Welcome to Calgary and the 7th edition of the Canadian Respiratory Conference (CRC). Our conference partners, the Canadian Thoracic Society (CTS), Canadian Respiratory Health Professionals (CRHP) and Canadian Lung Association (CLA), are thrilled with the response the community has shown for this event. A growing number of multi-disciplinary health professionals make time in their calendars to join us for “A Breath of Fresh Air”, and this year’s registration levels are at an all-time high!

The CRC has answered the need for a national forum and has become the undisputed premier national meeting for the respiratory community in Canada! Each year, CRC’s innovative programming delivers progressive presentations and current research from a variety of perspectives. The Scientific Committee, chaired by Drs. Richard Leigh and Richard Debigaré, has devoted much time and effort in organizing a stimulating and comprehensive program for our diverse audience. Inspiring subject matter will be presented through many concurrent sessions integrating pediatric and adult respiratory health. Sleep disordered breathing, asthma, COPD, pulmonary rehabilitation and many more topics will be addressed in a variety of formats. We are confident the resulting program will appeal to the broad range of professionals and trainees in our audience.

Through keynote and concurrent sessions and time incorporated for networking, delegates will find ample opportunities to learn of new and exciting developments, and mingle with colleagues and leading experts from across the country. This year’s feature networking event takes place at the Wainwright Hotel in Heritage Park, Calgary’s tribute to its western heritage. The Wainwright is an amazing venue that promises a memorable experience of dining with western entertainment. So, wear your Stetson and cowboy boots – it’ll be a rip-roaring time! (A limited number of tickets may still be available at the registration desk.)

This conference could not be presented without the commitment of many. In particular, our collaborating organization, the Lung Association, Alberta & Northwest Territories, has worked diligently to spread the word and help us attract their respiratory community to this unique multi-disciplinary event. The belief of our industry partners in our vision and their steadfast support have also been key components of our success. We thank them for their tremendous generosity.

On behalf of our partner organizations, thank you for attending “A Breath of Fresh Air” and for your commitment to improving the lung health of all Canadians!

Canadian Respiratory Conference Partner Representatives

Jean Bourbeau – CTS
Donna Goodridge – CRHP
Mary-Pat Shaw – CLA
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Planning Committee

Co-Chairs:
Jean Bourbeau
Canadian Thoracic Society
Montréal, QC

Donna Goodridge
Canadian Respiratory Health Professionals
Saskatoon, SK

Members:
Leigh Allard
The Lung Association, Alberta & Northwest Territories
Edmonton, AB

Diane Conley
Canadian Respiratory Health Professionals
Calgary, AB

Richard Debigaré
Canadian Respiratory Health Professionals
Québec City, QC

Richard Leigh
Canadian Thoracic Society
Calgary, AB

Janis Seville
The Lung Association, Alberta & Northwest Territories
Edmonton, AB

Mary-Pat Shaw
Canadian Lung Association
Ottawa, ON

Scientific Committee

Co-Chairs:
Richard Debigaré, Hôpital Laval – Université Laval,
Sainte-Foy, QC
Richard Leigh, University of Calgary, Calgary, AB

Members:
Mark Anselmo, University of Calgary, Calgary, AB
Mary Basha, Newfoundland and Labrador Lung Association, St. John’s, NL
Donna Goodridge, University of Saskatchewan, Saskatoon, SK
Carina Majaesic, University of Alberta, Edmonton, AB
François Maltais, Hôpital Laval, Université Laval, Sainte-Foy, QC
Sunita Mathur, University of Toronto, Toronto, ON
Rob McFadden, St. Joseph’s Health Care, University of Western Ontario, London, ON
Douglas McKim, Ottawa Hospital, Ottawa, ON
Rodel Padua, Southern Alberta Institute of Technology, Calgary, AB
David Proud, University of Calgary, Calgary, AB
Darlene Reid, University of British Columbia, Vancouver, BC
Janis Seville, The Lung Association, Alberta & Northwest Territories, Edmonton, AB
Michael Stickland, University of Alberta, Edmonton, AB
Renata Vaughan, Hamilton Health Sciences, Hamilton, ON
Pearce Wilcox, St. Paul’s Hospital, Vancouver, BC
**Registration Desk**
The Conference Registration Desk is located in the Exhibition Hall Foyer.

Hours of operation are:

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<td>Thursday, April 24, 2014</td>
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**Simultaneous Interpretation**
The language of presentation for the scientific program is English unless otherwise indicated. Simultaneous interpretation will be provided for plenary sessions and select concurrent sessions.

**Accreditation and CME Credits**
This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada (RCPSC), approved by the Canadian Thoracic Society. Delegates completing this program are eligible to claim one credit per hour of the program, to a maximum number of 15 credits.

Through an agreement between the American Medical Association and the Royal College of Physicians and Surgeons of Canada, the CTS will also designate this live educational activity, the Canadian Respiratory Conference 2014, for AMA PRA category 1 credits. Information on the process to convert Royal College MOC credits to AMA credits can be found at www.ama-assn.org/go/internationalcme.

Live educational activities, occurring in Canada, and recognized by the RCPSC as Accredited Group Learning Activities (Section 1), are deemed by the European Union of Medical Specialists (EUMS) eligible for ECMEC credits.

**Faculty Disclosure**
The CTS policy on disclosure is designed to ensure the development of objective, balanced and scientifically rigorous CME activities. All faculty are required to disclose whether or not they have financial relationships with industry. Potential conflicts of interest are identified. The CTS is committed to providing learners with commercially unbiased CME activities.

**Speakers’ Ready Room**
The Speakers’ Ready Room, located in Glen 205 (South Building Upper Level) is set aside as a quiet room for reviewing presentation material or for any last-minute presentation changes. Speakers are asked upon their arrival and no later than 8 hours prior to their scheduled presentation time to register with the technician. The Speakers’ Ready Room will be available as per the following schedule:

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**Name Badge Policy**
All conference attendees are asked to wear their name badges at all times to gain access to the scientific program, meal functions and social events.

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**Smoke-Free/Scent-Free Environment**
We are pleased to provide a smoke-free environment. Additionally, for the comfort of all delegates, we ask you to refrain from wearing scented products while attending the conference.

**Twitter**
Join the conversation #CRC2014AB.
CONFERENCE OBJECTIVES

The Canadian Respiratory Conference is the premier national educational and scientific meeting for the respiratory community in Canada. The conference will offer a broad scientific program developed by scientists, clinicians, multidisciplinary healthcare professionals and educators in our community who have developed excellent national and international reputations in respiratory medicine. The program will promote discussion of the most significant developments in clinical practice, research and education.

The conference objectives are:

• To promote lung health by providing updated, evidence-based scientific information to healthcare professionals caring for patients with respiratory diseases;
• To facilitate collaboration among respiratory stakeholders, through communication, information-sharing, networking and partnership-building; and
• To promote clinical research and knowledge translation for the prevention, management and treatment of respiratory diseases.

CRHP Research Poster Award

The CRHP Research Poster Award was created in 2010 by the CRHP Research Committee to strengthen research capacity within the community of non-physician respiratory health professionals. CRHP members whose poster abstracts are accepted by the CRC Scientific Committee for a moderated poster presentation, and who have agreed to be considered, will be eligible for this recognition award. The poster award will be based on excellence in scientific research related to respiratory health or disease.

The judges are experienced researchers who will provide valuable feedback to the poster presenters, facilitating the presenters’ development as respiratory health care researchers. The award aims to motivate respiratory health researchers to strive for excellence and to reward them with the recognition of their peers. The winner will be presented with a certificate of recognition and announced at the conference and in CRHP’s member e-bulletin.
THURSDAY, APRIL 24, 2014

1730 – 1930  Opening Reception / Sponsors’ Display / Poster Viewing  Exhibition Hall E

FRIDAY, APRIL 25, 2014

0700 – 0815  Optional Educational Activities: Co-Developed Symposia  TELUS 104/105
- The IPF Debate: Appropriate End Points in IPF
  Co-developed by the Canadian Thoracic Society and
  Boehringer-Ingelheim
  Dr. Chris Ryerson
  Dr. Charlene Fell
- Dual Bronchodilation in COPD: Is Two Better Than One?
  Co-developed by the Canadian Thoracic Society and Novartis
  Dr. François Maltais

0730 – 0825  Breakfast in Sponsors’ Display Area  Exhibition Hall E

0830 – 1000  PLENARY SESSION  Exhibition Hall D
- Opening Remarks
- Imaging the Innate Immune System During Sterile and Infectious Immunity  Dr. Paul Kubes

1000 – 1030  Refreshment Break / Sponsors’ Display / Poster Viewing  Exhibition Hall E

1030 – 1200  CONCURRENT SESSIONS  Glen 206
- Smoking Cessation  Mr. Rob Cunningham
  Tobacco with Training Wheels: The Case for Banning Flavoured Tobacco
  CAN-ADAPTT: Implementing Smoking Cessation Guidelines in Canada
  The Hookah: A Stealth Bomber for the Tobacco Industry  Dr. Peter Selby
  Dr. Barry Finegan
- Traversing the Second Death Valley: Examining our Effectiveness at Moving Research Results into Clinical Practice and Health Decision-Making
  The State of Rehabilitation Programs in Canada: Results of the 2013 CTS Pulmonary Rehabilitation Survey  Dr. Pat Camp
  Psychological Theories Underpinning Clinical Interventions to Change Behaviour  Dr. Wendy Rodgers
  Determinants of Physical Activity in COPD  Dr. Gail Dechman
- Diagnosis and Management of Sleep Disordered Breathing Outside of the Sleep Laboratory
  The Role of Alternative Care Providers in the Management of Sleep Disordered Breathing  Dr. Sachin Pendharkar
  Diagnostic Testing in Obstructive Sleep Apnea: Portable Monitoring/Level III Testing  Dr. Debra Morrison
  Diagnosis of Obstructive Sleep Apnea in Children  Dr. Indra Narang
- Update on the 7th Edition of the Canadian Tuberculosis Standards  Glen 203
  What is New in the Diagnosis and Treatment of Extra-Pulmonary TB?  Dr. Dina Fisher
  An Update from the New Canadian Tuberculosis Standards
  Tuberculosis in First Nations, Inuit and Métis Peoples  Dr. Gonzalo Alvarez
  Pediatric Tuberculosis  Dr. Ian Kitai
- Recent Advances in Pulmonary Arterial Hypertension (PAH): Addressing the Ongoing Treatment Gaps  Glen 204
  New Therapeutic Advances in PAH  Dr. Naushad Hirani
  The Future of PAH: An Overview of Ongoing Canadian PAH Research  Dr. Sébastien Bonnet
  Pulmonary Hypertension: How to Get the RV Out of Trouble  Dr. John Granton
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<tr>
<td>1200 – 1315</td>
<td>Luncheon in Sponsors’ Display Area</td>
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<td><strong>Optional Educational Activities</strong></td>
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<td>American College of Chest Physicians and Canadian Thoracic Society Conjoint Session</td>
<td>TELUS 104/105</td>
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<td>Truth or Consequences: Making Choices that Impact Patient Care</td>
<td>Dr. Michael Baumann, Dr. Robin McFadden</td>
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<td><strong>CRHP-Funded Research</strong></td>
<td>TELUS 108/109</td>
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<td>Feasibility of a Short Home-Based Rehabilitation Program for Cancer Patients Waiting for Lung Resection Surgery</td>
<td>Dr. Didier Saey</td>
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<td>Can a Therapeutic Singing Intervention Contribute to Optimizing Outcomes for Pulmonary Rehabilitation Participants?</td>
<td>Dr. Donna Goodridge</td>
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<td>SLEEP Disturbance in Family CAREgivers of Children Who Depend on Medical Technology: The CARE to SLEEP Study</td>
<td>Ms. Krista Keilty</td>
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<td>1330 – 1500</td>
<td><strong>CONCURRENT SESSIONS</strong></td>
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<td><strong>Motivational Communication to Improve Adherence and Outcomes in Adults and Children with Chronic Lung Disease</strong></td>
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<td>An Introduction to Motivational Communication for Behaviour Change in Patients with Chronic Lung Disease</td>
<td>Dr. Kim Lavoie</td>
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<td>Efficacy of Motivational Communication in Health Care Settings</td>
<td>Dr. Simon Bacon</td>
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<td>Using Motivational Communication to Optimize Patient Adherence and Outcomes in Pediatric Asthma</td>
<td>Dr. Silvana Barone</td>
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<td><strong>Canadian Lung Association Research Update</strong></td>
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<td>A National Respiratory Research Strategy: People, Platforms and Knowledge Mobilization</td>
<td>Dr. Andrew Halayko</td>
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<td>The Canadian Respiratory Research Network</td>
<td>Dr. Shawn Aaron</td>
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<td>Breathing as One: The Campaign for Lung Research</td>
<td>Dr. John Granton</td>
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<td><strong>Optimizing the Lung Transplant Candidate</strong></td>
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<td>Nutrition and Advanced Lung Disease</td>
<td>Ms. Valerie Jomphe</td>
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<td>Frailty and Sarcopenia in the Lung Transplant Candidate</td>
<td>Dr. Dmitry Rozenberg</td>
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<td>Optimizing the Lung Transplant Candidate Through Exercise Training</td>
<td>Ms. Lisa Wickerson</td>
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<td><strong>Obstructive Sleep Apnea and Co-Morbid Disease</strong></td>
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<td>OSA and Cardiovascular Disease</td>
<td>Dr. Najib Ayas</td>
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<td>OSA, Obesity and Diabetes</td>
<td>Dr. Willis Tsai</td>
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<td>OSA and Kidney Disease</td>
<td>Dr. Patrick Hanly</td>
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<td><strong>Neuromuscular Disease: Home Ventilation</strong></td>
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<td>Lung Volume Recruitment in Neuromuscular Disease</td>
<td>Dr. Sherri Katz</td>
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<td>Quality of Life in Individuals on Home Mechanical Ventilation</td>
<td>Dr. Jeremy Road</td>
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<td>HMV: An International Perspective</td>
<td>Dr. Karen Rimmer</td>
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<td>1500 – 1530</td>
<td><strong>Refreshment Break / Sponsors’ Display / Poster Viewing</strong></td>
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<td><strong>Moderated Poster Session</strong></td>
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<td>1800 – 2200</td>
<td><strong>Optional Social Activity: Hats off to Calgary!</strong></td>
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<td><strong>Buses will depart from the Hyatt Hotel</strong></td>
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SUNDAY, APRIL 27, 2014

