ATS 2013

Where today's science meets tomorrow's care™

American Thoracic Society
International Conference
May 17 to May 22, 2013

Philadelphia

ADVANCE *Program*

AMERICAN THORACIC SOCIETY

Invitations for the 2013 Program are now being sent.

For details, please contact
Michelle Turenne
mturenne@thoracic.org

The ATS Would Like to Acknowledge its 2012 Corporate Members

Benefactor

ACTELION

Forest Laboratories, Inc.

Genentech
A Member of the Roche Group

GILEAD
Advancing Therapeutics. Improving Lives.

gsk GlaxoSmithKline

Pfizer

United Therapeutics CORPORATION
Medicines for Life®

Patron

AstraZeneca

Boehringer Ingelheim

INTERMUNE

NOVARTIS

TEVA Respiratory

Supporter

Aerocrine

Bayer HealthCare Pharmaceuticals

Pearl™

PHILIPS RESPIRONICS

SUNOVION

VARIAN medical systems A partner for life

VERTEX

Friend

CECITY
The Leader in Performance Improvement and Lifelong Learning Technology

iSpire INSPIRING RESPIRATORY HEALTH

pharmaxis

PURDUE

Vitalograph 50

Thank you for your support

ATS® *We help the world breathe®*
PULMONARY • CRITICAL CARE • SLEEP

For more information about the Corporate Membership Program, please visit **www.thoracic.org**.

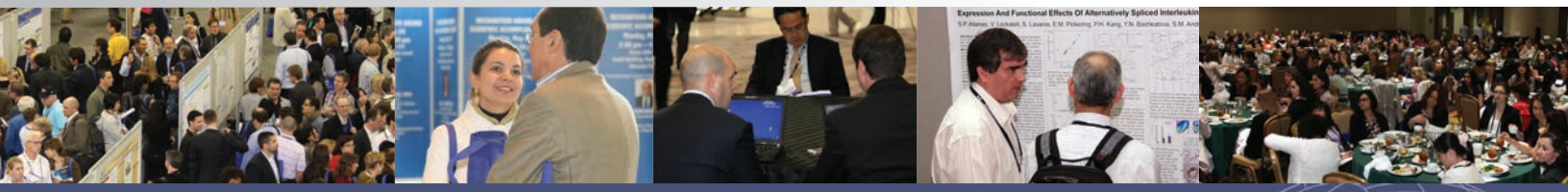


TABLE OF CONTENTS

ATS 2013 INTERNATIONAL CONFERENCE
MAY 17-22, 2013
PHILADELPHIA, PENNSYLVANIA

This is the virtual Advance Program for the ATS 2013 International Conference, which is one of the largest gatherings of pulmonary, critical care and sleep medicine clinicians and researchers in the world. This publication contains the programs and speakers for the postgraduate courses, scientific and educational sessions to be held at the International Conference.

For information on conference registration, hotel accommodations and other conference details, please visit the ATS International Conference website at http://conference.thoracic.org/2013.

ATS: COMMITTED TO EXCELLENCE IN CONTINUING MEDICAL EDUCATION AND SCIENTIFIC EXCHANGE

The American Thoracic Society is committed to providing education and scientific exchange of the highest quality at our International Conference and other programs.

As an accredited provider of the Accreditation Council for Continuing Medical Education (ACCME), the ATS must ensure objectivity, scientific rigor, balance, and freedom from commercial bias in Conference presentations.

ATS relies on the assistance of Conference Session organizers, chairs and presenters, Assembly Program Committees, the ATS Education Committee, and the ATS International Conference Committee to accomplish this. In keeping with ACCME standards and ATS policies on management of conflict of interest, all moderators and speakers must complete conflict of interest review and resolution prior to the Conference.

ATS thanks Conference presenters for their cooperation in completing disclosure forms by announced deadlines, and thanks Conference session organizers and all those involved in this important process.

