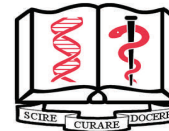


VITAL SIGNS



THE NEWSLETTER OF MCGILL UNIVERSITY DEPARTMENT OF MEDICINE

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Wishing you all a very Happy Holiday Season!



WORD FROM THE CHAIR

*Dr. David Eidelman, MD
Chair, Department of Medicine*



THE BEST OF TIMES, THE WORST OF TIMES

"It was the best of times, it was the worst of times". The ironic opening line of Dickens' novel of the French Revolution, *A Tale of Two Cities*, could serve as an apt description of our current situation in the Department of Medicine.

It is the best of times. We've just been ranked as one of the best universities in the world and we continue to find ourselves at the top of the Maclean's list of Canadian universities. Even if a bit overstated, we can't help but rejoice that we are consistently rated as one of the best universities despite very limited resources. More practically, we were recently told that the Quebec government has finally given formal approval to the functional and technical plan for the MUHC Redevelopment Project. Two consortia have already been qualified to bid on the contract for a public-private partnership to build the new installations at the Glen site. Moreover, the arrival of Dr. Papadopoulos as Director of the MUHC Research Institute is starting to bear fruit with increased involvement of individual researchers in the administration of the RI, a change that helps assure its future success. At

UPCOMING VISITING SPEAKERS TO GRAND ROUNDS

RVH/MGH Tuesdays at 12:00 PM

January 8 -- Dr. Charlie Chan
University of Toronto
Current concept of Idiopathic Pulmonary Fibrosis: the bench-to-clinic roller coaster ride

March 11 -- Dr. Doug Altman
University of Oxford
How much confidence can we have in published medical research?

JGH Mondays at 12:30 PM

December 17 -- Dr. Theodore Warkentin
McMaster University
Heparin-Induced Thrombocytopenia: A Canadian Perspective

the JGH, Dr. Hartley Stern has been appointed as the incoming Director General. Dr. Stern, a surgeon who served as Vice-President of the Ottawa Hospital Regional Cancer Centre, will take on his new role in the spring of 2008. We hope this change will help the Jewish continue its development as a leader among Quebec's health care institutions. Finally, McGill has just launched

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CANADA'S PREMIER YOUNG RESEARCHER



Dr. Michael B. Reed, Assistant Professor in the Division of Infectious Diseases, has been recognized by the CIHR with the **Peter Lougheed/CIHR New Investigator Award – Canada's Premier Young Researcher**, for his important contribution to the study of tuberculosis. *(More on page 6).*

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its comprehensive campaign, which will help us build on the excellence and international reputation of our university.

It is the worst of times. While the announcement of progress in the MUHC development plan is welcome, we still have to put up with outdated facilities for many more years. Similarly, while the arrival of a new Director General at the JGH is encouraging, up to now the construction of new buildings has taken priority over the support and development of academic faculty there. In particular, the Lady Davis Institute is in need of attention. Let's hope that the incoming JGH administration will prioritize the renewal of this important research centre. Our greatest challenges relate as always, to our efforts to renew the department's faculty. We have become used to the PREM, which frequently hinders us from developing our clinical services in a way that ensures both clinical and academic excellence. Unfortunately, we now have to deal with limits on University hiring. Eight years and almost 800 professors later, the University has decided that it has grown enough. From now on, the Provost will require proof of a departure before allocating a recruitment number; a "jumelage" system almost identical to that we have enjoyed with the PREM. Moreover, it turns out that before the freeze was announced, the Faculty of Medicine had already committed itself to hire professors for the Life Sciences Complex located adjacent to the McIntyre building. In effect, this means that departures from the Department of Medicine are not guaranteed to be replaced; the Faculty plans to use positions freed up by departures to meet its pre-existing hiring obligations.