0700 – 0815 Optional Educational Activities: Co-Developed Symposia
Risk Assessment to Better Manage the Individual COPD Patient: LABD and/or Anti-inflammatory Rx?
Co-developed by the Canadian Thoracic Society and Boehringer-Ingelheim
TELUS 104/105
Dr. Irv Mayers

Allergen Immunotherapy: From Subcutaneous Injection to Oral Tablet
Dr. Susan Waserman
Co-developed by the Canadian Thoracic Society and Merck
TELUS 108/109
Dr. Robert Schellenberg

0730 – 0825 Breakfast in Sponsors’ Display Area
Exhibition Hall E

0830 – 1000 PLENARY SESSION
Exhibition Hall D
Awards Presentation

Stem Cell Therapy for Lung Disease
Co-developed with the Canadian Thoracic Society and the Canadian Association of Physicists
Dr. Bernard Thébaud

CIHR-ICRH/CTS Distinguished Lecture in Respiratory Sciences
From Asthma Pathophysiology to Knowledge Translation: A Journey Through Airways and Human Behaviour
Dr. Louis-Philippe Boulet

1000 – 1030 Refreshment Break / Sponsors’ Display / Poster Viewing
Exhibition Hall E

1030 – 1200 CONCURRENT SESSIONS
Exhibition Hall D
Pharmacology of Airways Disease
β₂-Agonists: More Than Just Bronchodilators
Dr. Mark Giembycz
An Industry View of Future Developments in Pharmacotherapy in Obstructive Lung Disease
Dr. Steven Pascoe
Clinical Pharmacology of Allergen-Induced Asthma
Dr. Paul O’Byrne

Update on Lung Cancer
Expediting Lung Cancer Diagnosis and Management for Patients with Suspected Lung Cancer
Ms. Nadine Strilchuk
Mediastinal Staging for Lung Cancer
Dr. Jacob Gelberg
When Tissue is the Issue: Molecular Testing for Lung Cancer – What All Respirologists Should Know
Dr. Desirée Hao

Psychosocial Issues in COPD
Exploring Patients’ Appraisals to Facilitate Post-Exacerbation Pulmonary Rehabilitation
Dr. Samantha Harrison
The Prevalence and Impact of Depression and Anxiety on COPD Outcomes and Quality of Life
Dr. Kim Lavoie
Incremental Economic Burden of Psychiatric Disorders in Asthma
Dr. Grégory Moullec

The Role of Surfactant in Respiratory Disease
Pulmonary Surfactant and the Genetic Basis of Lung Disease: What’s New in Neonates and Infants
Dr. Larry Nogee
The Role of Surfactant in Adults - Is There a Future?
Dr. James Lewis
Host Defense vs. Lung Injury: Neutrophil Extracellular Traps (NETs) and Surfactant Proteins
Dr. Nades Palaniyar
1200 – 1315

**Luncheon in Sponsors’ Display Area**  
*Exhibition Hall E*

**Optional Educational Activities: Co-Developed Symposia**

**Current and Future Approaches to the Diagnosis and Management of CTEPH**  
Co-developed by the Canadian Thoracic Society and Bayer  
**TELUS 104/105**  
Dr. David Langleben  
Dr. Naushad Hirani

**The Impact of Pneumococcal Vaccine on Long-Term Morbidity and Mortality of Adults at High Risk for Pneumococcal Disease**  
Co-developed by the Canadian Thoracic Society and Pfizer  
**TELUS 108/109**  
Dr. George Zhanel  
Dr. Allison McGeer

1330 – 1500

**CONCURRENT SESSIONS**

**Acute Wheezing Emergencies: From Young to Old!**  
*Exhibition Hall D*

- Little Wheezers in the Emergency Department: Managing Acute Pediatric Asthma  
  Dr. David Johnson
- Everything That Wheezes is Not Asthma  
  Dr. Robert Cowie
- Acute COPD Management: Is There Anything More Than Ventolin?  
  Dr. Brian Rowe

**Interstitial Lung Disease Related to Connective Tissue Diseases**  
*Glen 206*

- What is the Relevance of Autoantibodies in ILD?  
  Dr. Chris Ryerson
- Air Pollution and ILD: Do the Particulates Matter?  
  Dr. Kerri Johannson
- New Rheumatologic Drugs: Pulmonary Benefits and Side Effects  
  Dr. Charlene Fell

**Non-CF Bronchiectasis: A Multidisciplinary Approach to Management**  
*Glen 201/202*

- Primary Ciliary Dyskinesia  
  Dr. David Hall
- Pharmacologic Management of Non-CF Bronchiectasis  
  Dr. Julie Jarand
- Airway Clearance Techniques in Non-CF Bronchiectasis  
  Ms. Maggie McIlwaine

**The PRESTINE Initiative: Data Standards to Support Respiratory Best Practice**  
*Glen 203*

- Lessons Learned and the Potential of EMR Data to Support Quality of Care and Performance Measurement  
  Ms. Alison Bidie
- The PRESTINE Working Group: Asthma and Related Respiratory Elements for EMRs  
  Dr. Diane Lougheed
- Which Asthma Quality of Care Indicators Really Matter?  
  Dr. Teresa To

**CRHP Research Presentation**  
*Glen 204*

- Non-Invasive Ventilation for the Restricted Thorax: Effects of Ventilator Modality on Quality of Life  
  Ms. Lorna Cummins
- Metabolic Cost of Resistance-Based Exercise Training in People with COPD: Preliminary Results  
  Ms. Priscila Robles
- Pediatric-to-Adult Asthma Transition Program: A Randomized Trial  
  Mr. Rodel Padua

1500 - 1530

**Refreshment Break**  
*Exhibition Hall Foyer*

1530 – 1630

**PLENARY SESSION**  
*Exhibition Hall D*

**Palliative Management of Intractable Dyspnea**  
*Dr. Michael Slawnych*

- Moderator: Dr. Chip Doig, Canadian Medical Association

**Closing Remarks**

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The language of presentation for the scientific program is English unless otherwise indicated. Simultaneous interpretation will be provided for all plenary sessions. 🌐 indicates those concurrent sessions for which simultaneous interpretation will be provided.
Infection is a central tenant underlying the majority of acute and chronic lung diseases. Currently little is known about the pathogenesis and kinetics of the inflammatory response in the lung following injury or infection. A better understanding of the identity and sequence of the inflammatory cells and pathways involved in this process will likely lead to advances in treatment for many inflammatory lung diseases. This session will address the role of the innate immune system in lung inflammation by highlighting research that uses cutting-edge live cell imaging techniques to track the inflammatory response, as it happens in the lung, in response to injury and infection. The session will further highlight the role of various inflammatory cells, such as neutrophils and iNKT cells, in causing lung inflammation, and will discuss some of the evolving mechanisms by which this happens.

**Learning Objectives**
At the end of this presentation, attendees will be able to:

- Outline the differences in the basic immune system in the lung versus other organs;
- Define the role that neutrophils and endothelium play in the lung vasculature during infection;
- Discuss the role of two types of monocytes in the lung vasculature; and
- Explain what iNKT cells do in innate immunity and how they respond in lung inflammation.

**Dr. Kubes** trained at Queen’s University in Kingston and completed a fellowship at LSU Medical Centre. Later, he moved to Calgary, where he is presently director of the Snyder Institute for Chronic Diseases, where his research is focused on understanding innate immunity (primarily in the vasculature of various organs).
CONCURRENT SESSIONS
FRIDAY, APRIL 25, 2014 | 1030 – 1200

Smoking Cessation

Tobacco with Training Wheels: The Case for Banning Flavoured Tobacco
Mr. Rob Cunningham

Over the last 12 years, flavoured tobacco products have increasingly appeared for sale in Canada. Flavours, such as chocolate, cherry, peach, vanilla, mint and many others, make tobacco products more appealing, especially to youth. A high proportion of youth who use tobacco consume flavoured tobacco. In Canada, national legislation (Bill C-32) prohibits flavoured cigarettes, cigarillos and blunt wraps, with an exception for menthol. The tobacco industry has avoided the federal definition of cigarillos (1.4 g or less, or has a cigarette filter) by marketing cigarillos weighing just more than 1.4 g. The tobacco industry continues to market cigarettes and other tobacco products with menthol, a flavouring which deters cessation and facilitates youth addiction. This session will present an overview of flavoured tobacco products available in Canada, legislative developments in Canada and internationally, and will provide the rationale for a legislated ban on flavours for all tobacco products.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Explain how flavoured tobacco products threaten tobacco control progress by facilitating youth addiction and by discouraging cessation; and
• Provide the rationale to governments as to why flavours should be banned for all tobacco products.

CAN-ADAPTT: Implementing Smoking Cessation Guidelines in Canada
Dr. Peter Selby

This session will review the latest evidence to intervene with smokers and describe an algorithm that enables the implementation of evidence-based tobacco addiction treatment guidelines in any setting. A case-based approach will help attendees address key issues in the treatment of tobacco addiction, including behavioural support and pharmacotherapy. It will conclude with an approach to those who have comorbid mental illness and/or addiction.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Identify the five evidence-based steps to treat tobacco addiction; and
• Appraise the evidence to support the treatment of every tobacco addicted person.

