

## May 2014 – 2nd EDITION

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### DIVISION DIRECTORS COLUMN



#### Douglas Bradley, MD, FRCPC

Today I am pleased to introduce **two new features** meant to celebrate our areas of research excellence and opportunity, as well as to highlight the **local impact and global reach** of our Respiriology alumni.

Two alumni who exemplify our local and global impact are profiled: Dr Frank Ritacca and Dr Matthew Naughton. These two individuals speak to the excellence of both the **Clinical/Research Fellowship Training Programs**, and **Respirology Resident Training Program** at the University of Toronto (UT).

Also in this issue, we highlight our acute lung injury program. Dr Margaret Herridge has provided a brief overview of its history, depth, scope and impact. I will be calling upon others in future issues to provide similar overviews.

### FEATURE ARTICLE



#### Dr Margaret Herridge - Acute Lung Injury Program UHN/UT

Lung injury research had its gestation at UT in the early 1980s through the pioneering work of Charlie Bryan at the Hospital for Sick Children. Charlie and his colleagues described lung inflammation in acute respiratory distress syndrome (ARDS) and invented low tidal volume high frequency oscillatory ventilation (HFOV) to improve gas exchange and reduce lung injury in ARDS. Subsequently, Arthur Slutsky built a lung injury research program, broad in scope, which spans all major UT-affiliated hospitals. Art's visionary leadership has brought international renown to this program, especially in relation to ventilator-induced lung injury (VILI), and helped to foster the next generation of world leaders in these areas.

Basic science leadership in acute lung injury (ALI)/ARDS has also been provided by MingYao Liu on cellular and molecular mechanisms of ALI in lung transplantation. Additional depth has been added through the work of Haibo Zhang on human neutrophil peptides in host defense and ALI, Chung-Wai Chow on the role of Syk in modulating airway inflammation and tissue injury, Claudia Dos Santos through whole genome approaches, Jane Batt through her study of the muscle biology associated with lung injury, and Warren Lee through his work on endothelial cell dysfunction during critical illness and regulation of transcellular and paracellular permeability. Finally, we honour the legacy of our colleague, Michael Ward, who focused on mechanisms of systemic vascular endothelial dysfunction following hypoxia.



Regarding clinical research, Geeta Mehta, John Granton and Tom Stewart led early studies on the physiological and clinical outcomes of HFOV. The evaluation of a pressure and volume limited ventilation strategy ( PLVS Trial) led to the study of lung open ventilation (LOVS) ( Tom Stewart and Maureen Meade) and to an international multi-centre trial, led by Niall Ferguson and Maureen Meade, evaluating the early application of HFOV for severe ARSD (OSCILLATE Trial). Neill Adhikari and Jan Freidrich have made significant contributions through meta-analyses and synthesis of evidence on lung injury and ARDS. Further modalities to support severely lung-

injured patients, including extracorporeal life support (ECLS), have been developed through collaboration with Shaf Keshavjee and his Thoracic Surgery group. Ongoing evaluation of ECLS in severely lung injured patients is underway by Eddy Fan and Marcelo Cypel.

Colleagues have also made important contributions from the refinement of the international definition of ARDS (Berlin Definition: Gordon Rubinfeld, Niall Ferguson and Eddy Fan), to the comprehensive elucidation of international ventilator weaning practices (Karen Burns), determination of optimal sedation strategy in the critically ill ( SLEAP: Geeta Mehta), evaluation of long-term patient and family-centred outcomes of ICU survivors of ARDS and prolonged mechanical ventilation (Toronto ARDS Outcome Study and RECOVER Program) as well as and risk stratification for multimodality rehabilitation (Margaret Herridge). Taken together, the ALI/ARDS program at UT spans the spectrum of basic science, clinical trials and outcomes research that have allowed it to flourish and gain world renown.

## RESIDENT TRAINING PROGRAM ALUMNI

### Dr Frank Ritacca, Trillium Health Partners

Since completing his training in Respiriology and Critical Care Medicine at UT in 2005, Dr Ritacca has been on staff at the Credit Valley Hospital (CVH) site of the current Trillium Health Partners (THP) organization in Mississauga. In 2009, he became certified in Sleep Medicine through the American Board of Internal Medicine.



Dr Ritacca has maintained his links with UT Respiriology through involvement in its pulmonary rehabilitation program which led to several research collaborations with Westpark. He also fostered UT linkage via the Respiriology Resident Training Program by providing a community Respiriology rotations at CVH. Residents praise the value of the rotation because of the opportunity to function as a junior staff in a busy hospital that sees a wide variety of interesting cases.

