

**Annual Report  
Division of Nephrology  
Department of Medicine-Jewish General Hospital  
Jan 1, 2013 - Dec 31, 2013**

**SUMMARY**

**1. Research & publications**

The Division has continued to expand its research activities with three ongoing local investigator-conceived and implemented studies. This is in addition to the division participating in several multi-center clinical trials as well as the fundamental research taking place in Dr. Lipman's laboratory. Details are presented below in Section II.

**2. Teaching and learning**

The Division of Nephrology at the JGH continues to serve as a training site for the McGill Renal Fellowship program. Fellows rotate through our peritoneal dialysis program and the consulting service. The feedback from the fellows on the JGH experience has been uniformly positive. In addition, McGill internal medicine residents and medical students do rotations on the nephrology consult service. Typically we have 2-4 individuals at any given time on the service.

Three of our nephrologists also act as attending staff on the medical CTUs. In an average year we provide 12 weeks of CTU service.

We also give many lectures throughout the year including Grand Medical Rounds, Core teaching for internal medicine, and core lectures for nephrology fellows. We also participate in teaching at the undergraduate level both through lecture series and through small group teaching at the medical school.

**Teaching activities (outside of CTU & nephrology service).**

Core Medicine lecture series:

- Dr. D. Bercovitch
- Dr. M. Davidman
- Dr. M. Lipman
- Dr. G. Frisch
- Dr. S. Nessim

University teaching:

- Dr. G. Frisch & Dr. S. Nessim:
  - Medicine I Physiology: Small group tutorials - Renal section - 18 hours/year each.
  - Back to Basics Acid-Base - 6 hours/year each.
- Dr. M. Lipman, Dr. Frisch, Dr. Nessim:
  - McGill Renal fellow seminar series.

2 hours/year each.

Dr. M. Davidman:

McGill Anesthesia resident seminar series - Fluids and electrolytes, acid-base and renal disease - 3 hours/year

Undergraduate medical student lectures:

Dr. D. Bercovitch, Hypertension, 6 hours

Dr. M. Davidman, Renal failure, 6 hours

Dr. M. Lipman, Electrolytes, 6 hours.

Dr. G. Frisch, Electrolytes, 6 hours.

Dr. S. Nessim, Hypertension, 6 hours

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

Dr. Lipman co-chaired the most recent Andre Aisenstadt Memorial Clinical Day. This conference brought together an illustrious group of international speakers to honour one of the key members of the JGH community. This year the honoree was Dr. Marie-Laure Brisson. This marks the third time in 6 years that Dr. Lipman has served in this capacity.

Drs. Lipman, Frisch, and Nessim give several CME rounds throughout the course of the year included at the McGill Refresher Course as well as JGH family medicine rounds amongst others.

Dr. Frisch has been actively involved as a fundraiser for Combined Jewish Appeal.

### **4. Partnerships**

Dr. Lipman is actively engaged in research partnerships with Drs. Ernesto Schiffrin and Andrew Karaplis at the Lady Davis Institute for Research, and with Drs. Marcelo Cantarovich and Steve Paraskevas at the MUHC. In addition, Dr. Lipman has a collaborative research project with Dr. Marie Briet from the Hopital Europeen Georges-Pompidou Hospital in Paris, France. Dr. Nessim has research collaborations with Dr. Joanne Bargman, among others, at the University of Toronto.

**5. Milestones:** None to report.

**6. New hires, promotions, and retirements:** None to report.

### **7. Honours, awards, and prizes**

Dr. Lipman received the Award for Medical Excellence.

### **8. Fundraising**

The Division of Nephrology is partnered with the Division of Internal Medicine as the principal fundraisers for the Annual JGH Tennis Classic. Funds raised from this initiative will be dedicated as seed money for the Vascular Health project. The latter is a mid-range

project to develop integrated clinical and research activities for the benefit of patients who suffer from the various complications of vascular disease.

## **SECTION I- DIVISION STATUS UPDATE**

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

The Division of Nephrology continues to provide excellence in patient care and teaching. In addition, although the division is small in terms of the number of members, there is significant activity in fundamental, translational, and clinical research domains.

Our satellite dialysis unit is in its sixth full year of service. The unit is located on the ground floor of Pavilion H. This past year the satellite unit was expanded with the addition of six hemodialysis stations. This expansion will allow us to accommodate up to 18 more hemodialysis patients. We have applied to the Agence de Montreal for operating funds for the additional stations.