The Hookah: A Stealth Bomber for the Tobacco Industry
Dr. Barry Finegan

The presentation will address the hookah (waterpipe), an increasingly popular form of smoking among young adults in Canada. Original research data relating to the composition of the smoke produced and the air quality of locations where so-called “herbal” shisha is smoked will be presented. Potential health consequences will be addressed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Describe the prevalence of hookah smoking in Canada;
• Explain how hookah smoking differs from cigarette smoking; and
• Recognize the potential health dangers of “herbal” shisha.
The State of Rehabilitation Programs in Canada: Results of the 2013 CTS Pulmonary Rehabilitation Survey

Dr. Pat Camp

In this session, the results of the 2013 CTS Pulmonary Rehabilitation Survey will be reported. This comprehensive survey was designed to provide a detailed characterization of all Canadian pulmonary rehabilitation (PR) programs, including capacity, exercise prescription practices, education components, outcomes assessment, and knowledge translation needs of health care professionals.

Learning Objectives
At the end of the presentation, attendees will be able to:
• Identify the PR programs in Canada and in their community;
• Compare the characteristics of Canadian PR programs in relation to national and international standards; and
• Identify next steps for strengthening the delivery of PR locally and nationally.

Psychological Theories Underpinning Clinical Interventions to Change Behaviour

Dr. Wendy Rodgers

This presentation will highlight prominent social-cognitive theories as they relate to the initiation and maintenance of exercise behaviours in rehabilitation settings. Personal and contextual level influences on motivation and how motivation relates to behaviour will be addressed.

Learning Objectives
At the end of the presentation, attendees will be able to:
• Discuss theories of behaviour change;
• Introduce psychological/motivational mediators of intervention to behaviours;
• Describe mediation by motivation; and
• Help patients translate intentions into sustained long-term behaviour.

Determinants of Physical Activity in COPD

Dr. Gail Dechman

No studies exist that have used theoretical correlates to explain steps per day during and after pulmonary rehabilitation (PR). This session will present results from a national, multicentre, longitudinal study designed to assess physical activity (PA) and its correlates in people with COPD, during and after a supervised PR program, using an objective assessment (i.e. pedometers). The findings demonstrate that steps/day were low, remained stable over time, and were similar for men and women. Outcome expectations were most strongly associated with steps/day following PR.

Learning Objectives
At the end of the presentation, attendees will be able to:
• Use pedometer data to objectively describe physical activity in people with COPD and how this changes during and following PR interventions;
• Describe how the social ecological model can be used to develop a framework for physical activity interventions for people with COPD; and
• Use the social ecological model to examine data from a Canadian multicenter study describing correlates of physical activity in people with COPD.
The Role of Alternative Care Providers in the Management of Sleep Disordered Breathing

Dr. Sachin Pendharkar

The difficulty in providing timely access to sleep specialists is widespread and has sparked an interest in alternate modes of care delivery. A major contributor to delays for sleep care is the lack of adequate physician supply to meet the demand of patients with sleep disordered breathing (SDB), prompting an interest in the use of nurses and respiratory therapists as alternate care providers (ACPs). This session will provide an update on the evidence supporting the use of ACPs for the management of SDB, from the perspective of clinical outcomes, improvements in access and cost. Examples from Canadian sleep centres will be used to discuss the evolving scope of ACP practice and the policies and procedures that are necessary to support ACPs in the management of patients with SDB.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Describe the role of ACPs in the management of patients with sleep disordered breathing; and
• Implement an ACP program for the management of patients with sleep disordered breathing, and recognize the practical considerations that are required to support such a program.

Diagnostic Testing in Obstructive Sleep Apnea: Portable Monitoring /Level III Testing

Dr. Debra Morrison

Due to limited availability of full polysomnography (PSG) in many parts of Canada, level III portable monitoring has become widely used. Through the use of case studies, the appropriate application of level III testing in the home will be illustrated. Proper patient selection, the use of risk stratification tools and the appropriate use and interpretation of the results of the level III device(s) are all part of an algorithm that will allow for success in studying patients outside the sleep laboratory setting.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Describe and contrast the variables tested/measured by PSG and level III home testing;
• Discuss the CTS and Canadian Sleep Society (CSS) guidelines regarding the use of PSG and level III studies; and
• Describe the limits of level III testing.

Diagnosis of Obstructive Sleep Apnea in Children

Dr. Indra Narang

This presentation will describe the current diagnostic modalities for Obstructive Sleep Apnea (OSA) in children, outlining the pros and cons of different tools that are utilized.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Describe the impact of timely diagnosis and management of OSA in children; and
• Discuss the limitations of diagnosing OSA in children in Canada.
What is New in the Diagnosis and Treatment of Extra-Pulmonary TB? An Update from the New Canadian Tuberculosis Standards

Dr. Dina Fisher
This talk will focus on changes in the Canadian Tuberculosis Standards that relate to extra-pulmonary tuberculosis (EPTB), with a focus on pleural and musculoskeletal disease.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the epidemiology of EPTB in Canada;
• Utilize diagnostic algorithms for diagnosis of EPTB; and
• Describe changes in length of treatment for musculoskeletal TB.

Tuberculosis in First Nations, Inuit and Métis Peoples

Dr. Gonzalo Alvarez
This presentation will address the epidemiology of TB in Aboriginal populations in Canada and new studies on TB in Aboriginal populations presented in the 7th edition of the Canadian Tuberculosis Standards. A brief overview of the findings of Taima (STOP) TB will be presented, and the impact of a multifaceted TB awareness and a door-to-door campaign in residential areas at high risk for TB in Iqaluit, Nunavut, will be highlighted.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the epidemiology of TB in Canadian Aboriginal populations;
• Discuss new studies on TB in Canadian Aboriginal populations; and
• Explain the findings of Taima (STOP) TB and the impact of a multifaceted TB awareness and door-to-door campaign in residential areas at high risk for TB in Iqaluit, Nunavut.

Pediatric Tuberculosis

Dr. Ian Kitai
This talk will outline recommendations in the 2013 Canadian Tuberculosis Standards for the diagnosis and management of tuberculosis in children. In addition to providing information on clinical presentation, it will highlight advances in diagnostic testing, including the use of induced sputa in younger children, as well as changes in drug doses based on newer pharmacokinetic data. Recommendations made in the Standards include higher doses of pyrazinamide and routine ethambutol use in initial therapy pending cultures. Uncertainty about isoniazid doses for older children and adolescents will be explored. In accordance with World Health Organization guidelines, the Standards have moved away from twice weekly therapy for TB disease in children to a preference for daily therapy with supervision. Management of latent TB infection and monitoring for toxicity during therapy will also be discussed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Identify significant differences between clinical presentation of childhood and adolescent TB;
• Describe differences in the dosing of isoniazid, rifampin and pyrazinamide in children and adults; and
• Identify two diagnostic tests to obtain cultures from young children with intrathoracic tuberculosis and possible methods to improve culture yield.
Concurrent Sessions  |  Program  

**New Therapeutic Advances in PAH**  
**Dr. Naushad Hirani**  
The last decade has seen an explosion of therapeutic options for patients afflicted by PAH. In this session, the current landscape of therapies available to treat patients with this devastating condition will be briefly reviewed. Recently developed agents will be introduced, with reference to evidence that has been published in the last several years. While the role of each agent in the clinician’s repertoire remains in rapid evolution, some of the issues surrounding combination therapy will be discussed.

**Learning Objectives**
At the end of this presentation, attendees will be able to:
- Discuss currently available therapies for PAH in Canada;
- Describe the mechanisms of action, clinical outcomes and evidence base supporting newly developed agents for PAH; and
- Summarize the issues surrounding combination therapy in PAH.

**The Future of PAH: An Overview of Ongoing Canadian PAH Research**  
**Dr. Sébastien Bonnet**  
This presentation will highlight the latest findings on the molecular, cellular and epigenetic etiology of PAH, with primary focus on the mechanisms accounting for vascular lesions in PAH. Future putative therapies for PAH will be described, and numerous basic research, preclinical and clinical findings, which constitute the basis of translational research, will be presented. The presentation will be a valuable source of information for both researchers and clinicians.

**Learning Objectives**
At the end of this presentation, attendees will be able to:
- Describe PAH from both a cellular and a molecular point of view;
- Explain why current therapies have limited effects; and
- Describe future therapies and ongoing preclinical and early clinical trials in PAH.

**Pulmonary Hypertension: How to Get the RV Out of Trouble**  
**Dr. John Granton**  
Despite advances in medical therapies, PAH continues to cause significant morbidity and mortality. Although the right ventricle can adapt to an increase in afterload, progression of the pulmonary vasculopathy that characterizes PAH causes many patients to develop progressive right ventricular failure. Furthermore, acute right ventricular decompensation may develop from disorders that lead to either an acute increase in cardiac demand or an increase in ventricular afterload, including interruptions in medical therapy, arrhythmia, or pulmonary embolism. The poor reserve of the right ventricle, RV ischemia and adverse right ventricular influence on left ventricular filling may lead to a global reduction in oxygen delivery and multi-organ failure. This presentation will review an approach to patients with advanced PAH focusing on both medical and surgical strategies to improve RV function, based upon current evidence and physiological principles.

**Learning Objectives**
At the end of this presentation, attendees will be able to:
- Describe how the RV differs with respect to form and function, from the LV;
- Develop an approach to the care of acute RV failure based upon physiological concepts; and
- Explain how extracorporeal support can be used to bridge patients to lung or heart-lung transplantation.
Truth or Consequences: Making Choices that Impact Patient Care

American College of Chest Physicians (CHEST) and Canadian Thoracic Society (CTS)
Conjoint Session

Dr. Michael Baumann, Dr. Robin McFadden

This conjoint session will highlight quality assurance initiatives in Canada and the US, including CHEST’s involvement in Choosing Wisely, an educational campaign led by the American Board of Internal Medicine (ABIM) Foundation. Choosing Wisely seeks to improve doctor-patient relationships and promote patient-centered care by informing patients and physicians about overutilization of medical resources. This session will present the five areas chosen within pulmonary medicine in the United States that often represent unnecessary testing, and the processes whereby these choices were made. These choices include the appropriate use of CT scanning for indeterminate pulmonary nodules, of pharmacologic treatment of Group II and III pulmonary hypertension, of oxygen supplementation, of CT angiography in the diagnosis of pulmonary embolism, and of CT screening for lung cancer in low risk patients. Several Canadian provinces have initiated projects to better align hospital funding with ‘pay-for-performance’ strategies that focus on both the quantity and quality of patient care. As a frequent cause of hospital admissions and re-admissions, acute exacerbations of COPD have attracted considerable attention. The recent experience in Ontario and one of it’s largest teaching hospitals will be discussed, along with the possible consequences (both intended and unintended) of such strategies.

Learning Objectives:
At the end of this presentation, attendees will be able to:
• Understand the processes whereby the U.S. ‘Choosing Wisely’ list was created;
• Explain the rationale for the selection of five pulmonary issues;
• Evaluate strategies for ‘incentivizing’ quality of care for in-patients with chronic disease; and
• Discuss how the management of AECOPD can be improved both within and beyond the hospital.
CRHP-Funded Research

This session will highlight selected lung health research funded by CRHP.

Feasibility of a Short Home-Based Rehabilitation Program for Cancer Patients Waiting for Lung Resection Surgery

Dr. Didier Saey

Patients with lung cancer often experience a reduction in exercise tolerance and muscle weakness. Despite the well-recognized effectiveness of pulmonary rehabilitation, few researchers have studied its feasibility and effectiveness in lung cancer patients, particularly among those awaiting for a lung resection surgery. This presentation will present results of a study funded by the CRHP and designed to explore the feasibility of a short home-based rehabilitation program for cancer patients waiting for lung resection surgery. The effectiveness of this intervention in patients with lung cancer will also be discussed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the feasibility of a short home-based rehabilitation program for cancer patients waiting for lung resection surgery; and
• Discuss the effectiveness of a short home-based rehabilitation program for lung cancer patients.

