I. Highlights of Past Year

The major advance during the last year was the opening of our out-patient center on the 2\textsuperscript{nd} floor of Pavilion E. Thanks to the generous support of our donors, a state-of-the art renovation resulted in a sunny, spacious and quiet environment for patients, and a pleasant and efficient working environment for the staff. The proximity to the cardiac catheterization laboratory has resulted in improved patient care. We continued to innovate in our areas of ultra-specialized care, including geriatric cardiology, heart failure, pulmonary hypertension, echocardiography, interventional cardiology, and others. During this past year, Drs. Richard Sheppard and Caroline Michel performed the initiated ultrafiltration therapy for heart failure, a technique that is of great help in treating uncontrollable heart and kidney failure. The JGH is the first “General” hospital to perform this procedure. Dr. Dominique Joyal, in our cardiac catheterization laboratory was a pioneer in refining the technique of opening chronically occluded coronary arteries. The Center for Pulmonary Vascular Disease provided internationally recognized care and research in the area of pulmonary hypertension. The JGH, under Dr David Langleben, is the only center in the world administering genetically modified endothelial progenitor cells to patient with pulmonary hypertension. Drs. Mark Eisenberg and Igal Sebag obtained prestigious competitive research grant awards for their work. Several of our staff, including Drs. Mark Eisenberg, Lawrence Rudski, and Judith Therrien, acted as mentors for international visiting trainees. Our clinicians continue to be recognized at McGill, nationally and internationally for the caliber of their teaching and their training skills.

II. Evaluation of Past Academic Year

1) Teaching activities

Ann Walling, MD

-POM examiner: 6 hrs
-2\textsuperscript{nd} year medical students. Talk given on chest pain. 3hrs
-McGill Osler fellow: 10 hrs. Mentor for First year medical students until graduation.
-Post doctoral fellows trained: 1 year (Dr Jennifer Nyugen, Dr Annie Tremblay, Dr Vartan Mardigyan, Dr Sophia Shames)
-Total clinical teaching hrs
CTU: 40 hrs (2 hrs/day * 5 days* 4 weeks)
Consults: 40 hrs (2 hrs/day * 5 days * 4 weeks)
Echo lab: Continuous training of fellows (year 1-3) all year round.
Echo lab teaching of cardiology fellow (equivalent of 15 full weeks/yr)
Cardiac Clinic: Supervisor of cardiology residents. 40 hrs
- CME courses: 6 hrs
- Academic half day: McGill cardiology

**Judith Therrien, MD**

- RVH Cardiology Grand Rounds April 2009 (1hr)
- MGH Cardiology Grand Rounds April 2009 (1hr)
- RVH Internal Medicine Core Lecture Rounds April 2009 (1hr)
- MGH Internal Medicine Core Lecture Rounds October 2009 (1hr)
- McGill medical student ECG teaching February 2010 (1hr)
- McGill Cardiology Core teaching February 2010 (1hr)
- McGill Cardiology Core teaching April 2010 (1hr)
- McGill Medical students Osler Fellows (8hrs)
- CCU attending 6 weeks (1hr per day of teaching x 30 days = 30hrs)
- Echo fellows teaching (1 hr per week x 44 weeks = 44 hrs)
- Adult Congenital Heart Disease Fellow teaching (1hr per week x 44 weeks)

**Richard Sheppard, MD**

- Continuous Training of Cardiology Fellows
- Monthly lecture on heart failure to residents rotating on cardiology CTU
- Clinical Lectures at JGH for Cardiology Fellows and Internal Medicine Residents (Myocarditis; Acute Decompensated HF to Internal Medicine Residents; Peripartum cardiomyopathy)
- Total CTU Teaching: CCU 3 weeks and Consults 6 weeks
- Nephrology Rounds on Ultrafiltration for Heart Failure (June 2009)
- Lecture for JGH Echocardiography Symposium May 2009
- JGH Mini-med Lecture Fall 2009
- Workshop Faculty of Medicine (Family Medicine): Heart Failure Workshop November 2009

**Caroline Michel, MD**

- Continuous Training of Cardiology fellows
- Post doctoral echocardiography fellows trained (Dr. Jennifer Nguyen)
- Internal Medicine Residents Trained in the Heart Function Clinic: nil for this year
- Clinical Lectures for Cardiology Fellows (November 2009): The Pathophysiology of Congestive Heart Failure; Heart Failure with Preserved Systolic Function
- Total CTU Teaching: CCU 4 weeks and Consults 4 weeks

