

**Annual Report  
Division of Nephrology  
Department of Medicine - Jewish General Hospital  
January 1 - December 31, 2020**

## **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, hemodialysis unit, 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 8 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. R. Sabbagh  
Dr. M. Lipman  
Dr. S. Nessim

##### **University teaching:**

##### **Dr. S. Nessim:**

Classroom lecture on divalent cations (1 hour)  
Renal physiology small groups (2 hour)  
TCP lecture on acid-base physiology (1 hrs)  
Lecture for GIM fellows on "CKD management" (1 hrs)  
Lecture for renal fellows on "Mechanical and infectious complications of PD" (2hrs)

**Dr. M. Lipman, Dr. G. Frisch, & Dr. S. Nessim:**  
McGill Renal fellow seminar series, 1-2 hours/year each

**Dr. R. Sabbagh:**  
Nephrology Academic Half Day: “Anemia of CKD”, “Nephrolithiasis”

**Dr. G. Frisch:** 50 hrs. TCP courses

**Undergraduate medical student lectures:**

Dr. R. Sabbagh, Nephrolithiasis, 2 hours  
Dr. D. Blum, Renal failure, 2 hours  
Dr. M. Lipman, Electrolytes, 8 hours  
Dr. G. Frisch, Electrolytes, 4 hours  
Dr. S. Nessim, Hypertension, 6 hours

**3. Involvement in the community**

Drs. Lipman, Frisch, Sabbagh 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.

**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 Cantarovitch and Steve Paraskevas at the MUHC. Dr. Nessim has research collaborations with Dr. Joanne Bergman, among others, at the University of Toronto.

**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 modest in terms of the number of members, there is significant activity in fundamental, translational, and clinical research domains.

Our consult service is extremely active and follows between 20 and 30 admitted patients daily.

The new hemodialysis unit is operating since September 2016 and includes 40 stations serving over 260 patients.

Acquired funding from the Ministry of Health for 5 additional hemodialysis stations which will be installed in the coming months.

Our peritoneal dialysis program has continued to be among the busiest in Montreal. We currently have close to 50 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%.

The Kidney Treatment Centre (pre-dialysis clinic) which is located adjacent to the satellite dialysis unit in Pavilion D is in its fifth 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 helps patients make the often difficult transition to dialysis therapy. This clinic now handles over 250 patients with Stage III and Stage IV CKD.

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.

We continue to develop the Diagnostic and Therapeutic Clinic conceived and designed to provide timely outpatient services to ambulatory patients who otherwise would be sent to the Emergency Department to expedite their care. This clinic is now open 3 days per week and the goal is to evolve towards a 5 days per week clinic.

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

### **Full-time JGH based:**

Dr. Daniel Blum	Associate Professor of Medicine	GFT-H
Dr. Gershon Frisch	Assistant Professor of Medicine	GFT-H
Dr. Mark Lipman	Associate Professor of Medicine	GFT-H
Dr. Sharon Nessim	Assistant Professor of Medicine	GFT-H
Dr. Ramsey Sabbagh	Assistant Professor of Medicine	GFT-H

### **Associate staff:**

Dr. Johanna Eid  
Dr. Laura Piloizzi-Edmonds, MD  
Dr. Natalie Ng Cheung

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

### **1. Grants**

#### Dr. Lipman

Preventing polycystic kidney disease.  
Kidney Foundation of Canada  
Co-PI with Dr. Andrew Karaplis 2019-2021 \$100,000.

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

#### Dr. Nessim

Manuscript reviews for Peritoneal Dialysis International, American Journal of Kidney Diseases.

### Dr. Blum

Co-Investigator on CIHR-funded trial “Pragmatic randomized trial of high or standard phosphate targets in end-stage kidney disease” – PHOSPHATE: \$1,526,175, 2019-2024. This is a multinational multicenter RCT in HD recipients and I will to be the local qualified investigator at the JGH.

Local qualified investigator at the JGH for the CIHR-funded trial Strategies for the management of Atrial Fibrillation in patients receiving Hemodialysis (SAFE-HD). This is a Canadian multicenter feasibility RCT. I have signed the trials agreement with the Sponsor.

Co-investigator on the CIHR-funded Quebec Renal Network (QRN) COVID-19 Study.

## **2. Publications**

### **Dr. Sharon Nessim**

--Radi SA, Nessim SJ. The Case | Severe hypophosphatemia in a patient with lymphoma. Kidney Int. 2020 Jul;98(1):243-244.