Can a Therapeutic Singing Intervention Contribute to Optimizing Outcomes for Pulmonary Rehabilitation Participants?

Dr. Donna Goodridge

In spite of optimized medical management, many individuals living with COPD continue to experience distressing and disabling symptoms such as breathlessness and poor quality of life. Novel interventions, such as therapeutic singing, hold promise to ameliorate these concerns by improving control of the breath and reducing awareness of breathlessness. This feasibility study compared the outcomes of an eight-week therapeutic singing program conducted by an accredited music therapist for 14 individuals with advanced COPD attending a Pulmonary Rehabilitation (PR) program against outcomes for five individuals receiving usual care. Outcomes of the intervention will be described.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Describe the rationale for and potential benefits of incorporating a therapeutic singing program into the care of patients living with COPD in the community; and
• Identify patient outcomes associated with participation in a therapeutic singing program as an adjunct to PR.

SLEEP Disturbance in Family CAREgivers of Children Who Depend on Medical Technology: The CARE to SLEEP Study

Ms. Krista Keilty

Society relies on family caregivers of children who depend on medical technology (e.g. oxygen delivery devices, home ventilation) to provide complex and vigilant care up to 24 hours per day. Subjective data have suggested that sleep disruption is prevalent and associated with negative consequences in family caregivers. This prospective cohort study compared sleep in family caregivers of technology-dependent children to the sleep in family caregivers of healthy age-matched children. Statistically and clinically meaningful difference was found on the number of sleep-deprived nights per week between the two groups. Other marked differences were found in outcomes related to sleep disturbance. The CARE to SLEEP Study confirms that family caregivers of technology dependent children are at high-risk for sleep deprivation and its long-term negative consequences.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Summarize what is known about sleep and related outcomes in family caregivers of children who depend on medical technology;
• Identify which factors influence sleep disturbance among family caregivers of children with chronic respiratory conditions; and
• Appraise results of The CARE to SLEEP Study and their application to clinical practice, research, advocacy and health policy.
An Introduction to Motivational Communication for Behaviour Change in Patients with Chronic Lung Disease

Dr. Kim Lavoie

Poor health behaviours (tobacco smoking, poor diet, physical inactivity, and treatment non-adherence) are common causes and/or exacerbators of chronic respiratory diseases including asthma and COPD. Interventions focusing on education and “advice-giving” have failed to produce significant behaviour/lifestyle change in the majority of patients, often resulting in patient dissatisfaction with care and provider frustration. Motivational communication (MC) is an empirically-validated client-centered communication style that has become increasingly popular within health care settings. At the heart of MC is getting patients to overcome their ambivalence about health behaviour change through the use of basic motivational and behaviour-change techniques. This session will introduce participants to the principles and basic skills of MC, as well as identify the types of patients or cases with whom MC may be effective. Finally, the advantages of adopting this more patient-centered communication style with patients, for both the health care provider and patient, will be highlighted, and potential training opportunities will be reviewed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Identify the attitudes, principles, and basic skills of MC;
• Recognize when MC can be used to deal more effectively with difficult, challenging or resistant patients in the respirology setting; and
• Determine the potential benefits of undergoing further training in MC (for both the health care provider and patient).

Efficacy of Motivational Communication in Health Care Settings

Dr. Simon Bacon

Most patients understand that poor health behaviours such as smoking, poor diet or low medication adherence, have negative consequences on their health. However, many continue to engage in such behaviours. There have been a number of attempts to develop interventions to increase patients’ adherence and engagement in healthy behaviours. One such intervention technique is MC, which is an empirically-validated client-centred communication style. This session will review the literature surrounding the use of MC in the health care setting. The overall efficacy of the technique will be explored, as well as focusing on efficacy between interventionists (e.g., physicians, nurses) and behaviours (e.g., physical activity, smoking).

Learning Objectives
At the end of this presentation, attendees will be able to:
• Report the efficacy of MC in the health care setting; and
• Differentiate the efficacy of motivational interviewing between different kinds of interventionists as well as between different behaviours.

Using Motivational Communication to Optimize Patient Adherence and Outcomes in Pediatric Asthma

Dr. Silvana Barone

Treatment adherence in pediatric asthma depends upon parental attitudes and behaviours that may be affected by anxiety about the negative consequences of certain aspects of asthma treatment. Provider-patient (parent) interactions focusing on education and “advice-giving” are often insufficient to reassure anxious patients about the importance and safety of various asthma treatments (pharmacological, environmental) for children and adolescents, leading to poorer adherence and outcomes, and provider frustration. MC, as an empirically-validated, client-centred communication style, has become increasingly popular within health care settings, as it focuses on enhancing motivation and confidence to adopt a particular health behaviour (e.g. quitting smoking, removing allergens from the home, improving adherence to therapy). This session will demonstrate how to use MC skills to optimize provider-patient (parent) interactions to overcome resistance to various aspects of treatment in pediatric asthma.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Summarize the evidence-base of MC applications in pediatric populations;
• Recognize when MC may be used to deal more effectively with anxious, resistant patients (parents) in pediatric asthma; and
• Demonstrate some specific MC skills that may be used to optimize provider-patient interactions and treatment adherence in pediatric asthma.
A National Respiratory Research Strategy: People, Platforms and Knowledge Mobilization

Dr. Andrew Halayko

The National Respiratory Research Strategy (NRRS) is an initiative of the Canadian Lung Association, the Canadian Thoracic Society and the Canadian Respiratory Health Professionals. The NRRS aims to enhance Canada’s research efforts and the impact of research on lung health through:

• A national training program that will build research capacity and create a fertile environment for respiratory research excellence and innovation;

• A national grant program to support research projects, including a research fund to support multidisciplinary and strategic research; and

• An integrated knowledge translation strategy that uses evidence-based research to inform advocacy, program planning and service delivery efforts across the continuum of care.

This presentation will focus on strategic highlights and key programs of the NRRS. It will also provide information on implementation, including milestones and timelines.

Learning Objectives
At the end of this presentation, attendees will be able to:

• Describe the purpose and strategic directions of the NRRS;

• Describe the three pillars of the Strategy: Training, Grants and Knowledge Translation; and

• Outline the portfolio of programs that are embedded within the pillars of the Strategy.

The Canadian Respiratory Research Network

Dr. Shawn Aaron

This session will present an overview of the Canadian Respiratory Research Network (CRRN) including its funding and structure, its investigators, platforms and projects. It will describe how the CRRN will serve as a resource for Canadian respiratory investigators by developing shared research platforms that will be accessible to the broader respiratory research community, and allowing investigators to leverage collaborations and access the platforms, to facilitate future opportunities and grant applications.

Learning Objectives
At the end of this presentation, attendees will be able to:

• Explain how the CRRN can help facilitate respiratory research in Canada; and

• Describe how individual researchers can access the CRRN and collaborate with it.

Breathing as One: The Campaign for Lung Research

Dr. John Granton

Breathing as One – The Campaign for Lung Research is a $10 million national fundraising campaign over 5 years that supports The Lung Association’s bold and innovative research strategy. Based on the principals of sharing and collaboration, the research strategy will push beyond the traditional boundaries of lung research, leverage new knowledge, and create the highest standards of treatments to attract and retain talented researchers. The Campaign represents a significant shift in the way The Lung Association works – one that will enable us to elevate our brand, draw new donors to our cause, and engage the federation and its societies from coast to coast. With your support, we will learn more about diseases that affect our patients, discover novel treatments, save lives, and improve the quality of life for all Canadians. It’s time to raise our collective voice and shine a spotlight on the growing challenges of lung disease.

Learning Objectives
At the end of this presentation, attendees will be able to:

• Describe the Breathing as One Campaign and how we plan to raise awareness of lung disease and leverage financial support for research that aligns with our national research strategy;

• Explain how the Breathing as One Campaign will shine a spotlight on the growing challenges of lung disease and influence public perception of the disease state; and

• Describe how they can get involved in the Breathing as One campaign.
Nutrition and Advanced Lung Disease

Ms. Valérie Jomphe

This presentation will review the nutritional requirements associated with the principal lung diseases dealt with in lung transplantation. Particular focus will be placed on optimizing nutritional goals and strategies and improving the candidate’s health by overcoming malnutrition, defined as either under-nutrition or obesity, in advanced lung disease.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss nutritional characteristics seen in advanced lung disease and assess nutritional status; and
• Recommend the appropriate nutritional therapy for patients awaiting lung transplants to improve their well-being.

Frailty and Sarcopenia in the Lung Transplant Candidate

Dr. Dmitry Rozenberg

Lung transplantation is increasingly provided to patients with older age, increased co-morbidities and functional limitations. Older recipients have a reduced survival time post transplantation, which is not necessarily related to age-associated co-morbidities. Frailty, an inflammatory state of increased vulnerability to physiological stressors, may be an important link in understanding some of the clinical outcomes in patients with advanced lung disease. A key component of frailty is sarcopenia, which is the progressive loss of muscle mass, strength and function that is commonly seen in patients with advanced lung disease. This presentation will review the construct of frailty as its been applied in the elderly, address the concept of sarcopenia in advanced lung disease, and discuss the current gaps in our understanding of these two processes in advanced lung disease.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the evidence for frailty and sarcopenia in advanced lung disease;
• Recognize the increased prevalence of frailty and sarcopenia in their patients with advanced lung disease; and
• Identify various construct measures and tools that might be helpful in assessing lung transplant candidates.

Optimizing the Lung Transplant Candidate Through Exercise Training

Ms. Lisa Wickerson

Lung transplant candidates represent a select group of individuals with very severe, heterogeneous lung disease who have historically participated in mandatory pre-habilitation programs in Canada. Despite advances in pulmonary rehabilitation in acutely-ill individuals, we are still at an early stage in understanding the role and optimal strategies of pre-transplant exercise training to prepare lung transplant candidates for surgery and facilitate post-transplant recovery. This presentation will focus on reviewing the current evidence supporting pre-transplant exercise training, discuss unique challenges in pre-habilitation of the lung transplant candidate and discuss current gaps and future research directions.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the evidence that exercise training in lung transplant candidates improves pre- and post-lung transplant outcomes;
• Recognize the specific challenges of pre-habilitation in the lung transplant candidate; and
• Identify potential training modes and exercise prescription strategies to optimize exercise capacity, peripheral muscle strength and physical activity in the lung transplant candidate.
OSA and Cardiovascular Disease  
**Dr. Najib Ayas**

Obstructive sleep apnea (OSA) is a well-recognized risk factor for cardiovascular disease. Animal and human studies have helped to elucidate the potential pathogenic mechanisms whereby OSA can lead to the development of cardiovascular disease, including metabolic abnormalities, activation of the sympathetic nervous system, and hypertension. Accumulating data suggests that treatment of OSA reduces the risks of future cardiovascular disease, but definitive trials are currently lacking. This presentation will review the epidemiologic and potential pathogenic mechanisms linking premature cardiovascular disease and OSA.

**Learning Objectives**
At the end of this presentation, attendees will be able to:
- Describe how OSA may lead to premature cardiovascular disease;
- Discuss the epidemiologic associations between OSA and cardiovascular disease, and the links between treatment and potential reduction of the risks; and
- Identify future research required to advance the field.

OSA, Obesity and Diabetes  
**Dr. Willis Tsai**

There is increasing evidence that OSA is independently associated with obesity and metabolic syndrome, most notably hypertension, diabetes and impaired glucose tolerance. Nonetheless, the effects of treatment (CPAP) on glycemic control remains mixed. This may be related to a lack of selection of “at risk” individuals, namely those with severe OSA, sleepiness, or more severe nocturnal oxygen desaturations. Furthermore, in studies that demonstrate an effect of CPAP on glycemic control, it is unknown whether treatment effect is related to suppression of OSA or a reduction in adipose tissue. The effect of CPAP on obesity is inconsistent. While there is an association between obstructive sleep apnea, obesity and diabetes in selected individuals, the effect of OSA treatment on these co-morbidities remains unclear.

