I HIGHLIGHTS

The Division of Endocrinology and Metabolism has continued its pursuit of excellence in patient care, research and training. The Division has continued to play an active role in joint activities with the other McGill Hospitals counterparts, such as Med-I Endocrine Physiology Course and Calcium Homeostasis, as well as hosting the Lipid-, Thyroid McGill Lectureships, and the newly established McGill/JGH Lecture on Metabolism, supported by a grant from GlaxoSmithKline. Our members continue to teach in McGill Graduate and Undergraduate courses such as Physiology (Tamilia), Advanced Endocrinology (Tamilia) and Neuroendocrinology (Tamilia). With a grant from GlaxoSmithKline, our Division hosted another McGill Lecture (details under Teaching Activities). Members of the Division continue to serve in committees of granting agencies, editorial boards and to participate in other high level academic activities at national and international levels. Members have succeeded in the competing renewal of their grants as well as in obtaining additional support from peer-reviewed granting agencies. Dr. Michael Tamilia has continued to receive the recognition of our young colleagues and students as a truly exceptional teacher. Drs. Tina Kader and Morris Schweitzer continue to be remarkable active in CME activities primarily addressed to general practitioners, internists and specialists. Thus, the JGH Endocrine Division has reached a high profile at the University, National and International levels. In spite of the limited resources and the absence of physical plant, the Metabolic Day Centre under the direction of Dr. Alicia Schiffrin has continued the effort to improve the care of patients with diabetes and bring us to the standards. Dr. Amnon Kahn has successfully reached donors to support our effort in providing state-of-the art treatment and education of patients with Diabetes to palliate the limited resources available for this major current medical problem. He has made arrangements with Montreal Children’s Hospital to again access for our patients to insulin pump usage. Overall, the Division of Endocrinology is one of the most, if not the most, active in contributing its staff to teaching (ICMA, ICMB, Physiology) and CTU coverage within the Department of Medicine at the Jewish General Hospital. Our newest recruits John Brent Richards and Agnieszka Majdan (Aug. 2009) will continue to perform as superb academic physicians; Dr. Brent Richards has in short order achieved already much acclaim in his young career.

II EVALUATION OF THE PAST ACADEMIC YEAR

1. Teaching activities

Medical Students

Metabolic Bone Disease in Unit 5, Med I; preparation of lecture notes, case study, and quiz for students and organizing small group tutors.
One 1-hour lecture on metabolic bone disorders and two 1.5-hour small group sessions
Residents
(i) Journal Club
(ii) Core lectures in Endocrinology
(iii) Simulated oral examination in Internal Medicine

Postgraduate Students
Advances in Human Genetics - A postgraduate course offered by the Department of Human Genetics. Three 1.5-hr lectures on the genetics of metabolic bone diseases.

Endocrine Residents (Fellows) and Medical Residents doing elective rotations participate in all our clinical activities. They are under the direct supervision of the Attending on service. Some clinics are compulsory: Gestational Diabetes, Thyroid, Lipid and Osteoporosis Clinic. Our Division has become very popular for elective rotations among residents and students. All trainees rotating through the Division must attend Endocrine Grand Rounds (every Thursday from 11:30-12:30). This past year we have had an unusually high number of Endocrine Residents, and the same is expected for the next academic year. In addition to McGill Medical Students doing elective rotations, we have received students from UK, Australia, Finland, and Brazil during the last year. Notably, the majority of McGill candidates to McGill Endocrine Residents have come from our Internal Medicine training program over the last several years, a reflection of the positive influence of our staff on the Residents. The McGill Endocrine Teaching Program at large was highly rated by the trainees with our Division receiving the highest ratings in a large number of items, notably conferences, bedside and outpatient teaching, integration with basic sciences. Our weakest mark is on premises and facilities for Endocrine Residents.