In 2009, Dr Ritacca became Head of Respiriology at CVH, and upon its merger with THC in 2013, became Division Head for the entire organization. In addition to his busy clinical, educational, and administrative roles, Dr Ritacca has spent time on the Ontario Thoracic Society Educational Committee and has become actively involved as an Independent Health Facility physician assessor for the CPSO.

In his spare time, he can be found on the driving range perfecting his golf swing. He has been known to occasionally have a friendly match with Drs. Lazar, Granton, and Kargel. He is a devoted husband to Bridgette and proud father of Charles (7) and Joseph (4).

## CLINICAL/RESEARCH FELLOWSHIP ALUMNI

### Dr Matthew Naughton, Monash University

Dr Matthew Naughton completed training in Respiriology and Sleep Medicine at the University of Melbourne, Australia in 1991 following which he ventured to our Clinical/Research Fellowship in Sleep with Dr Doug Bradley from 1992 – 1994. Under Doug's supervision, he completed a series of projects that provided valuable insights into mechanisms by which sleep apnea worsened heart failure and CPAP improved cardiovascular function in such patients for which he received a Doctorate of Medicine from the University of Melbourne in 1994.



Dr Naughton returned to the Alfred Hospital, Monash University in Melbourne in 1994 to begin his own successful clinical research program. Important findings of his research include the demonstration that augmented central and peripheral chemosensitivity, as well as elevated left ventricular filling pressures contribute to the hyperventilation that triggers central apneas. He showed that treating obstructive sleep apnea with CPAP in patients with heart failure improves left ventricular function and described how impaired lung function contributed to dyspnea and reduced exercise capacity in heart failure. Dr Naughton has published over 150 papers and supervised 14 post graduate students and fellows.

Dr Naughton enjoys cycling, hiking, fine music, travel and family time with his wife, Suellen, and 3 sons, Tom, Jack and Charlie. Dr. Naughton feels that without doubt, his exposure at UT to high quality research and encouragement to enquire, has led to his success in academic medicine and to his international reputation in sleep apnea research.

## NEWS, UPDATES and PROMOTIONS

### Welcome to Dr Laurent Brochard – DD Critical Care

It is with great pleasure that the Division of Respiriology welcomes Dr Laurent Brochard, who recently moved from Geneva, Switzerland, as the new Director of the Extra-Departmental Division of Critical Care Medicine at UT. He is a professor and a clinician scientist with his main clinical appointment at St. Michael's Hospital.



Dr Brochard obtained his MD degree from University Paris V in 1986 followed by residency training in Hopitaux de Paris. He then did a research fellowship at the National Institute for Scientific and Medical Research (INSERM) (Creteil). He served as Vice Dean of the Medical School of Creteil, Paris 12 University from 1995 to 2003. He was head of the Medical Council, Henri Mondor Hospital Medical ICU in Creteil, Paris from 2003 to 2010. Subsequently, he became the Head of the ICU of the Geneva University Hospital, in Switzerland for three years.

Dr Brochard has been Editor-in-Chief of Intensive Care Medicine from 2001 to 2007 and is currently Deputy Editor of the American Journal of Respiratory and Critical Care Medicine. He is world renowned in critical care, especially for his clinical research on mechanical ventilation. He has mentored and directed more than 15 PhD students and has published over 300 papers. Dr Brochard's recruitment will undoubtedly enhance our national and international impact in Critical Care and Respiriology.



**Dr Kieran McIntyre and his wife Amanda**, welcome Ryan Declan McIntyre into the family. Ryan was born March 28<sup>th</sup>, tipping the scales at 3030g. Ryan has two siblings, Katherine, age 7, and James, age 4.

**Dr Meyer Balter** has been named as Chair of the American College of Chest Physicians Board Review Course (August 2014)



**Dr Andrea Gershon** received the 2013 Ontario Lung Association Research Award in Smoking Cessation and COPD. She has been awarded funding from the MOHLTC for a project entitled **The Ontario Chronic Obstructive Pulmonary Disease (COPD) Population Health Network**. She is leading this project in partnership with Dr. Shawn Aaron at the Ottawa Hospital.

**Respirology Research Day** will be held on June 4<sup>th</sup>, 2014 at the Munk Centre for Global Affairs, 1 Devonshire Place, 8am-5pm.