**Learning Objectives**
At the end of this presentation, attendees will be able to:
- Recognize that there is an independent association between OSA and diabetes in selected individuals;
- Identify potentially “at risk” groups, including those with severe OSA, more severe desaturations, and possibly sleepiness; and
- Recognize that while weight loss and exercise will improve metabolic syndrome parameters and OSA, the effects of OSA treatment on metabolic syndrome remain unclear.

OSA and Kidney Disease  
**Dr. Patrick Hanly**

It is well recognized that end stage renal disease (ESRD) is a risk factor for sleep apnea, whose pathophysiology is related both to destabilization of central ventilatory control and upper airway occlusion during sleep. More recently, the potential impact of sleep apnea on the development of chronic kidney disease (CKD) has received increasing attention, which raises the possibility that there is a bi-directional relationship between sleep apnea and kidney failure. A better understanding of these relationships is clinically important since identification and modification of additional risk factors for CKD may slow or halt the progression to ESRD, which has significant benefits both for the individual patient and the healthcare system in general.

This presentation will review the pathogenesis of CKD, summarize the data on the prevalence of sleep apnea in this population and its potential impact on kidney function, and outline pathophysiologic mechanisms through which hypoxia may damage the kidney.

**Learning Objectives**
At the end of this presentation, attendees will be able to:
- Describe the pathogenesis of CKD;
- Summarize the literature on the association between OSA and CKD; and
- Discuss the potential impact of nocturnal hypoxia on kidney function.
Neuromuscular Disease: Home Ventilation

**Lung Volume Recruitment in Neuromuscular Disease**

*Dr. Sherri Katz*

This talk will address lung volume recruitment (LVR) in neuromuscular disease. The evidence for LVR as a beneficial therapy will be summarized, including gaps in knowledge surrounding its use. Clinical application of LVR will be discussed in the context of current clinical care guidelines for neuromuscular disease.

**Learning Objectives**

At the end of this presentation, attendees will be able to:
- Distinguish LVR techniques and explain their application in neuromuscular disease;
- Appraise the evidence in the literature for benefit of LVR in individuals with neuromuscular disease; and
- Compare the role of LVR therapy in clinical care guidelines for the management of individuals with neuromuscular disease.

**Quality of Life in Individuals on Home Mechanical Ventilation**

*Dr. Jeremy Road*

Home mechanical ventilation (HMV) is a resource intensive intervention. Although there is limited high quality evidence, i.e. randomized control trials (RCT) looking at survival, there is little likelihood that such RCTs will occur going forward. There is some information on health-related quality of life in patients on HMV and the underlying disease appears to play a significant role in the quality of life in those on HMV. In this session, the data evaluating health-related quality of life in patients on HMV will be discussed along with new information on this topic.

**Learning Objectives**

At the end of this presentation, attendees will be able to:
- Relate new knowledge on health-related quality of life in patients on HMV; and
- Apply this new knowledge to guide them in their endeavors in improving quality of life in ventilator-assisted individuals.

**HMV: An International Perspective**

*Dr. Karen Rimmer*

The components and success of two large non-Canadian HMV programs will be examined. The relevance to Canadian programs will be highlighted.

**Learning Objective**

At the end of this presentation, attendees will be able to:
- List the important components of a successful HMV program.
MODERATED POSTER SESSION

FRIDAY, APRIL 25, 2014  |  1530 – 1700

During the refreshment break from 1500 – 1530, presenters will be available to answer questions at their posters. At 1530, poster session chairs will foster discussion among the authors and audience. Delegates should review the following themed poster groupings and move to their area of interest. Posters are listed by theme and then alphabetically by presenting author.

### Asthma Basic Science

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<td>Jason Arnason</td>
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<td>PrimoTinA-Asthma™ Abstract: Improvements in Lung Function with Tiotropium as Add-on Controller Therapy to ICS+LABA for Patients with Symptomatic Severe Asthma</td>
<td>Catherine Charbonneau</td>
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<td>Regulation of Human Airway Epithelial to Mesenchymal Transition upon Rhinovirus Infection</td>
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<td>Exposure of Human Bronchial Epithelial Cells to House Dust Mite Allergen Mediates Human Airway Smooth Muscle Cell Chemotaxis</td>
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<td>Human Rhinovirus Infection of Human Bronchial Epithelial Cells Results in Migration of Human Airway Smooth Muscle Cells</td>
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<td>Human Rhinovirus Infection of Human Bronchial Epithelial Cells Induces Release of Chemoattractants for Fibroblasts</td>
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<td>The Association Between Asthma Sputum Phenotypes and Body Mass Index</td>
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<td>Impaired Ciliary Differentiation of Airway Epithelial Cells from Asthmatics With and Without Exercise-Induced Bronchoconstriction</td>
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### Asthma Clinical Management

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<td>Osteoporosis Prevention in Inhaled Cortico-Steroid Users</td>
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<td>A Profile of Children with Asthma as a Reason for Participation and Activity Limitation in a National Sample of Canadians</td>
<td>Joshua Lawson</td>
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<td>Assessment of the Use of a Work-Related Asthma Screening Questionnaire in a Primary Care Asthma Program</td>
<td>Diane Lougheed</td>
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## Chronic Obstructive Pulmonary Disease (COPD)

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<td>Pat Camp</td>
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<td>Ankle/Brachial (ABI) Measurement in COPD Patients: A Pilot Study</td>
<td>Andrew Cave</td>
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<td>TIOSPIR: Safety and Efficacy Trial of Tiotropium Respimat Versus HandiHaler in COPD</td>
<td>James Gamble</td>
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<td>Assessment of Oscillating Positive Expiratory Pressure (OPEP) Devices by Means of Adult Expiratory Waveforms: A Laboratory Study</td>
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<td>Metabolic Cost of Resistance-Based Exercise Training in People with COPD: Preliminary Results</td>
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<td>MicroCT Analysis of Paraffin Embedded Lung Tissue: Is Small Airway Obstruction an Early Feature of COPD?</td>
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## Infectious Lung Disease

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<td>Mustafa Al-Saiedy</td>
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<td>The Role for Conventional Transbronchial Needle Aspiration in the Era of Endoscopic Ultrasonography for Assessment of Mediastinal Lesions</td>
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## Interstitial Lung Disease/Pulmonary Vascular Disease

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Ann Zalucky
Acute and chronic lung diseases such as bronchopulmonary dysplasia (BPD) in premature infants, acute respiratory distress syndrome (ARDS) and emphysema represent a major health care challenge because of a lack of efficient therapies. A common denominator of these diseases is the absence of injury resolution leading to distorted tissue repair and/or scarring resulting in arrested alveolar growth in the case of BPD, fibrosis in the case of ARDS, or alveolar destruction in the case of emphysema. Despite intense investigations in understanding the mechanisms of lung injury, modern clinical management remains largely devoid of medications promoting lung repair. Current treatment remains largely supportive. Recent insight into stem cell biology has created excitement about the repair potential of these cells. This presentation will highlight basic properties of mesenchymal stromal cells, their use in preclinical models of lung injury, and potential therapeutic mechanisms.

Learning Objectives
At the end of this presentation, attendees will be able to:

- Discuss stem/progenitor cell biology;
- Describe the healing mechanisms of action of stem/progenitor cells; and
- Appraise the potential of stem/progenitor cells in lung repair.

Dr. Bernard Thébaud is a clinician-scientist and a professor of pediatrics at the University of Ottawa. He obtained his MD, PhD and clinical training in France before completing a post-doctoral fellowship at the University of Alberta. Dr. Thébaud studies the mechanisms underlying lung development, injury and repair. His research is supported by the Canada Research Chair program, the Canadian Institutes for Health Research and the Stem Cell Network.
CIHR-ICRH/CTS Distinguished Lecture in Respiratory Sciences

From Asthma Pathophysiology to Knowledge Translation: A Journey through Airways and Human Behaviour

Dr. Louis-Philippe Boulet

This presentation will review various aspects of research on asthma, airway function and inflammation/remodelling. The concept of asthma phenotypes/endotypes will be reviewed. Furthermore, a historical perspective will be provided on education and knowledge translation in respiratory health. More specifically, the mechanisms of the development of asthma, including airway changes occurring before the development of airway hyperresponsiveness, and symptomatic asthma in susceptible populations, will be described. To illustrate the various pathways involved in those changes in relation to the subject’s characteristics, lifestyle and environmental issues, the effects of allergen/occupational exposures, smoking, obesity and aging will also be described. Research on factors leading to the development of airway dysfunction and structural changes, as well as their relationships with clinical consequences in high-level athletes, will be reviewed. Finally, the presentation will conclude with an update about research on knowledge translation, particularly on patient education, guidelines implementation and related topics.

Learning Objectives
At the end of this presentation, attendees will be able to:

- Discuss current hypotheses on the mechanisms of the development of asthma;
- Describe the main asthma phenotypes and discuss the clinical relevance of such categorization; and
- Provide an update on research on knowledge translation in respiratory health.

Dr. Louis-Philippe Boulet is a lung specialist at l’Institut Universitaire de Cardiologie et de Pneumologie de Québec (IUCPQ) and a professor of medicine at Laval University’s Department of Medicine. He completed his medical studies at Laval University and a fellowship at McMaster University. Dr. Boulet holds the Knowledge Translation, Education and Prevention in Respiratory and Cardiovascular Health Chair at Laval University. He is a past-president of the Canadian Thoracic Society and was chair of the Canadian Respiratory Guidelines Committee from 2008 to 2012. He has been chair of the Global Initiative on Asthma (GINA Guidelines) Dissemination and Implementation Committee since 2009. He was the founder and president/scientific director of the Quebec Asthma and COPD Network, and first vice-president of the Canadian Network for Asthma Care. He is assistant editor of the Canadian Respiratory Journal, European Respiratory Journal, Therapeutic Education Journal and past member of various editorial boards (CHEST), as well as reviewer for several medical journals. Dr. Boulet has published close to 500 medical publications, 600 abstracts, 28 book chapters and 6 books. He is frequently invited as a speaker at national and international meetings.
β₂-Agonists: More Than Just Bronchodilators

*Dr. Mark Giembycz*

In asthmatic patients who are not well controlled by inhaled corticosteroids (ICS), current national and international treatment guidelines recommend adding a long-acting β₂-agonist (LABA). Clinical trials have convincingly shown that this so-called “combination therapy” exerts therapeutic benefit by having a positive impact on a number of outcome measures including lung function, exacerbation frequency and rescue medication utilization, which are not produced by an ICS alone as monotherapy. In this presentation, current ideas are presented that may account for the ability of an ICS and LABA, when used in combination, to achieve asthma control in patients that fail to respond optimally to ICS.

**Learning Objective**

At the end of this presentation, attendees will be able to:

- Describe how a long-acting β₂-agonist in combination with an ICS delivers superior clinical benefit in asthma than an ICS alone as monotherapy.