In addition to these tutorial activities, our Division offers a yearly cycle of lectures on essential endocrinology for residents and non-endocrinologists in general. Our Division also actively participates in the undergraduate teaching of Endocrine Physiology and Calcium Homeostasis (Med-I Physiology) with 6 of our members being small group tutors this year (Assimakopoulos, Beitel, Kader, Karaplis, Schiffrin, and Trifiro). All GFTs have also been very active on CME accredited activities. Dr. Tina Kader has been traditionally active in CME to various groups of physicians, paramedical personnel, as well as in giving talks to the community at large on prevention of obesity and diabetes. Ms. Joyce Arsenault (Nurse, Certified Diabetes Educator), Ms. Maria Di Narzo (nurse, Certified, Diabetes Educator) and Ms. Sondra Sherman (Dietitian) have worked together with Dr. Tina Kader in this latter endeavour.

The McGill Hospital Endocrine Division hold quarterly combined Endo Rounds, one of which is hosted by our Division. Our Division has for years hosted two major McGill Endocrine lectures, the McGill/Merck-Schering Lipid Lecture and the McGill/Abbott Thyroid Lecture. Invited speakers for the period covered by this report were, respectively, David J. Mangelsdorf, Ph.D., Professor of Pharmacology and Biochemistry, University of Texas Southwestern Medical Center, Rotterdam, The Netherlands. Nearly 5 years ago, we instituted a third Lectureship, the McGill Lecture on Metabolism, with a restricted grant from GlaxoSmithKline. The Fourth McGill/JGH Lecture on Metabolism
was given by Michael W. Schwartz, MD, Professor of Medicine, Division of Metabolism, Endocrinology and Nutrition, University of Washington and Harborview Medical Center, Seattle Washington.

In addition to the teaching activities described under Teaching Activities, above, Endocrine Grand Rounds, under the direction of Dr. Mark Trifiro, have continued to be a great success because of the timeliness of the subjects, the sensible balance of basic and clinical science and the quality of the invited speakers. Endo Grand Rounds are given weekly from September to June.

2. Research Activities

Research activities continue in the rise (see individual reports for details).

Karaplis, Andrew C.

2005-2010 Canadian Institutes of Health Research (Total: $606,385) "PTHrP and osteoblast biology: Relevance to osteoporosis".

2005-2008 Canadian Space Agency/ Canadian Institutes of Health Research (Total: $332,700) “PTHrP expression and osteoblast apoptosis in microgravity-induced osteoporosis”.

2006-2009 Canadian Institutes of Health Research (Total: $336,000) “Molecular genetics of calcitropic hormones”

Trifiro, Mark

2004-2009 CIHR GR-13297: “CIHR Group in Medical Genetics”; group grant, 19,740/y (Co-applicant)

2006-2009 NCIC, National Cancer Institute of Canada, “Mouse model for prostate cancer”, $140,000/yr

2008-2009 Prostate Cancer Research Foundation of Canada, operating grant $60,000. “Isolation and characterization of active AR-transcriptional complexes- New therapeutic targets”

2009-2012 Fonds Québécois de la Recherche sur la Nature et les Technologies, Operating $48,760/yr (Co-PI), «Biosenseurs génétiquement modifiés à haute sélectivité et sensibilité »

2009-2011 Animas Corporation $50,000/yr Canadian Artificial Pancreas Project

Schweitzer, Morris

Richards, John Brent

2008 Canadian Institutes of Health Research, Clinical Investigator Award, Institute of Genetics. Approx. $140,000/yr for up to 4 yrs for salary support

3. Clinical Activities

Endocrinology is largely an outpatient specialty. Including the Gestational Diabetes Clinic and Bone and Osteoporosis Clinics that do not function in our premises, the number of visits per year exceeded the 20,000. Outpatient clinics are run around the week by GFTs. Non-GFTs run clinics on Monday and Thursday mornings. The increase in the number of patients is still too long. It has been due to space and support personnel constraints that we have not been able to recruit more new members. Constraints also result from the RAMQ that is trying to restrict the number of endocrinologists. This problem has been solved at the expense of physician scientists increasing their clinical hours, reducing their research time. We also have established a triage system to see first those patients in most urgent need (e.g. decompensated diabetics, thyrotoxic patients). To enhance the use of the space, examining space has been arranged in three of the largest physician offices. We have stretched to the limits the secretarial time available, which has not increased in over 6 years in spite the doubling of the numbers of patient visits. Although all staff physicians see patients spanning the whole spectrum of endocrine and metabolic diseases, some clinics are focused on a particular condition, as shown in the table below.