We also continue to operate out of our original hemodialysis unit in Pavilion G. This unit is running at almost full capacity using 16 dialysis stations, three sessions per day, 6 days per week. This unit serves all our dialysis patients who are admitted to hospital as well as our more fragile out-patients.

The Kidney Treatment Centre (pre-dialysis clinic) which is located adjacent to the satellite dialysis unit in Pavilion H is in its fourth year of operation. The clinic provides the necessary educational, dietary, and psychological support to patients with progressive kidney failure and to their families. These programs have been shown to slow the decline of renal function in participants. In addition, the team in the pre-dialysis clinic help patients make the often difficult transition to dialysis therapy. This clinic now handles over 200 patients with Stage III and Stage IV CKD.

Our peritoneal dialysis program has continues to be among the largest in Montreal. We currently have over 40 patients in this program. Of our total dialysis population 18% are on peritoneal dialysis as their mode of therapy. This figure is substantially higher than the provincial average of 12%.

We continue to aggressively promote renal transplantation to our patients as the preferred option for the treatment of end-stage renal disease. We emphasize the value of pre-emptive transplantation in order that the patient may avoid dialysis and we encourage donations from both living-related and living-unrelated donors.

### **2. List of academic staff**

Full-time JGH based:

Dr. David Bercovitch	Associate Professor of Medicine	GFT-H
Dr. Michael Davidman	Associate Professor of Medicine	GFT-H
Dr. Gershon Frisch	Assistant Professor of Medicine	GFT-H

Dr. Mark Lipman  
Dr. Sharon Nessim

Associate Professor of Medicine  
Assistant Professor of Medicine

GFT-H  
GFT-H

Associate staff:

Dr. Johana Eid  
Dr. Paul Bourgoïn  
Dr. Natalie Ng Cheung  
Dr. Ralph Bifefsky

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

### Grants

*Peer reviewed:* none

*Industry sponsored:*

#### Dr. Lipman

A Comparison of Effects of Standard Dose vs. Low Dose Advagraf with IL-2 Receptor Antibody Induction, MMF and Steroids With or Without ACEi / ARB - based Antihypertensive Therapy on Renal Allograft Histology, Function, and Immune Response.  
Fujisawa Canada

An observer-blinded, randomized study comparing the safety and immunogenicity of HEPLISAV to licensed vaccine (Energix-B) among adults with chronic kidney disease.  
Dynavax Technologies

*Investigator initiated:*

#### Dr. Lipman and Dr. Nessim

Effect of vitamin D3 supplementation on arterial and bone remodelling in chronic kidney disease patients.

The effect of hemodialysis (and ultrafiltration) on large arteries on hemodialysis (HD) patients.

The Effect of anemia correction by erythropoietin on the macro- and micro-vasculature in patients with moderate chronic kidney disease.

*Research Trainees:*

Dr. Nada Kanj, Medical Biochemistry Resident, McGill University

*Publications:*

Lapi F, Azoulay L, Yin H, Nessim SJ, Suissa, S.  
Concurrent use of diuretics, angiotensin converting enzyme inhibitors, and angiotensin receptor blockers with non-steroidal anti-inflammatory drugs and risk of acute kidney injury: nested case control study. *BMJ* 2013 Jan 8; 346:e8525

Nessim SJ, Bargman JM.  
The peritoneal-renal syndrome. *Nat Rev Nephrol* 2013 May; 9(5): 302-6.

Briet M, Barhoumi T, Mian MO, Sierra C, Boutouyrie P, Davidman M, Bercovitch D, Nessim SJ, Frisch G, Paradis P, Lipman ML, Schiffrin EL.  
Effects of recombinant human erythropoietin on resistance artery endothelial function in stage 4 chronic kidney disease. *J Am Heart Assoc.* 2013 Apr 12;2(2):e000128

Nessim SJ, Bargman JM, Jassal SV, Oliver MJ, Na Y, Perl J.  
The impact of transfer from hemodialysis on peritoneal dialysis technique survival. *Perit Dial Int.* 2013 Dec 1. [Epub ahead of print]

Daheb K, Lecours J\_P, Lipman ML, Hildgen P, Roy JJ.  
Prediction of in vivo atenolol removal by high-permeability hemodialysis based on an in vitro model. *J Pharm Pharm Sci* 2013; 16(5): 657-664.

Daheb K, Lipman ML, Hildgen P, Roy JJ.  
Artificial neural network modeling for drug dialyzability prediction. *J Pharm Pharm Sci* 2013; 16(5): 665-675.

Respectfully submitted,



Mark L. Lipman, M.D.  
Chief, Division of Nephrology, JGH