An Industry View of Future Developments in Pharmacotherapy in Obstructive Lung Disease

*Dr. Steven Pascoe*

Citing current examples, this presentation will look at the potential for different therapeutic targets to be explored in obstructive lung disease. The main emphasis will be placed on phenotypic differentiation as it relates to patient selection and study design. The value of different anti-inflammatory strategies as they relate to likely benefit will be discussed, as well as common hurdles encountered at different stages of drug development.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Interpret and apply data, given results from early phase clinical studies and/or secondary analysis; and

Clinical Pharmacology of Allergen-Induced Asthma

*Dr. Paul O’Byrne*

Allergen inhalation challenge is a reproducible method of inducing reversible bronchoconstriction, airway hyper-responsiveness and airway inflammation in mild allergic asthmatic subjects. The airway effects of the allergen challenge resolve fully within two weeks, which allows the subjects to be used as their own controls in some studies. This clinical challenge model has been predictive for drugs that are likely to be effective, or not, in asthma. The Clinical Investigator Collaborative (CIC) was formed, as part of the Network of Centres of Excellence (NCE), AllerGen. The CIC now consists of six Canadian academic centres (McMaster University, Laval University, University of Saskatchewan, University of British Columbia, University of Alberta and University of Calgary). Partnerships with biopharmaceutical and biotechnological companies have been formed with the CIC, which has established a mechanism to fast-track potential drug candidates for the treatment of asthma.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Describe the inflammatory basis of allergen-induced asthma;
- Summarize the effects of currently available asthma treatments on allergen-induced asthmatic responses; and
- Explain the value of allergen-inhalation challenge in the development of new drugs for asthma.
Expediting Lung Cancer Diagnosis and Management for Patients with Suspected Lung Cancer

Ms. Nadine Strilchuk

Lung cancer is the most common cancer in the world (Globocan, 2008). Canadian 2012 estimates identified 25,600 new cases of lung cancer. The five-year survival ratio for lung cancer between 2004 and 2006 was only 16%, worse than prostate (96%), breast (88%), cervical (75%), and colorectal cancer (63%), resulting in more deaths than these 3 other cancers combined (Canadian Cancer Statistics, 2011). Delays in evaluation and treatment could contribute to poor outcomes as well as patient anxiety. To address the time delays for patients in Alberta, the Alberta Thoracic Oncology Program’s inter-professional team has developed innovative approaches to expedite the detection, diagnosis, and specialty consultation for patients with suspected lung cancer. The goal of this presentation is to encourage participants to consider novel approaches in developing process improvements for expediting lung cancer diagnosis and management in their health centres.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Identify potential delays in diagnosing patients with suspected lung cancer;
• Recognize the importance of reducing referral delays for patients with a suspected diagnosis of lung cancer;
• Recognize the impact on delayed prognosis for these patients; and
• Implement novel approaches in expediting lung cancer diagnosis for patients with suspected lung cancer.

Mediastinal Staging for Lung Cancer

Dr. Jacob Gelberg

Recent years have seen advances in lung cancer care from screening to new invasive diagnostic tools and novel treatments. This session will highlight the importance of mediastinal lymph node staging in guiding treatment selection and prognosis in patients with lung cancer. The role of non-invasive staging with imaging including CT, PET and PET/CT will be reviewed. Invasive staging modalities including the role and diagnostic yield of TBNA, EBUS and mediastinoscopy will be discussed. A practical approach to staging of patients with lung cancer will be developed during this session.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Describe the importance of lymph node staging in guiding management and prognosis of lung cancer;
• Identify available mediastinal lymph node staging modalities and their diagnostic yields; and
• Develop an approach to staging of the mediastinum in lung cancer patients.

When Tissue is the Issue: Molecular Testing for Lung Cancer – What All Respirologists Should Know

Dr. Desirée Hao

Lung cancer is the leading cause of cancer-related deaths in both men and women across Canada. The majority of patients are diagnosed at an advanced stage when treatment options are largely palliative, and historically, the magnitude of benefit of systemic therapy has been small. However, the landscape of treatment options for advanced lung cancer has changed dramatically in the last several years with the introduction of molecularly-targeted agents. This presentation will review current treatment algorithms for advanced non-small-cell lung carcinoma (NSCLC), emphasizing the critical need for adequate tumour tissue for molecular testing to facilitate therapeutic decisions.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Relate the evolution of systemic therapy in the treatment of NSCLC;
• Summarize algorithms for treatment of NSCLC; and
• Explain why tissue is the issue.
Exploring Patients’ Appraisals to Facilitate Post-Exacerbation Pulmonary Rehabilitation

Dr. Samantha Harrison

Adherence to pulmonary rehabilitation (PR) following an acute exacerbation of COPD is known to be poor. Psychological theories suggest that the experience of an acute exacerbation may affect the manner in which patients perceive their illness. These illness perceptions may, in turn affect patients’ engagement in disease management strategies, for example, adherence to PR.

This presentation will provide an overview of the role of patients’ illness perceptions in shaping health behaviour, namely attendance to PR. A cluster analysis of illness perceptions data will be described, establishing groups of patients holding distinct beliefs. A qualitative methodology will be presented promoting in-depth understanding about the way in which patients appraise acute exacerbations as they consider, yet decline PR. Knowledge gleaned from this body of work could inform the development of targeted psychologically-informed strategies which may be helpful in facilitating post-exacerbation PR.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the role of patients’ illness perceptions in shaping health behaviour, namely attendance to PR;
• Describe groups of patients with distinct illness perceptions following an acute exacerbation of COPD; and
• Explain how patients appraise acute exacerbations as they consider, yet decline PR.

The Prevalence and Impact of Depression and Anxiety on COPD Outcomes and Quality of Life

Dr. Kim Lavoie

COPD is a chronic irreversible respiratory disorder that may be associated with significant psychosocial impairments. Depression and anxiety are common, and rates of depressive and anxiety disorders are disproportionately high. Identifying depression and anxiety among patients with COPD can be challenging, but remains important due to established links between depression and anxiety and worse COPD outcomes. This presentation will review the prevalence of depressive and anxiety disorders among COPD patients, and their impact on exacerbation rates and prognosis. The pros and cons of different assessment methods of anxiety and depression will be reviewed, and the efficacy of psychosocial interventions will be discussed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Summarize the results of a recent meta-analysis treating the question of the incremental asthma-related medical cost of comorbid psychiatric disorders in asthma;
• Explain the difference between productivity loss due to presenteeism and absenteeism given an asthma patient demonstrating a productivity loss at work; and
• Determine the average weekly hours of lost work and the cost of the productivity loss, given an asthma patient with psychiatric disorders and uncontrolled asthma.

Incremental Economic Burden of Psychiatric Disorders in Asthma

Dr. Grégory Moullec

Overall economic burden of chronic health conditions comprises direct costs (e.g. hospitalizations, medication treatments, outpatient visits) and indirect costs (e.g. absences, impaired work productivity). Indirect costs are often an overlooked aspect of this burden. Psychiatric disorders have been shown to be associated with lowered work productivity. While asthma is also known as being a condition adversely affecting work productivity, no published studies have yet determined the synergistic effect of comorbid psychiatric disorders and asthma control on productivity loss. This presentation will address the results of a recent meta-analysis treating the question of the incremental asthma-related medical cost of comorbid psychiatric disorders in asthma, and of a population-based study comparing productivity losses in asthma patients, with or without psychiatric conditions.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Summarize the results of a recent meta-analysis treating the question of the incremental asthma-related medical cost of comorbid psychiatric disorders in asthma;
• Recognize the impact of depression and anxiety on COPD exacerbations and prognosis;
• Outline methods of assessing depression and anxiety among patients with COPD; and
• Identify targets for psychological intervention among patients with COPD.
**Pulmonary Surfactant and the Genetic Basis of Lung Disease: What's New in Neonates and Infants**

*Dr. Lawrence Nogee*

This presentation will focus on the role of pulmonary surfactant in the pathophysiology of a common lung disease of premature infants, neonatal respiratory distress syndrome (nRDS), and the roles of common and rare variants in the genes encoding proteins important in surfactant function in metabolism in lung disease. Specific clinical and laboratory features of rare disorders, including interstitial lung disease in older children and adults, which are caused by mutations in different surfactant related genes, will be reviewed, with an emphasis on recognizing the clinical phenotypes of these disorders and important clues to their diagnosis. Specific examples of how these rare illnesses provide insights into both the normal function and metabolism of different surfactant components and pathophysiologic mechanisms of more common diseases will also be discussed.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Recognize the characteristic clinical and laboratory features of children with inborn errors of surfactant metabolism when encountering such patients in clinical practice, and thus suspect the diagnosis when appropriate;
- Relate how the study of rare diseases may provide insights into normal metabolism or mechanisms of common diseases, such as neonatal respiratory distress syndrome; and
- Articulate at least one specific example.

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**The Role of Surfactant in Adults – Is There a Future?**

*Dr. James Lewis*

The role of endogenous surfactant alterations in the development and progression of lung injury, and the mechanisms responsible for these changes, will be discussed. The biophysical and inflammatory consequences of surfactant dysfunction will also be reviewed, as will the specific contribution of mechanical ventilation to this process. This information will provide the rational for evaluating exogenous surfactant administration in patients with Acute Lung Injury (ALI) as a therapeutic intervention, and results of multi-centre clinical trials evaluating surfactant treatment in patients with ALI will be presented. Finally, speculation as to the potential future role of surfactant administration in adult patients with lung disease will be discussed.

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**Host Defense vs. Lung Injury: Neutrophil Extracellular Traps (NETs) and Surfactant Proteins**

*Dr. Nades Palaniyar*

This presentation will describe the relevance of recently identified neutrophil extracellular traps (NETs) for pathogen clearance and lung injury. Although NETosis has been initially considered as an effective mechanism for trapping and killing microbial pathogens, recent studies highlight the pathogenic roles of NETs. This presentation will summarize the current understanding of NETosis and evaluate the good and bad sides of the NETs, and discuss how NETs effect paediatric and adult lung diseases. How NETs can be cleared from the lungs without compromising anti-microbial properties of innate immune cell components will be discussed. The talk will also highlight how innate immune collectins such as surfactant proteins A and D regulate infection and inflammation in the airways. Effect of SP-D on NETosis and NETs clearance will also be highlighted. Finally, the therapeutic potential of innate immune surfactant proteins and NETotic pathway components will be highlighted.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Summarize NETosis, and the factors that induce and suppress NET formation in the lungs;
- Evaluate the therapeutic options in treating lung infections and neutrophilic inflammation;
- Discuss the pros and cons of NETs in adult and pediatric inflammatory lung diseases; and
- Relate the emerging field of NETosis in the context of their own research or clinical practice.
**Little Wheezers in the Emergency Department: Managing Acute Pediatric Asthma**

**Dr. David Johnson**

This presentation will provide evidence supporting how best to manage pre-school and school-age children who present for emergency care. The discussion will include how best evidence supports the delivery of aerosols by meter-dose inhalers and spacers in children with mild to moderate respiratory distress. Continuous nebulization in children with severe respiratory distress as well as frequent salbutamol inhalations and inhalations of ipratropium in the first hour of treatment for children with moderate to severe respiratory distress will be presented. A discussion of early administration of oral corticosteroids and the provision of asthma education to families in follow-up after discharge will follow.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Describe types of aerosol administration;
- Discuss the types, dosage and frequency of aerosolized bronchodilator therapies;
- Describe the evidence supporting the use of early corticosteroid therapy and other therapies including intravenous magnesium and salbutamol; and
- Explain the importance of the role of asthma education in follow-up to an emergency visit.

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**Everything That Wheezes Is Not Asthma**

**Dr. Robert Cowie**

Many patients who attend an urgent care or emergency department with acute shortness of breath and wheezing do not have asthma. This is especially true amongst those who attend repeatedly. In this presentation some of the typical non-asthma disorders will be presented with case reports for illustration.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Recognize and distinguish the variety of syndromes that might mimic asthma on acute presentation; and
- Describe disorder-specific interventions to deal with the acute episode to limit future episodes.

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**Acute COPD Management: Is There Anything More Than Ventolin?**

**Dr. Brian Rowe**

Acute COPD presentations are common in Canadian Emergency Departments (ED), and many care gaps have been identified. Using an approach including bronchodilators, systemic corticosteroids, antibiotics, and non-invasive ventilation, clinicians can safely and successfully manage moderate-severe COPD exacerbations. Despite this aggressive approach, however, a high proportion of patients may still require admission. This presentation will discuss how COPD patients recover slowly and are susceptible to relapse and further exacerbations, and explore options for patients who continue to present to the ED with recurrent acute COPD episodes.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Discuss the major diagnostic difference between acute asthma and COPD presentations;
- Relate the synergistic role of systemic corticosteroids and antibiotics in the management of acute COPD in the ED and after discharge;
- Outline risk factors associated with COPD admission and relapse; and
- Discuss the role of follow-up and non-pharmacological issues in COPD management.
What is the Relevance of Autoantibodies in Interstitial Lung Disease?