**Igal A. Sebag, MD**

- Course co-Director, Second Annual McGill University/Jewish General Hospital Echocardiography Scientific Symposium (in partnership with the McGill Faculty for Continuing Medical Education); Title: Echocardiography to Guide Interventions: From the Cath Lab to the Operating Suite
-Board Examiner and Exam Developer, Cardiology (Adult) Examinations, The Royal College of Physicians and Surgeons of Canada, Ottawa, CA

Teaching lectures at International Scientific Meetings
-2009: Mice echocardiography can change your practice: Practical training in live murine scanning (1 hour 45 minutes); - Invited International Faculty, 2009 20th Annual Scientific Sessions of the American Society of Echocardiography, Washington, DC
-2009: Patient-prosthesis mismatch revisited: A case gone awry – The short, stocky patient with aortic stenosis; Invited Faculty, Fourth Quebec Valvular Heart Diseases Symposium, Quebec City, QC
-2010: Incremental value of trans-thoracic 3-D echocardiography – A critical appraisal; - Invited Faculty, Canadian Society of Echocardiography Annual Meeting, Toronto, ON
-2010: A comprehensive approach to mitral stenosis; Invited Faculty, Canadian Society of Echocardiography Annual Meeting, Toronto, ON

Undergraduate:

- May 2010: Introduction to Internal Medicine - Technology in Medicine - EKG III, McGill Medical School, Tutor. Second-year students (15 students), contact time: 1.5 hours
- Apr 2010: Senior Physician Rounds – Case Presentations, McGill Medical School, Tutor. Second-year students (15 students), contact time: 1.5 hours
- Feb 2010: Senior Physician Rounds – Case Presentations, McGill Medical School, Tutor. Second-year students (10 students), contact time: 1.5 hours
- May 2009: Introduction to Internal Medicine (IIM, ICM-B), McGill Medical School, Tutor. Second-year students (3 students), contact time: 42 hours

Postgraduate Teaching (Cardiology and Internal Medicine)

- McGill Cardiology Academic Teaching, McGill Cardiology Training Program. Prosthetic heart valves: Anatomic structure of the various types, investigation and complications (1 hour)
- Perfecting your skills in Physical Examination- Part III (2 hours). Lecturer. Core Cardiology fellows (16 fellows), contact time: 3 hours
- McGill Cardiology Academic Teaching, McGill Cardiology Training Program, A Primer on Physical Examination Part II: The diastolic murmur. Lecturer. Core Cardiology fellows (16 fellows), contact time: 3 hours
- McGill Cardiology Academic Teaching, McGill Cardiology Training Program. A Primer on Physical Examination Part I: The systolic murmur. Lecturer. Core Cardiology fellows (16 fellows), contact time: 2 hours

Post-doctoral fellows

- 2 Echocardiography Fellows (Dr. Annie Tremblay and Dr. Jennifer Nguyen)

Total clinical teaching hours
- Cardiology Fellows, residents and students: CTU – 4 weeks, Consults – 14 days

Regina Husa

- CCU rounds, internal medicine ECG rounds, Cardiology Fellows simulation course and academic half day, surgical grand rounds, family practice ECG rounds, ECG teaching med II, med I (medical student) physiology small groups and med I simulation course, program director adult cardiology training program

2) Research

Mark J. Eisenberg, MD

Collaborative Projects

-Co-Investigator, "GENESIS PRAXY" (GENdEr and Sex determinants of cardiovascular disease: from bench to beyond PREmature Acute Coronary Syndrome). Principal Investigators: Louise Pilote (McGill University), Igor Karp (Université de Montréal)

-Co-Investigator, “AMI-QUEBEC-2: Knowledge translation to reduce delays to reperfusion therapy in Quebec”. Principal Investigator: Thao Huynh (McGill University)

-Principal Investigator, “The efficacy of popular diets: A systematic review and hierarchical Bayesian meta-analysis” Co-Investigators: Kristian Filion, Jacques Genest, Lawrence Joseph, Louise Pilote (McGill University); Ernesto Schiffrin (Sir Mortimer B Davis Jewish General Hospital); Paul Poirier, Stephane Rinfret (Université Laval)

-Co-Investigator, “A population-based analysis of the effectiveness and adverse effects of medications in patients with atrial fibrillation.” Principal Investigator: Louise Pilote (McGill University)

-Co-Investigator, “Canadian cardiovascular outcomes research team (CCORT) II: Access to quality cardiac care. Team grant in improvement of quality of cardiac care to Canadians” Principal Investigator: Jack Tu (Institute for Clinical Evaluative Sciences)

David Langleben, MD

- Dr. Langleben is collaborating with Dr Stylianos Orfanos of the University of Athens Greece and with Dr John Catravas of the Medical College of Georgia in the USA, on studies of pulmonary vascular surface area in pulmonary hypertension.

