr 1;111(7):1079.

--**Afilalo J**, Flynn AW, Shimony A, Rudski LG, Agnihotri AK, Morin JF, Castrillo C, Shahian DM, Picard MH. Incremental Value of the Preoperative Echocardiogram to Predict Mortality and Major Morbidity in Coronary Artery Bypass Surgery. *Circulation*. 2013 Jan 22;127(3):356-64. Epub 2012 Dec 12.

--Flynn AW, **Afilalo J** (co-1st), Agnihotri AK, Castrillo C, Shahian DM, Picard MH. Aortic sclerosis is associated with mortality and major morbidity in patients undergoing coronary artery bypass surgery. *Heart*. 2013 Feb;99(4):247-52. Epub 2012 Dec 4.

--Shimony A, Fox BD, **Afilalo J**, Rudski LG, Hirsch A, Langleben D. Pulmonary Arterial Hypertension in the Elderly-Clinical Characteristics and Long-Term Survival. *Lung*. 2012 Dec;190(6):645-9. Epub 2012 Oct 11.

### **Eisenberg, Mark**

--Williams JB, Alexander KP, Morin JF, Langlois Y, Noiseux N, Perrault LP, Smolderen K, Arnold SV, Eisenberg MJ, Pilote L, Monette J, Bergman H, Smith PK, **Afilalo J**. Preoperative anxiety as a predictor of mortality and major morbidity in patients aged >70 years undergoing cardiac surgery. *Am J Cardiol*. 2013 Jan 1;111(1):137-42.

--Pilote L, **Eisenberg MJ**, Essebag V, Tu JV, Humphries KH, Leung Yinko SSL, Belhouli H, Guo H, Jackevicius CA. Temporal trends in medication use and outcomes in atrial fibrillation. *Can J Cardiol*, 29:1241-8,2013

--\*Boothroyd LJ, Segal E, Bogaty P, Nasmith J, **Eisenberg MJ**, Boivin JF, Vadeboncœur A, Champlain FD. Information on myocardial ischemia and arrhythmias added by prehospital electrocardiograms. *Prehosp Emerg Care*, 17:187-92,2013

--**Eisenberg MJ**, Grandi SM, Gervais A, Joseph L, O'Loughlin J, Paradis G, Rinfret S, Sarrafzadegan N, Sharma S, Lauzon C, Yadav R, and Pilote L, for the ZESCA Investigators. Bupropion for smoking cessation in hospitalized patients with acute myocardial infarction: A randomized, placebo-controlled trial. *J Am Coll Cardiol*, 61:524-32,2013

--Huynh T, Kouz S, Yan A, Danchin N, Loughlin JO, Schampaert E, Yan R, Rinfret S, Tardif JC, **Eisenberg MJ**, Afilalo M, Chong A, Dery JP, Nguyen M, Lauzon C, Mansour S, Ko DT, Tu JV, Goodman S. Canada Acute Coronary Syndrome Risk Score: A new risk score for early prognostication in acute coronary syndromes. *Am Heart J*, 166:58-63,2013

--\*Franck C, Grandi SM, **Eisenberg MJ**. Agricultural subsidies and the American obesity epidemic. *Am J Prev Med*, 45:327-33,2013

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**3. Academic and community engagement service outside of McGill by individual members of the unit: see above under Community Involvement**

Members of the Division continue to serve in committees, editorial boards and to participate in other high level academic activities at national and international levels. Dr. Rudski serves on the Boards of Directors of the Canadian Society of Echocardiography and the American Society of Echocardiography. He serves as well on several national and international imaging committees and writing groups. Dr. Sebag serves on the Board of Directors of the Canadian Society of Echocardiography as well as on ASE writing groups and committees. Dr. Langleben participated in guidelines development for international societies in pulmonary hypertension. Members have succeeded in the competing renewal of their grants as well as in obtaining additional support from peer-reviewed granting agencies.

Submitted by:

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