In-patient activities are centered on the Endocrine Consulting Service, attended by our staff physicians in a 2-week rotating schedule through the year. The endocrine service is largely covered by 7 of the 8 GFTs, which burden’s them – including the physician scientists- with a minimum of 6 weeks per year. Volume of consults is approximately 1200/year. In addition, our staff is actively involved in CTU rotations. The Division does not have assigned beds and endocrine patients are admitted to general wards.

The Survival Skills Program of self-management education for patients with diabetes has continued to function regularly with private donations. No additional resources have been provided this year for the essential program.

Outpatient Clinics:

Monday AM
Diabetic Clinic (Kader)
General Endocrinology (Schweitzer, Karaplis, Trifiro, Kahn)
Monday PM
General Endocrinology (Karaplis, Assimakopoulos, Schweitzer)
Tuesday AM
Thyroid (Tamilia)
General Endocrinology (Trifiro, Assimakopoulos, Schiffrin)
Tuesday PM
General Endocrinology (Assimakopoulos, Schiffrin, Christopoulos, Richards)

Wednesday AM
General Endocrinology (Kader, Trifiro)
Gestational Diabetes (Kader)
Osteoporosis I (Trifiro)
Wednesday PM
General Endocrinology (Schiffrin, Christopoulos, Richards, Majdan)
Osteoporosis II (Karaplis)

Thursday AM
General Endocrinology (Clamen, Kahn, Rizzo, Jukier)
Thursday PM
Lipid Clinic (Schweitzer)
General Endocrinology (Assimakopoulos, Kader)

Friday AM
General Endocrinology (Schweitzer, Trifiro, Christopoulos, Majdan)

4. **Academic Staff**

- Dr. Lillian Jukier has become an affiliated endocrinologist in our division and will participate in Consultation Service and specialty clinics.
- Dr. Stavroula Christopoulos is back maternity leave as of January 2009.
- Dr. Agnieszka Majdan has been approved at the hospital and university levels and she will be joining us effective August 2009.

5. **Consulting Activities:** None reported

6. **Honours, Awards, Prizes:** None reported

7. **Publications**

**Karaplis, Andrew C.**

Refereed papers


--Bai X, Dinghong Q, Miao D, Goltzman D, Karaplis AC. Klotho ablation converts the biochemical and skeletal alterations in FGF23 (R176Q) transgenic mice to a Klotho-deficient phenotype. Am J Physiol Endocrinol Metab, 296:E79-88, 2009

**Trifiro, Mark and Beitel, Lenore K.**


**Richards, John Brent**


Abstracts
Trifiro, Mark and Beitel, Lenore

--Girardin C, Deal C, Lemyre E, Beitel LK, Trifiro M, Van Vliet G. Molecular investigation of complete androgen insensitivity associated with a 47, XXY karyotype. 47th Annual Meeting of the European Society for Paediatric Endocrinology (ESPE), Sept.20-23, Instanbul, Turkey 2008.


--Gottlieb B, Beitel LK, Trifiro M. A new cancer hypothesis based on selection being the driving force in cancer ontogeny might explain the efficacy of both traditional and alternative cancer treatments. 1st World Congress on Cancer (WCC-2009), Kottayam, Kerala, India, Jan.12-14, 2009, Abstr.#IL 81.

Richards, John Brent


Richards JB. Insights into Aging-Related disease from Genome-wide association’s studies. Canadian Institutes of Health Research Institutes of Aging and Genetics New Investigator Meeting. Oral Presentation, Toronto, November 2008


III OBJECTIVES AND PRIORITIES

The Division of Endocrinology continues to place a high priority on patient care and in doing so seeks new clinical recruits either as full-time or as part time members. Efforts are being made to add another diabetic nurse to help with the ever-increasing referral of diabetic patients. Plans have been put forth to acquire new physical space that will help with delivering the excellent care that has been provided to-date with very limited space.

Other priorities include the expansion of both clinical research and basic research personnel that will start in the next few years. This will be a very arduous task given the many roadblocks at the university, government and hospital level; however the Division remains confident that when the right recruits come along, it will find the mechanisms to have them join its staff.

Respectfully submitted,

Marc Trifiro, MD
Chief, Division of Endocrinology