No doubt, the coming year will bring both opportunities and problems, like all years do. Happily, we are not living during the Terror and, as far as we know, there is no Robespierre in the MSSS. Indeed, a glance at this issue of *Vital Signs* shows just how much success we have managed despite our constraints. We will continue to capitalize on the opportunities that present themselves and will look for ways to minimize the negative impact of limits imposed by the government and the University. We will push forward, ensuring that the Department of Medicine maintains its role as leader of the Faculty of Medicine and McGill University.



CLINICAL SCHOLARS PROGRAM: A GIM initiative

*Dr. Vicky Tagalakis
GIM Program Director*

In June 2006 the Division of General Internal Medicine (GIM) launched the Clinical Scholars Program (CSP), a two-year program that provides formal training and mentorship to trainees in the GIM postgraduate fellowship program who wish to pursue a clinician scientist career or to acquire knowledge and skills in health care research.

Among the clinical research tracks available within the CPS are Women's Health, Vascular Medicine, Thrombosis Medicine, Medical Education, and Health Services Research. By providing a formal and structured curriculum consisting of coursework in biostatistics, epidemiology and related subjects, a longitudinal seminar series, and a mentored clinical research project, the CSP promises to train and mentor future leaders in health care research. Thus far, trainees have participated in a wide range of seminars related to clinical research, covering topics such as protocol writing, exploring health advocacy research opportunities, understanding the RUIS and making career choices. Moreover, monthly meetings with members of the GIM division active in healthcare research have provided exceptional mentorship opportunities.

The need for a research training program within GIM was first recognized by Dr. Louise Pilote, who proposed the CSP as a response to the urgent need for the advancement of health services research with the creation of the McGill RUIS. In the restructuring of health care in Quebec, academic institutions have been asked to organize and coordinate tertiary and quaternary health care services, increase health research and education, and evaluate health technologies in order to efficiently use the existing resources. While this new organizational structure has created an opportunity to improve delivery of health care throughout the province, it has also underscored the lack of health care professionals equipped to address the current challenges. There is an urgent need for clinician scientists with their broad knowledge base, clinical experience, and research skills to lead

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translational research within the McGill RUIS. For its part, the McGill University GIM program has long recognized that its trainees are well positioned to become clinical research leaders given their extensive knowledge base and insight into health care issues. The Royal College of Physicians and Surgeons of Canada report, *Working Group in General Internal Medicine*, identified internists as specialists uniquely equipped to make a significant impact in health services research. The program has always encouraged its trainees to devote the eleven flexible periods of their fellowship toward formal training in critical thinking and quantitative and qualitative research methods, through coursework in the Departments of Epidemiology, Biostatistics and Occupational Health, Medical Education, and Economics and completion of a scholarly project. The creation of the CSP continues the tradition of clinical research training in GIM but in addition, provides a formal and structured curriculum and exposes its residents to clinician scientist role models and mentors.

The first year of the CSP has been a success largely due to highly motivated trainees and committed research supervisors and mentors. In 2008, six new GIM trainees will enter the program. This critical mass sets the stage for the establishment of formal links between the CSP and other departments, the expansion of the seminar series and the development of special interest workshops.

For more information, please visit: www.mcgill.ca/internalmed/teachingactivities/clinicalscholarsprogram/



THE HORMONES AND CANCER RESEARCH UNIT

*Dr. Jean-Jacques Lebrun
Associate Professor and
Director, HCRU*

The Hormones and Cancer Research Unit (HCRU), within the MUHC Division of Endocrinology and Metabolism, is located at the Royal Victoria Hospital. With five principal investigators, three associate members and their teams, the Unit is an important research group in the Department of Medicine. Members of the Unit are the recipients of numerous awards

and play key roles in Canadian and International research organizations.