--Perl J, Fuller DS, Bieber BA, Boudville N, Kanjanabuch T, Ito Y, Nessim SJ, Piraino BM, Pisoni RL, Robinson BM, Schaubel DE, Schreiber MJ, Teitelbaum I, Woodrow G, Zhao J, Johnson DW. Peritoneal Dialysis-Related Infection Rates and Outcomes: Results from the Peritoneal Dialysis Outcomes and Practice Patterns Study (PDOPPS). Am J Kidney Dis. 2020 Jul;76(1):42-53.

### **Dr. Daniel Blum**

--Samuel Silver, William Beaubien-Souligny, Prakesh Shah, Shai Harel, **Daniel Blum**, Teruko Kishibe, Alejandro Meraz-Munoz, Ron Wald, Ziv Harel. The Prevalence of Acute Kidney Injury in Patients Hospitalized With COVID-19 Infection: A Systematic Review and Meta-analysis. Kidney Medicine, published online December 8, 2020.

--**Daniel Blum**, Alison Thomas, Claire Harris, Jay Hingwala, William Beaubien-Souligny, Samuel Silver. An Environmental Scan of Canadian Quality Metrics for Patients on In-Center Hemodialysis. Can J Kid Health and Disease 7:1-10, December 8, 2020.

--**Daniel Blum**, Alejandro Meraz-Munoz and Ziv Harel. Kidney injury associated with COVID-19. Canadian Medical Association Journal 192 (37): E1065. September 14, 2020

--Daniel Li, Ron Wald, **Daniel Blum**, Eric McArthur, Matthew T. James, Karen E. A. Burns, Jan O. Friedrich, Neill K. J. Adhikari, Danielle M. Nash, Gerald Lebovic, Andrea K. Harvey, Stephanie N. Dixon, Samuel A. Silver, Sean M. Bagshaw, William Beaubien-Souligny. Predicting mortality among critically ill patients with acute kidney injury treated with renal replacement therapy: development and validation of new prediction models. Journal of Critical Care 56: 113-119, April 2020.

--Alison Thomas, Samuel A Silver, Jeffrey Perl, Megan Freeman, Justin J Slater, Danielle M Nash, Marlee Vinegar, Eric McArthur, Amit X Garg, Ziv Harel, Rahul Chanchlani, Michael Zappitelli, Eduard Ilescu, Abhijat Kitchlu, **Daniel Blum**, William Beaubien-Souligny, Ron Wald. The Frequency of Routine Blood Sampling and Patient Outcomes Among Maintenance Hemodialysis Recipients. American Journal of Kidney Diseases 75(4): 471-479, April 2020.

--Ruth Sapir-Pichhadze, Xun Zhang, Abdelhakim Ferradji, Abeer Madbouly, Kathryn J Tinckam, Howard M Gebel, **Daniel Blum**, Marilyn Marrari, S Joseph Kim, Stephanie Fingerson, Pradeep Bashyal, Héloïse Cardinal, Bethany J Foster. Epitopes as characterized by antibody-verified eplet mismatches determine risk of kidney transplant loss. Kidney International 97(4): 778-785, April 2020.

--**Daniel Blum**, William Beaubien-Souligny, Marisa Battistella, Eric Tseng, Ziv Harel, Jaspreet Nijjar, Elena Nazvitch, Samuel Silver, Ron Wald. Quality Improvement Program Improves Time in Therapeutic Range for Hemodialysis Recipients Taking Warfarin. Kidney International Reports 5: 159-164, February 2020.

### **Dr. Mark Lipman**

--Zhang, JC, El-Majzoub S, Li M, Tibyan A, Wu J, **Lipman ML**, Moussaoui G, Looper KJ, Novak M, Rej S, Mucsi I. Could symptom burden predict subsequent healthcare use in patients with end stage kidney disease on hemodialysis care? A prospective preliminary study. Renal Failure 2020: 42: 294-301.

### **3. Service outside McGill**

We are participating in the Dialysis Outcomes and Practice Patterns Study Program (DOPPS) with Dr. Nessim and our point person. This is a multi-national effort to monitor and record dialysis practices around the world. We provide all relevant statistics from our program which are incorporated into the overall study. Here too, we can compare how our dialysis program performs with respect to those in other regions of the world.

We participate in the Canadian Organ Replacement Register (CORR). This effort is sponsored by the Canadian Institute for Health Information and is designed to monitor trends and practices in end-stage renal disease populations. It includes both hemodialysis and transplantation practices. We provide our annual statistics which are then included with other centers across the country. This allows us to compare ourselves to other programs with respect to many clinically relevant aspects of patient management.

Respectfully submitted,



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