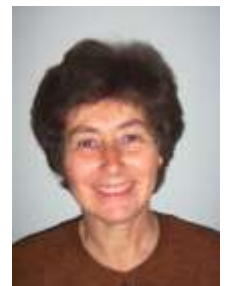
**Congratulations to:** Dr John Granton on promotion to Professor, TGH, and Dr Matthew Stanbrook on his promotion to Associate Professor, TWH



## INNOVATION

### A Web-based Tool for Patients and Workers on Work Related Asthma – Dr Susan Tarlo

A team led by Drs. Susan Tarlo, Samir Gupta and Gary Liss, *supported by a grant from WorkSafe BC, and WCB of Newfoundland and Labrador*, have developed a web-based tool on work-related asthma, and aimed mainly at young asthmatics and workers. Need for this tool was due to long delays in diagnosis of occupational asthma and lack of knowledge, about workplace triggers to asthma and ways to limit exposure to these. Other attempts to shorten the gap between onset of occupational asthma and diagnosis focused on better physician recognition of work-related asthma. Our approach is to empower the patient/worker to recognize the work-related asthma symptoms and to bring it to the attention of their physician. The tool is located on the Canadian Lung Association website at <http://lung.ca/workrelatedasthma/>.



## UPDATES

### Quality Improvement and Patient Safety - Dr Kieran McIntyre

Ongoing quality improvement and patient safety (QIPS) initiatives within the division include:

Drs Roger Goldstein and Andrea Gershon; highlighting the under diagnosis of COPD in primary care

Dr Bill Geerts, venous thromboembolism prophylaxis through the "Safer Healthcare Now" initiative

Dr Liz Tullis, leading a national CF Canada QIPS initiative.

Drs Deborah Casey and Ken Chapman, using QIPS training to improve COPD patient care at the UHN Toronto Western site.

The importance of embedding QIPS in divisional activities was a key theme of the recent divisional retreat and ties in with "Choosing Wisely Canada", led by Dr Wendy Levinson. Dr Levinson advocates for providing quality care while avoiding unnecessary testing and procedures (<http://www.choosingwiselycanada.org>).

Respirology trainees have taken on one such initiative to follow pulmonary nodules detected on CT scan at St. Michael's hospital. They will try to implement American College of Chest Physicians guidelines that are designed to avoid excessive CT imaging and radiation exposure and to improve the follow up of such nodules. This work is part of the QIPS curriculum through which subspecialty trainees learn and apply QIPS methods in their everyday work. Further training in QIPS is now possible through the QIPS Masters offered by the IHPME at the University of Toronto.

### Program Director Update – Dr Christopher Li

**Accreditation 2015** - We continue to prepare for our next Royal College external review in the Fall of 2015. In response to the feedback from Accreditation 2013, a number of initiatives are in process. We are updating our Goals and Objectives and creating new, rotation-specific ITERS. We are approaching the completion of the first year of our new procedure curriculum, developed by Dr. Harvey Wong. This curriculum enhances teaching and evaluation of procedural skills, through case-based sessions and wet-lab simulation sessions. Instruction in chest drain insertion, identified as a weakness during Accreditation 2013, will be addressed by this procedure curriculum. We are also rolling out an on-line logging system, MedSquares that will allow better tracking of resident procedures.



We have also been clarifying administrative structures, roles, and procedures in our training program. Look for updates in the near future on our Resident Safety Policy, which you can always access on our website, at <http://www.utoronto.ca/respirology/resident-safety-policy.html>. An internal review of our program is being planned for the Fall of 2014.

**CanMEDS 2015** - The CanMEDS 2015 project is underway, with the current framework being revised to move our residency programs towards competence-based medical education.

On the national level, each specialty committee will develop the competency milestones that will guide teaching and evaluation in our programs. These milestones will be created within the existing CanMEDS roles. All specialties will undergo this process within the next 7 years. However, there will be no immediate changes to our program in this regard, although we can anticipate that Portfolios will become an important means of documenting a resident's progress in a program. All residents in our program are now maintaining a Portfolio, which is currently being used to document scholarly activity, evaluate communication skills (through review of consultation letters), and collect multi-source feedback on resident performance in various roles.

### Meet the Investigator Evening – Dr. Niall Ferguson

We were delighted by the excellent turnout at the inaugural divisional "Meet the Investigators Evening" on April 16, 2014. Eighteen investigators presented snapshots of their research to a crowd of current and incoming respirology residents. Originally designed to allow residents to get the 'lay of the land' in planning their research experiences, the evening also provided an opportunity for informal discussion between faculty and residents. The summary slide deck will be placed on our website for future reference. Planning for the next instalment of this event is already in progress - **mark your calendars for November 26, 2014**. Dr Andrew Youn, our 1st year rep, commented that the event was a resounding success. From the variety of hors d'oeuvre to satisfy their hunger, to the strict "one-minute" presentation afforded to each investigator, the entire evening was boisterous and fun from beginning to end.

