### Annual Report Division of Pulmonary Medicine Department of Medicine - Jewish General Hospital April 1, 2010-March 31, 2011

### I HIGHLIGHTS

#### A. Airways Center

At the Airways Centre we believe we now offer state of the art multidimensional and multidisciplinary care for patients with asthma, and COPD especially those with severe disease.

Patients being treated for asthma have a combined evaluation by an allergist, nurse specialist, inhalation therapist and pulmonary physician on the same day, as well as rapid evaluation by an ENT specialist. For the more difficult cases we get together as a group to discuss a unified approach at our joint conferences held on a regular basis. Our patients not responding to the usual therapeutic approach undergo sputum induction and analysis to examine the inflammatory profile of their airways, which allows us to better target therapy and thus improve effectiveness of medications and reduce adverse effects.

The COPD aspect of the airways centre has expanded with the development of a multidisciplinary COPD clinic with Dr. Mark Palayew seeing patients from the medical point of view, and Esther Dajczman the clinical nurse specialist, administering to the nursing needs of the patients. This clinic is based on the chronic care model and strives to attend to patient needs through pris en charge and early intervention, by the attending nurse and physician with support of the patient with continued education and self-management support. This end has been facilitated by the creation of a COPD patient data base. The COPD clinic has strengthened and established links with Mount Sinai Hospital, the Smoking Cessation and pre-admission clinics, the CSSS and with exercise facilities in the community (YMHA, Cummings Center). Patients are transitioned and followed by Esther across hospital centers (JGH, MSH) and the community as per the needs of their care strengthening the bonds between the institutions and to the benefit of patients. Already there is a preliminary trend towards reduction in the number of visits for respiratory and non-respiratory causes to the Emergency Department which appear to decrease following the introduction of the new COPD program resources. Furthermore, the number of admissions for both respiratory and non-respiratory causes also seem reduced in the 1 year post observation period. Healthcare end-points are being studied in a trial on continuity of care for patients with exacerbation of COPD which is currently ongoing.

Patients have access to new medications through trials done in conjunction with pharmaceutical companies. Independent research has recently been started with the addition of Dr. Chantal Robitaille. An abstract titled "Screening for occult airways disease. A case for implementation in a surgical pre-admission clinic" has been accepted for presentation at the American College of Chest Physicians Meeting.

### **B.** Pulmonary Oncology

The past year has also been significant for our pulmonary oncology program, which grew substantially. We were designated a cancer referral centre by the comité de lutte contre le cancer du Québec. The creation of the Brojde Lung Cancer Centre combining traditional Chinese Medicine and other complementary modalities with mainstream treatment for our lung cancer patients is based on the philosophies of integrative oncology and holistic nursing. This offers opportunities for research, education, and state of the art clinical practice with facilities to provide services to patients in our center, as well as at home. Our comprehensive approach manifests itself in a team, which includes a dedicated dietician, physiotherapist, acupuncturist, and a traditional Chinese medicine specialist who are now available to all of our patients and the feedback has been extremely positive. We are looking forward to the expansion of the Brojde Centre to the 10th floor of the Segal Cancer Centre.

The work of our Tumor Board continues to be one of the most important tools in the comprehensive approach to the treatment of our oncology patients. Tumor Board includes the participation and detailed discussion by physicians from surgery, radiotherapy, nuclear medicine (reviewing PET/CTs), pathologists (presenting and reviewing pathology slides), in addition to our pulmonary oncology team (physicians, nurses) and our Cancer Nutrition and Rehabilitation group. This comprehensive approach to treatment of our lung cancer patients has brought a number of patients requesting second opinions. Our Tumour Board has become a model for Ontario Cancer Care.

Our annual lung cancer awareness campaign in November has been an enormous success. We were awarded a CIHR grant for our public education session last year. We will continue this year with both a public lecture and information sessions.

Our research continues to grow with several publications in peer reviewed journals and presentations at major international conferences including MASCC (international supportive care conference) and World lung cancer conference. Dr. J. Agulnik received a salary support grant for his research in molecular diagnostics of lung cancer which was presented at the World lung cancer conference.

#### C. Pulmonary Vascular Diseases

Pulmonary vascular disease is managed with the collaboration of Dr. Andrew Hirsch in two subspecialized clinics. The Center for Pulmonary Vascular Disease is one of two major referral centers in the province that diagnose and manage patients with pulmonary hypertension of all causes. Dr. Hirsch is also very active in providing expert in-patient and out-patient care to patients with all varieties of arterial and venous thrombotic diseases. This of course includes the diagnosis and management of acute and chronic pulmonary embolism. Research in pulmonary hypertension and thromboembolic diseases is also ongoing and Dr. A. Hirsch has been fortunate enough to have secured a CIHR grant for a study on perspective evaluation of long-term outcomes after pulmonary embolism, which is being conducted in conjunction with Dr. Susan Kahn. Dr. A. Hirsch has been promoted to Associate Professor of Medicine in January 2011.