Our work is aimed at understanding the molecular mechanisms by which cytokines, hormones and growth factors transduce their signals in living cells through the assembly of signaling networks. Defining these signaling complexes is critical as their alteration is known to be the underlying cause of a wide variety of illnesses ranging from cancer to metabolic, endocrine, cardiovascular, neuronal and autoimmune disorders. The main research themes of the HCRU focus on the characterization of the intracellular signaling components within different cellular pathways and on relating these data to define inter-signaling crosstalk interactions and implications in human diseases, with a particular emphasis on cancer.

Dr. Suhad Ali studies the role of the hormone prolactin in breast cancer metastasis. Dr. Ali's research has recently led to a significant breakthrough in the field highlighting a novel role for prolactin as a suppressor of breast cancer metastasis. This seminal work represents substantial advancement of our understanding of the role of prolactin hormone in breast carcinogenesis.

Dr. Stéphane Laporte's work focuses on the mechanisms that control hormonal responses mediated by G protein-coupled receptors. His lab uses cellular imaging approaches such as confocal microscopy to study in real time the dynamics of protein and signaling complexes affecting receptor desensitization and internalization.

Dr. Jean-Jacques Lebrun's research group focuses on the molecular mechanisms of tumor formation and progression. Tumor metastasis is critical for cancer patient survival as it represents the last stage in tumorigenesis. Dr. Lebrun's goal is to develop drugs with high efficacy and low toxicity that effectively reduce tumor spread.

Dr. Christian Rocheleau's research program utilizes the nematode *C. elegans* as a model system to study protein trafficking, ubiquitination and chromatin remodeling. With a fully sequenced genome, powerful forward and reverse genetics, an invariant and fully mapped cell lineage and simple anatomy, *C. elegans* provides an excellent system for gene discovery and functional analysis.

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Dr. Bernard Turcotte studies transcriptional regulatory networks in *Saccharomyces cerevisiae* using genome-wide DNA microarrays analysis.

The Hormones and Cancer Research unit also includes three associate members.

Dr. Geoffrey Hendy's interest is in understanding the role of the tumor suppressor menin in multiple endocrine neoplasia and the function of the parathyroid calcium-sensing receptor in patients with abnormal calcium levels.

Dr. Serge Lemay studies the role of the tyrosine kinase receptor EphA2, which he has found to be an injury-induced receptor that may play a critical role in renal tubular repair following ischemic injury.

Dr. Hans Zingg's research focuses on the oxytocin/vasopressin receptor system. Using DNA microarray technology, his laboratory is also defining gene expression profiles at a genome-wide level in different tissues in response to steroid hormones and during pregnancy.

Our long-term objectives are to identify pathway specific biomarkers and to develop lead target specific compounds to prevent tumor formation and cancer spreading as well as to treat hormonal and cardiovascular disorders. We hope to apply our findings to the development of novel therapies, which can be tested in related preclinical model systems.

Our group enjoys financial support from the Canada Research Chair Program, the National Cancer Institute of Canada, the Canadian Institutes of Health Research and the *Fonds de la recherche en santé du Québec*. More details on the research unit and investigators can be found on the Hormones and Cancer Research Unit web site www.hcru.mcgill.ca.

NEW CARDIOVASCULAR RESEARCH LABORATORIES AT THE MUHC

Dr. Jacques Genest

The Cardiovascular Research Laboratories underwent extensive renovations, thanks to the support of the Department of Medicine and the



RVH Foundation. The new laboratories, located on the 7th floor of the Hersey Pavilion of the RVH, regroup Drs. Engert, Kiss, Marcil and Genest along with approximately 20 graduate students, post-doctoral fellows (clinical and basic), research assistants and associates. The architects have adopted an open laboratory concept with shares resources; the new facilities comprise approximately 1,800 sq feet of renovated space, within a 4,000 sq feet enclosed laboratory area. The major focus of research is cardiovascular genetics and the molecular cellular physiology of cholesterol transport. A special clinical material processing



laboratory is now available for clinical research projects requiring DNA isolation and banking, plasma or serum storage and human cell culture facilities. Collaborations with the cardiac catheterization laboratory, the Congenital Heart Disease Unit (MAUDE), the heart failure clinic and the preventive/lipid clinics have been initiated. A new bio-informatics laboratory will also allow in silico research from the large amount of data collected in genetics.