Dr. Christopher Ryerson

This presentation will include a brief review of the clinical features and serological markers of autoimmune diseases that commonly cause interstitial lung disease (ILD), including a focus on rheumatoid arthritis, systemic sclerosis, dermatomyositis, polymyositis, antisynthetase syndrome, mixed connective tissue disease and undifferentiated connective tissue disease. The relevance of autoimmune antibodies in ILD will be discussed, highlighting the association of specific autoimmune antibodies with clinical features and prognosis. Illustrative cases will be used to highlight key points.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Name the autoimmune diseases that commonly cause ILD;
• Identify the relevance of autoimmune antibodies in ILD; and
• Provide a general guide for the testing of autoimmune antibodies in ILD.

Air Pollution and Interstitial Lung Disease: Do the Particulates Matter?

Dr. Kerri Johannson

Air pollution is a ubiquitous exposure and a well-established risk factor for several lung diseases including asthma, COPD and lung cancer. Recent data suggest a relationship between air pollution exposure and both the development and exacerbation of interstitial lung disease (ILD). This session will review the current clinical and biological evidence linking air pollution exposure to the development and progression of ILD and propose a new way of conceptualizing cumulative environmental exposures in this patient population.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Recognize the potential role of air pollution exposure in symptom exacerbation and disease progression in the ILD patient;
• Ask about potential sources of air pollution in the ILD patient’s environment; and
• Integrate environmental exposure information into global patient management.

New Rheumatologic Drugs: Pulmonary Benefits and Side Effects

Dr. Charlene Fell

Autoimmune disease is recognized as a cause of interstitial lung disease (ILD) and patients with a new diagnosis of ILD should be screened for these disorders. There is a growing body of evidence supporting the use of immunomodulating drugs in ILD caused by autoimmune disease, particularly scleroderma. This session will focus on the use of immune suppressant drugs in autoimmune ILD, the evidence for their efficacy, potential side effects and monitoring parameters.

Learning Objectives
At the end of this presentation, attendees will be able to:
• List three drugs used to treat rheumatologic disease causing ILD;
• Cite the data supporting the use of these drugs in ILD; and
• Identify drug-related side effects and monitoring parameters.
Primary Ciliary Dyskinesia

Dr. David Hall

This presentation will provide an overview of Primary Ciliary Dyskinesia (PCD) with a focus on pulmonary manifestations. The current challenges in diagnosis including the evolving role of genetic testing will be discussed with special attention paid to the role of nasal nitric oxide. Treatment options will be briefly discussed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Explain what cilia are and how their dysfunction can affect patients;
• Suspect a diagnosis of PCD;
• Recognize the challenges in diagnosing PCD; and
• Describe the role of nasal nitric oxide measurements in screening for PCD and identify the main treatments available for PCD.

Pharmacologic Management of Non-CF Bronchiectasis

Dr. Julie Jarand

Non-CF bronchiectasis is increasingly recognized and is the cause of significant morbidity in affected individuals. There is renewed interest in this disease that is associated with multiple medical conditions and disease mechanisms. Management can be challenging and requires a multimodal therapeutic approach. Historically, evidence for treatment was extrapolated from trials performed in cystic fibrosis (CF) patients. More recently, therapies for non-CF bronchiectasis are undergoing testing in clinical research trials designed for this specific, but variable, population. This session will provide a clinical approach to the prevention and management of acute exacerbations as well as ways to reduce chronic infection and inflammation. Current pharmacologic and surgical therapies will be outlined, and the data to support their use reviewed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the causes/associated conditions and microbiology of non-CF bronchiectasis to provide a basis for the rationale of current therapies;
• Describe the indicators and treatment of exacerbations of non-CF bronchiectasis;
• Identify options for maintenance therapy of non-CF bronchiectasis including inhaled, oral and intravenous medications (e.g. antibiotics, steroids, bronchodilators, anti-inflammatories); and
• Make more informed decisions with regards to treatment of non-CF bronchiectasis as well as recognize the risks/benefits and challenges of therapy.

Airway Clearance Techniques in Non-CF Bronchiectasis

Ms. Maggie McIlwaine

This presentation will focus on airway clearance therapies for the treatment of non-CF bronchiectasis. Various airway clearance techniques will be described together with the underlying physiology on which they are based. These include the active cycle of breathing techniques, autogenic drainage, positive expiratory pressure, oscillating positive pressure such as acapella or flutter, and high frequency chest wall oscillation. Timing and use of adjuncts, such as inhalation therapies to optimize airway clearance, will be examined, and the outcome of clinical studies using these techniques, and the efficacy of their use in this population, will be discussed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss the techniques of active cycle of breathing, autogenic drainage, positive expiratory pressure, oscillating positive pressure, and high frequency chest wall oscillation;
• Discuss the physiology upon which each of these techniques is based;
• Synthesize the evidence for the use of airway clearance techniques in the treatment of bronchiectasis; and
• Summarize the role of inhalation therapy as it relates to airway clearance.
Lessons Learned and the Potential of EMR Data to Support Quality of Care and Performance Measurement

Ms. Alison Bidie

Over half of physicians in Canada are using electronic medical records (EMRs). Presently, EMR data is largely free text. This restricts the use of clinical data for measuring population health, quality of care and performance. To improve the availability of primary health care (PHC) data, key stakeholders endorsed a priority subset of the PHC EMR Content Standard and the development of associated clinician-friendly picklists (CFPLs) for implementation in EMRs. This standard, once implemented in EMR specifications, will improve the capture of quality information and make coded data available in key areas such as health concern and reason for visit. Standardized and consistent collection of EMR data may improve availability for use in clinical practice and its potential to measure PHC indicators and to address questions about patient outcomes and health system performance.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Discuss clinicians’ existing experience of using EMR data for QI and the potential value and associated implications in capturing and using structured EMR data for quality improvement and system-level planning on chronic disease management and health promotion;
• Explain how the PHC EMR Content Standard supports respiratory performance measurement and quality of care; and
• Outline key enablers and insights on how to improve the availability of EMR data for quality of care and performance measurement.

The PRESTINE Working Group: Asthma and Related Respiratory Elements for EHRs

Dr. Diane Lougheed

Electronic health records (EHRs) are increasingly replacing traditional paper records in hospital and ambulatory care settings. EHRs are emerging as a potentially powerful knowledge translation tool and means of promoting and enabling the implementation of best practice guidelines. In addition, EHR data may be used to monitor performance. The CTS and Canadian Respiratory Guidelines Committee (CRGC) are supporting a Pan-Canadian Respiratory Standards Initiative for Electronic Health Records (PRESTINE). In this presentation, the process the Asthma Working Group used to identify and prioritize data elements will be described, and the committee’s recommendations for asthma and related data elements will be summarized.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Relate the importance of standardization of data elements for electronic health/medical records;
• Recognize ways of using standardized EHR data to support respiratory best practices and performance measurement; and
• Begin to incorporate standardized respiratory elements into the EMR system they currently use.

Which Asthma Quality of Care Indicators Really Matter?

Dr. Teresa To

Despite well-established management guidelines, variations in quality of asthma care are common in primary care settings. Community-based performance indicators (or quality of care indicators) can help identify barriers to, and enablers of, the development, dissemination and uptake of clinical guidelines for asthma management. Performance indicators specific to chronic respiratory disease management currently do not exist at the national level, the values of which would suggest one or more dimensions of quality of care that are potentially amenable to change by the provider or the health system. In this presentation, a set of asthma indicators that can be used to measure current asthma care gaps will be proposed. Using preliminary data from participating sites in our Primary Care Asthma Performance Indicator (PC-API) initiative, asthma statistics measured by these indicators will be reported and how they may contribute to establishing asthma quality of care benchmarks will be discussed.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Outline asthma indicators developed, implemented and evaluated by others in the literature;
• Link quality of care indicators to current asthma care gaps; and
• Discuss Ontario asthma indicator data from the PC-API initiative.
CRHP Research Presentation

This session will feature presentations on new and innovative research in lung health conducted by respiratory health professionals. Presentations have been selected by the CRHP Research Committee from scientific poster abstracts submitted to the CRC.

Non-Invasive Ventilation for the Restricted Thorax: Effects of Ventilator Modality on Quality of Life  |  Ms. Lorna Cummins

Metabolic Cost of Resistance-Based Exercise Training in People with COPD: Preliminary Results  |  Ms. Priscila Robles

Pediatric-to-Adult Asthma Transition Program: A Randomized Trial  |  Mr. Rodel Padua

PLENARY

SATURDAY, APRIL 26, 2014  |  1530 – 1615

Palliative Management of Intractable Dyspnea

Exhibition Hall D

Dr. Michael Slawnych

Moderator: Dr. Chip Doig, Canadian Medical Association

Dyspnea often leads to significant patient distress. In many instances, management of the underlying clinical condition does not alleviate this symptom, and we have to turn to a more general symptom-based approach. The pathophysiology of dyspnea and the evidence for various symptom-based treatment options will be reviewed.

Learning Objectives

At the end of this presentation, attendees will be able to:

- Recognize that treatment of underlying clinical conditions may not alleviate dyspnea;
- Discuss the pathophysiology of dyspnea; and
- Analyze the evidence for various symptom-based treatment options.

Dr. Slawnych initially trained as an electrical engineer at the University of Alberta and the University of British Columbia (UBC). He then did a post-doctoral fellowship in anatomy at UBC. He subsequently was a junior faculty member with the Department of Biomedical Engineering at McGill University. He went on to study medicine at the University of Calgary, and has completed residencies in internal medicine, cardiology and palliative care. He works in both cardiology and palliative care, and has a special interest in cardiac patients near the end of life.

We welcome Dr. Chip Doig, a member of the Board of Directors of the Canadian Medical Association, as moderator, and to share reflections on the CMA’s work on end-of-life issues.
The IPF Debate: Appropriate End Points in IPF
TELUS 104/105
Dr. Chris Ryerson, Dr. Charlene Fell
This pro-con debate will highlight the issues with clinical trial design and the choice of endpoints in idiopathic pulmonary fibrosis (IPF) research. This session will include a review of major IPF clinical trials, with a focus on how the choice of primary endpoint can impact the interpretation of these trials and the generalizability of the results. The two presenters will debate the pros and cons of various endpoints in IPF and discuss what endpoints are most appropriate for use in phase III clinical trials.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Review the findings of major recent IPF clinical trials;
• Identify the advantages and limitations of commonly used endpoints in IPF clinical trials; and
• Demonstrate how the choice of primary endpoint in IPF clinical trials impacts regulatory decisions.

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Dual Bronchodilation in COPD: Is Two Better Than One?
TELUS 108/109
Dr. François Maltais
Bronchodilation is the cornerstone of COPD therapy and recent development of fixed-dose combinations of long-acting bronchodilators provides a unique opportunity to optimize this aspect of the treatment. During this presentation, the rationale and evidence supporting dual long-acting bronchodilation in COPD will be reviewed. We will also discuss the place of dual long-acting bronchodilation in the current COPD treatment armamentarium, taking into account recent COPD treatment guidelines.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Explain the rationale for dual bronchodilation in COPD;
• Appraise the evidence of dual bronchodilation; and
• Identify when dual bronchodilation should be used in treating COPD.

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In recognition of their support, Platinum sponsors have the opportunity to co-develop accredited symposia with the Canadian Thoracic Society (CTS). You are cordially invited to attend the following accredited sessions that have been planned to achieve scientific integrity, objectivity and balance. Space at each session is limited, so plan to arrive early. Access will be based on a first-come, first-served basis. Meals will be provided.
Risk Assessment to Better Manage the Individual COPD Patient: LABD and/or Anti-inflammatory Rx?