## **D.** Tuberculosis

The Tuberculosis Clinic, under the co-directorship of Drs. Mark Palayew and Chris Greenaway continues to serve the hospital by managing the care of almost all patients diagnosed with active tuberculosis in the hospital. There is also a large burden of latent tuberculosis that is managed through the TB clinic. There are close liaisons with the Departments of Public Health both on and off the island of Montreal. This is coordinated through the work of Geraldine Ricafort.

## II. EVALUATION OF THE PAST ACADEMIC YEAR

The initiation of many new research projects and the significant increase in clinical activities has resulted in a very active year. Teaching remains of the highest caliber. We have been rated very highly according to student, intern and resident evaluations over the past year.

#### 1. Teaching activities

The JGH Pulmonary Division was extremely active in teaching. Five members of the Division attended on the medical wards. While there, they supervised the medical team consisting of medical students, junior and senior residents. They conducted daily teaching rounds as well.

The pulmonary consult service is always extremely active. Medical students, residents and pulmonary fellows always benefit from diverse and challenging cases when they are on the Pulmonary rotation. They see patients in Emergency and on the floors and in outpatient clinics. They also participate in weekly Pulmonary, Tumour Board and X-ray rounds. Fellows and residents receive "hands on" training in invasive procedures, such as bronchoscopy and thoracentesis. Pulmonary fellows gain experience in working up and following patients in a 6-month rotation. They have their weekly clinics under the supervision of Dr. Mark Palayew, Dr. A. Hirsch and Dr. D. Small (pulmonary), as well as sub-specialty clinics in pulmonary oncology (Dr. D. Small, Dr. C. Pepe), pulmonary hypertension and thrombosis (Dr. A. Hirsch) and tuberculosis (Dr. M. Palayew) and a sleep clinic at Mount Sinai Hospital (Dr. M. Palayew).

In addition to the clinical teaching, some members of the division regularly participated in lecture series to the medical residents and students at their CXR teaching sessions and Core medicine lectures.

With the ongoing success of the Experimental and Clinical Oncology Course 56-635D, undergraduate students continue to participate in our Pulmonary Tumor Board meetings (held weekly) as part of the workshop portion of their course. This year again, the students greatly appreciated the opportunity to attend the Tumor Board meetings and thereby gain a unique experience in participating in the work of this multi-disciplinary, innovative team.

Divisional weekly pulmonary rounds take place throughout the academic year. This involves presentations by our own staff, including fellows, residents and physicians from other divisions of the Jewish General, as well as many visiting professors. This year, guest speakers have included Dr. Anne Gonzales, Dr. Moishe Liberman, Dr. Benjamin Fox, Dr. Reno, Dr. Paul O'Byrne, Dr. H. Manganas.

A weekly Clinical/X-Ray conference is held in conjunction with the Radiology and Thoracic Surgery Departments.

Members of our Respiratory Physiology Department are also active in the ongoing clinical teaching of Vanier College Respiratory and Anesthesia students, including HOP students.

# 2. Research Activities

Research studies have been undertaken in pulmonary oncology, obstructive lung disease, asthma, thromboembolism and pulmonary hypertension. ELOPE study, a multicenter CIHR funded study of the long term outcome of pulmonary embolism is underway and is going on well.

Research studies, many of which are ongoing include:

**GSK:** Antigen-specific Cancer Immunotherapeutic as Adjuvant Therapy in Patients with Resectable MAGE-A3 Positive NSCLC.

**ImClone:** A randomized, multicenter, open-label phase 3 study of pemetrexed-cisplatin chemotherapy plus IMC-11F8 versus pemetrexed-cisplatin chemotherapy alone in the first-line treatment of patients with nonsquamous stage III or IV NSCLC

**ImClone:** A randomized, multicenter, open-label phase 3 study of gemcitabine-cisplatin chemotherapy plus IMC-11F8 versus gemcitabine-cisplatin chemotherapy alone in the first-line treatment of patients with nonsquamous stage III or IV NSCLC

**Pfizer:** Phase2, open-label, single arm study of the efficacy and safety of PF-02341066 in patients with advanced non-small cell lung cancer (NSCLC) harboring a translation or inversion involving the anaplastic lymphoma kinase (ALK) gene locus

**Pfizer:** Phase 3, randomized, open-label study of the efficacy and safety Of PF-02341066 versus standard of care chemotherapy (Pemetrexed Or Docetaxel) in patients with NSCLC harboring a translation or inversion event involving ALK gene locus

**Boehringer Ingelheim:** A randomized open-label phase II trial of BI 6727 monotherapy and BI 6727 in combination with standard dose pemetrexed compared to pemetrexed monotherapy in second line Non-small Cell Lung Cancer **RTOG:** A study of Nimotuzumab (TheraCIM h-R3) in combination with external RT in Stages 2B-4 NSCLC

**Novartis:** A phase II, multi-center, open-label study of AUY922 administered IV on a once-weekly schedule in patients with advanced NSCLC who have received at least two lines of prior chemotherapy

**Morphotek:** A randomized, double-blind, placebo-controlled, study of the safety and efficacy of farletuzumab in combination with carbo/taxol or docetaxel followed by pemetrexed in chemotherapyna we subjects with stage IV adenocarcinoma with wild type EGFR