MUHC CRITICAL CARE REORGANIZATION

Following an external review, Critical Care at the MUHC has undergone administrative reorganization. **Dr. Peter Goldberg** has been named Director of Critical Care, adult sites, effective November 1st, 2007. Dr. Goldberg will chair a Critical Care Services Steering Committee that will address issues facing the Intensive Care Units and link more efficiently with the services utilizing these critical care beds. **Dr. Ash Gursahaney** has been named Director of Clinical Services, adult sites. We congratulate Peter and Ash on their new positions and hope that these changes will help lead to better care, teaching and research in critical care.

RECRUITMENTS

We are pleased to welcome **Dr. Thomas Jagoe** as Assistant Professor in the Departments of Oncology and Medicine and as the Director of the [Cancer Nutrition and Rehabilitation Program](#). Dr. Jagoe is a pulmonologist who has engaged in both clinical and laboratory research into the problem of muscle wasting in the cancer context. He will be based at the JGH.

We are happy to welcome **Dr. Jerry Zaharatos** as Assistant Professor to the Division of Infectious Diseases of the SMBD-JGH. Dr. Zaharatos is a Montrealer and a graduate of McGill. He is certified in Internal Medicine, Infectious Diseases and Medical Microbiology. He underwent post-doctoral training in HIV research at the Aaron Diamond AIDS Research Center in New York. His return to the JGH will allow him to meld his basic science HIV expertise with his clinical proficiency in order to improve patient care and promote research into HIV and related viruses.

It is with great pleasure that we announce the arrival of **Dr. Stéphanie Lehoux**, a newly awarded Tier 2 CRC recipient, as an Assistant Professor in the Division of Cardiology of our Department. Dr. Lehoux obtained her PhD in Pharmacology at the University of Sherbrooke. She pursued postdoctoral training in intracellular signaling in Rochester, NY and in vascular research at the INSERM unit of Lariboisière Hospital where she worked for the past 6 years. Dr. Lehoux's arrival enhances the vascular biology research team at the Lady Davis Institute, where she is based, and strengthens cardiovascular research within McGill University.

We are pleased to announce that **Dr. Stella Daskalopoulou** has joined the Division of General Internal Medicine. Dr. Daskalopoulou did her medical training at the University of Athens Medical School and went on to complete her MSc in vascular technology and medicine at the Imperial College of London, UK, and her PhD in vascular biology at the University of Athens. She recently completed a post-doctoral fellowship in clinical epidemiology at McGill. She will be based at the MGH.

FULL PROFESSOR PROMOTIONS

Congratulations to the members of our Department who were recently promoted to Full Professor.

Ann Clarke (Allergy and Clinical Immunology) - Dr. Clarke studies epidemiologic aspects of systemic inflammatory disorders and allergic diseases. More recently Dr. Clarke has extended her work to examine the societal impact of peanut allergy in children and has been coordinating an international effort to investigate the risk of malignancy in systemic lupus erythematosus patients.

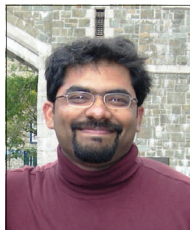
Mark Goldberg (Clinical Epidemiology) - Dr. Goldberg's research has covered many different aspects of clinical and environmental epidemiological studies, with current work focused on clinical epidemiological issues in cancer care.

Basil Petrof (Respiratory Medicine) - Dr. Petrof studies disorders of the respiratory muscles including the application of gene therapy to the treatment of Duchenne's muscular dystrophy. Dr. Petrof has also made significant contributions to the field of sleep medicine.

Louise Pilote (General Internal Medicine) - Dr. Pilote's research is focused on the clinical epidemiology of cardiovascular diseases. She and her group have contributed to a number of important observations in the areas of quality of life, outcomes research, and health care delivery.