Lawrence Rudski, MD

- 2009-2012: Co-Investigator – (Dr. Susan Kahn – PI): The ELOPE Study – Prospective
Igal Sebag, MD

Collaborative Works


Collaborative research within McGill (with the LDI)

- Steroidal hormone programming in the heart
  CIHR-funded collaborative work with the LDI (Dr. Lorraine Chalifour) (Amount: $555,664) Term: October 2008 - September 2013. Role: Co-Investigator. The grant is authored by 2 investigators: Drs. L. Chalifour (PI, McGill) and I. Sebag. This grant was ranked 4 out of >50 in the grants panel. It is a study of the influence of sex hormones on cardiac structure and function and their relationship to protein expression in calcium homeostasis.

- Aortic disease in murine models of bicuspid aortic disease
  This ongoing research encompasses the study of aortic root disease in the presence of the bicuspid aortic valve in the murine model. This project, led by Dr. Therrien (MAUDE Unit), includes Drs. Lorraine Chalifour (LDI), Dr. Elaine Davis (Dept. of Cell Biology and Anatomy), Karima Addetia, a cardiology fellow and Dr. Sebag.

- International collaborative research (with Massachusetts General Hospital, Boston, MA)
  Source: Susan Komen For the Cure Investigator Initiated Grant. Title: Early detection and prediction of chemotherapy-induced cardiotoxicity in breast cancer Patients. (Amount: $600,000) Term: July 2008 - July 2011. Role: Co-Investigator. The grant is authored by 4 investigators: Drs. M. Scherrer-Crosbie (PI, Massachusetts General Hospital), I.A. Sebag (McGill), JC. Plana (MDAnderson) and B. Ky (Upenn).

  Dr. Sebag is the site PI for the conduct of this trial. The team is constituted by a research nurse, four cardiac sonographers, an oncologist (Dr. V. Cohen) and an oncology nurse. As a result, the JGH site is the strongest patient recruitment centre of all four participating institutions (the JGH recruited 31 patients out of a total of 46 patients). Promising interim results, on which Dr. Sebag is the second author, have been accepted for publication.

3) Clinical activities

CCU Admissions – 1064
2 Cardiac CTU Admissions - 1926
Pacemaker Program (that includes visits) - 2131
Cardiology Clinic Visits- 864
Physician Consults - 2121
GFT Physicians Visits- 7201
Diagnostic Cardiac Catheterizations –1193
Coronary Angioplasties - 482
Primary Coronary Stenting - 95
Echocardiograms (including transesophageal and stress echos) - 7138
Electrocardiograms - 19335
Holter monitorings / Ambulatory BP monitorings - 919
Exercise stress tests (including Dobutamine echos) – 993
Cardiac stress nuclear imaging – 893

4) **Academic Staff**

Dr. Sven Wassmann resigned in September 2009.

5) **Consulting activities***

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<th>Public Sector Consulting (# of days)</th>
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<td>Lawrence Rudski</td>
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6) **Honours, Awards and Prizes**

- **Regina Husa**: Pericardiocentesis Simulator Teaching Award (with Lawrence Rudski) - $20,000

- **Dr. L. Rudski**: Fellow of the American Society of Echocardiography, Awarded as a distinguished international member in the field of echocardiography

7) **Other - Publications**

**Mark Eisenberg, MD**


Dominique Joyal, MD


Lawrence Rudski, MD


Igal Sebag, MD

--Do DH, Therrien J, Marelli A, Martucci J, Afilalo J, Sebag IA. Clinical utility of right atrial size by echocardiography in the assessment of right ventricular end-diastolic pressure. Echocardiography. Accepted for publication in “Echocardiography”.

Richard Sheppard, MD


--Richard Sheppard, Paul Mather, Randall C Starling, John Boehmer, Jeffrey Alexis, MD, Vinay Thohan, Daniel Pauly, David Markham, Mark Zuker, Denis M McNamara. “ICDs and Sudden Death in Recent Onset Cardiomyopathy: Results from IMAC” (Poster presentation at Heart Failure Association Meeting September 2009)

Judith Therrien, MD


III. Objectives and Priorities

The priorities for the upcoming year are to expand the volume and variety of our activities. We need to be able to shorten waiting times for consultation requests, and to increase the out-patient clinical activities to accommodate referrals from our affiliated general practitioners. To achieve that end, we intend to recruit more cardiologists and try to provide more time for clinics within our busy schedules. In parallel, we intend to increase our research activities, particularly in the areas of translational research and the study of resource utilization. We will increase the institution’s national and international profile through research presentations, development of novel techniques and participation in the administration of international medical societies.

Respectfully submitted,

David Langleben, MD
Chief, Division of Cardiology