**Boehringer Ingelheim:** Multi-country, retrospective, cross-sectional chart review of patients with advanced NSCLC. (LUCEOR 1)

**Boehringer Ingelheim:** Multi-country, cross-sectional, prospective patient quality of life survey of patients with advanced NSCLC. (LUCEOR 2)

**OSI Pharmaceutical:** A randomized, double-blind, phase 2 study of erlotinib (Tarceva®) in combination with OSI-906 or placebo in chemonaive patients with advanced NSCLC with activating mutations of the Epidermal Growth Factor Receptor (EGFR) Gene

**OSI Pharmaceutical:** A Randomized, double-blind, phase 2 study of maintenance OSI-906 plus erlotinib (Tarceva®) or erlotinib (Tarceva®) plus placebo in patients with nonprogression following four cycles of 1<sup>st</sup> line platinum-based chemotherapy for advanced NSCLC

**Daiichi Sankyo Inc.:** A phase 3, randomized, double-blind, placebo-controlled study of ARQ-197 plus erlotinib (Tarceva®) in previously treated subject with locally advanced or metastatic, NSCLC

**Bristol-Myers Squibb:** Randomized, multicenter, double-blind, phase 3 trial comparing the efficacy of Ipilimumab in addition to paclitaxel and carboplatin versus placebo in addition to paclitaxel and carboplatin in subjects with stage IV/recurrent Non-Small Cell Lung

**Novartis:** An open label two-stage study of orally administered BKM120 in patients with metastatic non-small cell lung cancer with activated PI3K pathway

**Helsinn Therapeutics/Medpace:** Anamorelin HCI in the treatment of NSCLC – Cachexia (NSCLC-C): A randomized, double-blind, placebo-controlled, multicenter, phase 3 study to evaluate the safety and efficacy of Anamorelin HCI in patients with NSCLC **Hoffman-La Roche/Quintiles:** A randomized, double-blind, placebo-controlled, phase 3 study of 1<sup>st</sup> line maintenance erlotinib (Tarceva®) versus erlotinib (Tarceva®) at the time of progression in patients with advanced NSCLC who have not progressed following 4 cycles of platinum-based chemotherapy

Phase III, A Randomized, double-blind, double-dummy, placebo controlled, parallel group study to assess the efficacy and safety of 48 weeks of once daily treatment of orally inhaled BI 1744 CL (5ug (2 actuations of 2.5 ug) and 10 ug (2 actuation of 5 ug) delivered by the Respimat ® Inhaler, and 48 weeks of twice daily Foradil ® (12 ug) delivered by the aerolizer ® Inhaler, in patients with Chronic Obstructive Pulmonary Disease (COPD)

#### **3.** Clinical Activities:

Oncology clinic statistics New patients Follow up visits Chemotherapy 810		158 2150
Pulmonary clinic statistics New patients (including oncology patients workup) Follow up visits Oncology follow up visits Pulmonary oncology new patients	2372	9417 1312 93
<u>Laboratory Investigations</u> : Pulmonary function tests, Histamine challenge studies, Cardio-pulmonary exercise studies		4691
Procedures:Bronchoscopies(including EBUS and Cryotherapy)Thoracocentesis		339 121

#### 4. Academic Staff

Current Staff are listed under consulting activities. We have been very active in recruitment this year. We have been lucky to recruit Dr. Lama Sakr, a graduate of the Pulmonary Fellowship from Université de Montréal affiliated hospitals. She subsequently did a year fellowship in interventional procedures at Marseilles, France and will be completing a Master's of Epidemiology with a research project in pulmonary oncology before joining our team full time in September of 2012. Dr. Nathalie Saad is also completing her pulmonary fellowship at McGill and will be joining us after two subsequent years focusing on pulmonary rehabilitation. She will have a joint

appointment at the Jewish General and Mount Sinai hospitals. Both of these excellent recruits will add substantially to the development of our pulmonary division.

Name of Faculty	Private Sector	Public Sector	Other (# of	Total
Member	Consulting (#	Consulting (#	days) Please	
	days)	days)	explain	
David Small	<u>0</u>	<u>7</u>	<u>0</u>	<u>7</u>
Jason Agulnik	<u>0</u>	<u>0</u>	<u>0</u>	
Andrew Hirsch	<u>0</u>	<u>0</u>	<u>0</u>	
Thomas Jagoe	<u>0</u>	<u>0</u>	<u>0</u>	
Mark Palayew	<u>0</u>	<u>0</u>	<u>0</u>	
Carmela Pepe	<u>0</u>	<u>0</u>	<u>0</u>	
Norman Wolkove	<u>0</u>	<u>0</u>	<u>0</u>	
P. Ernst	<u>4</u>	<u>20</u>	<u>0</u>	<u>24</u>

# 5. Consulting Activities

# III OBJECTIVES AND PRIORITIES

Our objective for the coming year is to accommodate our new recruits and plan for further recruitment. It will also be important to ensure new PREM positions for our continuing clinical and academic growth. Space, as always will be an extremely important issue that will have to be dealt with within the next year or so.

Respectfully submitted,

David Small, M.D., F.R.C.P.C. Chief, Division of Pulmonary Diseases Jewish General Hospital