Stéphane Richard (Lady Davis Institute) - Dr. Richard studies signal transduction, with particular attention to specialized domains in a variety of kinases. His recent work has focused on arginine methylation as a mechanism regulating protein-protein interactions and he has applied his work to the fields of HIV, multiple sclerosis and cancer.

HONOURS



Madhukar Pai, Medical Scientist in the Respiratory and Infectious Diseases Divisions and Assistant Professor in Epidemiology, Biostatistics and Occupational Health, received the 2007 Scientific Prize of the International Union Against Tuberculosis and Lung Disease. The prize recognizes outstanding research, at the global level, in the field of tuberculosis and is given to a scientist under the age of 45. Dr. Pai is also the recipient of

CIHR New Investigator, FRSQ Chercheur Boursier Junior 1, MGH/RVH Foundations' Millennium Research Awards as well as the Student Award for Teaching Excellence.

Canada's Premier Young Researcher is **Dr. Michael B. Reed**, Assistant Professor in the Division of Infectious Diseases. This award is given to Canada's brightest young health researchers at the beginning of their careers. Dr. Reed's research focuses on better understanding strain variation within the tuberculosis bacterium, studying and characterizing the unique attributes of the encounters within the human host. His research could potential lead to improved treatments for tuberculosis and improved way to identify patients most at risk for developing active disease.

Margaret R. Becklake has been awarded the 2007 Prix Chercheur Émérite en santé des populations of the RRSPQ. A Professor Emerita, Dr. Becklake remains very active in the Respiratory Epidemiology and Clinical Research Unit of the Respiratory Division, with an ongoing interest in occupational lung disease.

Manuel Borod, Assistant Professor in the Division of Palliative Care, is the recipient of the 2007 MUHC Palliative Care Service Award. This award recognizes individuals who have made outstanding contributions and who have demonstrated the qualities of wisdom and maturity, compassion, competence and commitment to their work in palliative care.

CFI AWARDS

The Canada Foundation for Innovation (CFI), through the Leaders Opportunity Fund has awarded grants to our innovative McGill University research projects.

Dr. Robert Scott Kiss, Cardiology, for *Live Cell Real-Time Fluorescence Imaging of Intracellular Cholesterol Trafficking*

Dr. Stéphane Richard, Oncology, for *Imaging Spreading Initiation Centres (SICs) in Normal and Cancer Cells*

Dr. Elena Torban, Nephrology, for *The Role of the Novel Molecular Pathway (Planar Cell Polarity Pathway) in Kidney Disease in Humans and Mice*

Dr. Brian Ward, Infectious Diseases, for *Biomarker Discovery Program for Parasitic Diseases*

WE MADE NEWS THIS FALL

Many of our members made the news recently.



Concerned about patient safety, the RVH launched a pilot project to make sure people discharged from a hospital get a follow-up appointment with a doctor within two weeks. This pilot project was covered in [The Gazette](#) of October 20th with **Dr. Jeff Wiseman**. The October edition of [ATS News](#) featured a profile of **Dr. Arnold S. Kristof** and his research on LAM. **Dr. Martin Chasen** was interviewed by *le Téléjournal de Radio-Canada* on September 28th and reported on how proper nutrition can help cancer patients improve their quality of life. A paper entitled "The Caspase-1 digestome identifies the glycolysis pathway as a target during infection and septic shock", by **Dr. Maya Saleh** and colleagues including **Dr. Sabah Hussain**, was selected as a [Journal of Biological Chemistry](#) (JBC) Paper of the Week, December 14th. On November 16th, Health Minister Philippe Couillard announced that **Dr. Howard Bergman** will head a multi-disciplinary committee to combat Alzheimer. The offensive, which was covered in [The Gazette](#) and [la Presse](#), will deal with diagnosing and treating the disease, and assisting relatives who care for loved ones with Alzheimer.

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