**TELUS 104/105**

**Dr. Irv Mayers**

The mainstay of pharmacological therapy is effective bronchodilatation. The majority of our current therapies are based upon well-designed controlled trials but there are still controversies surrounding the most effective approaches and the potential to influence disease progression in the early course of the disease. Additionally, the risks and benefits of anti-inflammatory therapies added to bronchodilator therapy remain controversial for some groups of patients. Some of these controversies likely reflect the hypothesis that COPD represents a complex set of disorders that have as a common presentation chronic airflow obstruction. The use of well-characterized disease phenotypes to find novel therapies is just becoming available. This presentation will review the mainstay of COPD therapy, effective bronchodilators, and examine if additional treatments can provide additive or synergistic clinical benefits.

**Learning Objectives**

At the end of this presentation, attendees will be able to:

- Explain the roles of long acting bronchodilators in the management of COPD;
- Assess the roles of anti-inflammatory therapy for the treatment of COPD; and
- Recognize how combination therapies in COPD can affect outcomes.

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Allergen Immunotherapy: From Subcutaneous Injection to Oral Tablet

**TELUS 108/109**

**Dr. Susan Waserman, Dr. Robert Schellenberg**

Allergic rhinitis is an increasingly prevalent condition, occurring in up to 40% of the population, and present in the majority of asthmatics. It can have a significant impact on quality of life, and affect asthma control. Treatment of allergic rhinitis has focused on allergen avoidance, antihistamines and intranasal steroids, with allergen immunotherapy reserved for those who have responded poorly, or been intolerant to medication. Subcutaneous immunotherapy is disease-modifying with a duration of clinical benefit that substantially exceeds the treatment period. It has been shown to reduce the incidence of asthma in children with allergic rhinitis and to reduce the development of multiple allergic sensitizations. However, though effective for allergic rhinitis, subcutaneous immunotherapy has been used in a small minority of patients because of inconvenience, and potential systemic side effects. A new development in immunotherapy, sublingual tablets for grass pollen allergy, is a home-based treatment with fewer side effects. This will affect the current treatment paradigm for allergic rhinitis.

**Learning Objectives**

At the end of the session, attendees will be able to:

- Evaluate the factors increasing the allergic burden in respiratory disease;
- Describe the impact of concurrent allergic burden and asthma;
- Discuss allergen specific immunotherapy and its effect on disease modification; and
- Compare sublingual immunotherapy with subcutaneous immunotherapy.

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SATURDAY, APRIL 26, 2014    |   1200 – 1315

Current and Future Approaches to the Diagnosis and Management of CTEPH  
TELUS 104/105
Dr. David Langleben, Dr. Naushad Hirani
This symposium will focus on a very important cause of PH: CTEPH / chronic thromboembolic pulmonary hypertension. We will review the disease state (what it is, what causes it, presentation, incidence); diagnostic approaches and current gaps; current treatment approaches including surgical PEA/ pulmonary endarterectomy, and use of medical therapies, including existing PH-targeted medications, and specifically the novel riociguat (mechanism of action, CHEST trial, clinical experience); potential future therapy of angioplasty; current/potential future treatment algorithms.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Recognize and distinguish chronic thromboembolic pulmonary hypertension (CTEPH) from acute pulmonary thromboembolism;
• Be able to accurately diagnose a patient with possible CTEPH;
• Describe the indications, risks, benefits, and results with surgical and medical treatment approaches for CTEPH; and
• Describe pulmonary vascular angioplasty as a possible emerging approach for CTEPH inspection.

The Impact of Pneumococcal Vaccine on Long-Term Morbidity and Mortality of Adults at High Risk for Pneumococcal Disease  
TELUS 108/109
Dr. George Zhanel, Dr. Allison McGeer
Streptococcus pneumoniae is a leading cause of lower respiratory tract infections as well as invasive diseases (bacteremia and meningitis). The organism possesses a polysaccharide capsule (92 different capsular types exist) that serves as an important virulence factor as well as the basis for serotyping. There has been considerable debate in Canada whether or not the current pneumococcal vaccine for adults is effective, particularly in high-risk populations. This program will also examine the burden and impact of disease due to S. pneumoniae, particularly antibiotic resistant S. pneumonia, ask what impact the implementation of new pediatric vaccination programs will have on incidence and antibiotic resistance in adult disease, and discuss the potential for adult vaccination to provide additional protection.

Learning Objectives
At the end of this presentation, attendees will be able to:
• Review the pneumococcal-associated morbidity and mortality in high-risk adults;
• Examine the impact of S. pneumoniae, particularly multi-drug resistant S. pneumoniae, at all points of care; and
• Discuss the impact of pneumococcal vaccination in adults at high risk for pneumonia.

Co-developed by the Canadian Thoracic Society and

Bayer HealthCare

Pfizer Vaccines
Don’t miss the great networking opportunities offered in the sponsors’ display area! Conference sponsors and partners will host booths providing information on a wide range of innovative products, publications and services, specifically targeted to the respiratory community.

Make your way around this year’s sponsors’ display area to learn more about the national respiratory community, meet industry representatives, find out what they have to offer in your area of practice, and expand your national network of contacts.

In addition to the official opening reception, the sponsors’ display area will host Friday and Saturday breakfasts, lunches and refreshment breaks, as well as the moderated poster session on Friday afternoon. Posters will be available on display throughout.

Support your association and your network of suppliers by taking the time to visit our many booths.

**Networking Schedule**

**Thursday, April 24, 2014**
- Opening Reception 1730 – 1930

**Friday, April 25, 2014**
- Delegate Breakfast 0730 – 0825
- Networking Break 1000 – 1030
- Delegate Luncheon 1200 – 1330
- Networking Break 1500 – 1530
- Moderated Poster Session 1530 – 1700

**Saturday, April 26, 2014**
- Delegate Breakfast 0730 – 0825
- Networking Break 1000 – 1030
- Delegate Luncheon 1200 – 1330

**FRIDAY, APRIL 25, 2014 | 1800 – 2200**

**Optional Social Event: Hats off to Calgary!**

Pull on those boots – grab your cowboy hat and rosin up the bow – we’re in for a rip-roarin’ night of pure country fun! The Wainwright Hotel in Heritage Park will serve up not only the best vittles this side of the Rockies – but our featured entertainer, Tim Hus, is a real-life cowboy with a voice sweeter than a Husqvarna chainsaw, a wit sharper than rusty barbed wire, and a list of songs longer than an Alberta fence line! For the past decade Hus and his Travelin’ Band have toured every corner of the land performing their distinctive brand of Canadiana cowboy music. Your ticket is your access to the best boot stompin’, minin’, loggin’, truck drivin’, cowboyin’, and oil riggin’ set o’ songs you’ll ever hear! Buses will depart from the Hyatt Hotel foyer starting at 1800 – and return from 2130. Yeehaw! Hats off to Calgary!

A limited number of tickets may still be available at the registration desk. Your ticket is your access to the event. Be sure to bring it with you!

**THURSDAY, APRIL 24, 2014 | 1730 – 1930**

**“A Breath of Fresh Air” Opening Reception**

This kick-off event has proven to be one of the networking highlights of past CRC conferences! Don’t miss this opportunity to meet members of the conference planning and scientific committees of the Canadian Thoracic Society, the Canadian Respiratory Health Professionals, and the Canadian and Alberta and Northwest Territories’ Lung Associations. The reception offers delegates an unparalleled opportunity to network with peers from across the country and beyond, while browsing sponsor and partner booths to collect a wealth of information on innovative products and services.

**SATURDAY, APRIL 26, 2014 | 0600 – 0645**

**Fun Run/Walk**

We’ll help you wake up! We don’t mind if you have bed head. Lace up and make a great start to your day. Join our run or walk groups starting from the Hyatt Regency. You’ll be eligible to win a prize and refreshments will be ready when you return. Information is available at the conference Registration Desk.
The scientific program will be flanked by a variety of affiliated meetings and events. The following preliminary schedule is included for the interest of those attending as members of the associated committees or meetings. This schedule is subject to change.

**Wednesday, April 23, 2014**

- **0700 – 1900** National Senior Respiratory Fellows Symposium  
  M - Acadia A, 2nd Floor
- **0830 – 1330** Alberta Health Services Respiratory Strategic Clinical Network  
  H - Stephen, Level 3
- **1400 – 1600** Alberta Respiratory Stakeholders/Thoracic Network (TNANT)  
  H - Stephen, Level 3
- **1500 – 1700** Canadian Lung Association - Canadian Thoracic Society Leadership Meeting  
  H - Walker, Level 3
- **1700 – 2100** Canadian Severe Asthma Network  
  H - Doll, Level 3
- **1730 – 2130** Canadian Thoracic Society (CTS) Board of Directors  
  H - Walker, Level 3
- **1830 – 2230** Royal College Specialty Committee Meeting in Respirology  
  H - Herald, Level 3

**Thursday, April 24, 2014**

- **0700 – 1345** National Senior Respiratory Fellows Symposium  
  M - Acadia B, 2nd Floor
- **0800 – 1000** CTS Canadian Respiratory Guidelines Committee  
  H - Doll, Level 3
- **0800 – 1300** CRHP Leadership Council  
  H - Neilson 2, Level 3
- **0800 – 1630** Canadian Pediatric Respiratory Fellows’ Day  
  H - Imperial 1, Level 3
- **0800 – 1630** Ultrasound for Respirologists Simulation Course  
  H - Stephen, Level 3
- **0830 – 1230** CLA Chronic Disease Working Group  
  H - Bannerman, Level 3
- **0900 – 1200** Alberta COPD Research Strategy  
  M - Acadia A, 2nd Floor
- **0900 – 1700** Primary Care Day Spirometry in Family Practice  
  H - Walker, Level 3
- **1000 – 1200** CTS Home Mechanical Ventilation Clinical Assembly  
  H - Herald, Level 3
- **1130 – 1330** Pulsus - Canadian Respiratory Journal Editorial Board  
  H - Neilson 1, Level 3
- **1300 – 1500** Alberta Central Zone Community of Practice  
  M - MacKenzie, Main Level
- **1300 – 1600** CTS Asthma Clinical Assembly  
  H - Herald, Level 3
- **1300 – 1600** CTS COPD Clinical Assembly  
  H - Doll, Level 3
- **1400 – 1600** CTS Clinical Assembly on Interstitial Lung Disease  
  H - Neilson 3, Level 3
- **1400 – 1600** CTS Membership Committee  
  H - Neilson 1, Level 3
- **1400 – 1600** CTS Pulmonary Function Standards Committee  
  H - Bannerman, Level 3
- **1400 – 1600** CTS Sleep Disordered Breathing Clinical Assembly  
  H - Neilson 2, Level 3
- **1500 – 1630** CTS Long Term Planning  
  H - McTavish, Level 3
- **1630 – 1730** CTS Annual General Meeting  
  H - Imperial 2, Level 3
- **1930 – 2100** Canadian Respiratory Research Network  
  H - Neilson 1, Level 3
- **1930 – 2130** CTS Pediatric Assembly Business Meeting  
  H - Doll, Level 3
- **1930 – 2100** CRHP Annual General Meeting  
  H - Imperial 2, Level 3
- **2100 – 2300** CRHP – RESPTrec® Reception  
  H - Stephen, Level 3

**Friday, April 25, 2014**

- **1700 – 1800** Canadian Respiratory Journal Associate Editors  
  H - Gallery, Level 2
- **1700 – 1800** CTS Industry Advisory Panel  
  H - Neilson 1, Level 3

**Saturday, April 26, 2014**

- **1630 – 1830** CRC Conference Planning & Scientific Committees’ Debrief  
  H - Neilson 1, Level 3
- **1700 – 1900** Canadian Association of Cardio-Pulmonary Technologists’ Annual General Meeting  
  H - Gallery, Level 2
- **1700 – 1900** CLA National Respiratory Research Steering Committee  
  H - Neilson 2, Level 3
North Building, Upper Level

Canadian Respiratory Conference 2015

April 24-26, 2015
Westin Ottawa, Ottawa, Ontario

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