POSTGRADUATE COURSES

CLINICAL

POSTGRADUATE COURSE

PG1 INCORPORATING ULTRASOUND AND ECHOCARDIOGRAPHY INTO ICU PRACTICE

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $475
Non Member: $550
In Training Member: $300
In Training Non Member: $400

Assemblies on Critical Care; Clinical Problems

8:00 am-4:00 pm

Target Audience

Clinicians, in-training members, and researchers interested in the use or study of ultrasonography or echocardiography to enhance ICU patient care

Objectives

At the conclusion of this session, the participant will be able to:

- acquire a knowledge base of the indications, techniques, and limitations of critical care ultrasonography and echocardiography;
- attain skills in vascular and body ultrasound image acquisition; ultrasound-guided vascular and pleural procedures; and basic critical care echocardiography image acquisition (including ventricular function, pericardial disease, IVC assessment);
- understand potential applications of ultrasound and echocardiography in the determination of volume responsiveness.

A growing literature supports the use of ultrasonography and echocardiography to enhance the care of critically ill patients. Ultrasonography and echocardiography are increasingly used by non-radiologist/non-cardiologist practitioners, and training for these techniques is non-uniform. American Thoracic Society members will benefit from a dedicated

training in ICU-specific ultrasonography and echocardiography prior to incorporating these technologies in their practice.

Chairing: D.P. De Backer, MD, PhD, Brussels, Belgium
G.A. Schmidt, MD, Iowa City, IA

8:00 **Skills Session I: Machine Introduction - Thorax Imaging - Vascular Imaging**
D.P. De Backer, MD, PhD, Brussels, Belgium

8:55 **Abdominal Ultrasound Applications**
K.S. Boniface, MD, Washington, DC

9:20 **Lung And Pleural Ultrasound Applications**
G.A. Schmidt, MD, Iowa City, IA

9:45 *Break*

10:00 **Vascular Ultrasound And Image-Guided Access**
W.D. Schweickert, MD, Philadelphia, PA

10:25 **Venous Thrombosis**
P.D. Kory, MD, New York, NY

10:35 **Coding Issues**
J. Leatherman, MD, Minneapolis, MN

10:45 *Break*

11:00 **Skills Session II: Thorax Imaging - FAST; Bladder/Kidney - Vascular Access Training**
D.P. De Backer, MD, PhD, Brussels, Belgium

12:00 *LUNCH*

12:45 **Echocardiography In The ICU: Indications, Applications, And Planes**
D.P. De Backer, MD, PhD, Brussels, Belgium

1:00 **Evaluation Of Fluid Responsiveness**
M. Slama, MD, Amiens, France

1:15 **Measurement Of Cardiac Output**
X. Monnet, MD, PhD, Le Kremlin-Bicetre, France

1:30 **Right Ventricular Disease**
A. Vieillard-Baron, MD, Boulogne, France

1:45 **Evaluation Of Systolic Function**
A. Combes, MD, PhD, Paris, France

2:00 **Cardiac Tamponade**
A. Mekontso Dessap, MD, Creteil, France

2:15 **Ultrasound For The Assessment Of Shock**
P.H. Mayo, MD, New Hyde Park, NY

2:40 **Clinical Cases**
M.E.W. Thiessen, MD, Aurora, CO

3:00 *Break*

3:05 **Skills Session III: Parasternal View - Subcoastal View - Apical View - Cardiac Output Measurement**
D.P. De Backer, MD, PhD, Brussels, Belgium

CLINICAL

POSTGRADUATE COURSE

PG2 ICU MONITORING

R **Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.**

Member: $475 In Training Member: $300
Non Member: $550 In Training Non Member: $400

Assemblies on Critical Care; Clinical Problems

8:00 am-4:00 pm

Target Audience

Medical students, residents, fellows, mid-level providers, junior and senior attending physicians in pulmonary, critical care, cardiology, pediatrics, surgery and emergency medicine; respiratory therapists; critical care and emergency department nurses; there is a focus on trainees

Objectives

At the conclusion of this session, the participant will be able to:

- understand how ICU monitoring is performed and how reliable the generated data are;
- recognize and incorporate standard and novel methods of monitoring in clinical decision making;
- gain insight on how to assess standard and novel technology and determine the possible clinical utility of monitoring patient outcomes.

Monitoring critically ill patients in the ICU and other inpatient care areas (operating rooms, post-anesthesia care, high-dependency units) is a fundamental skill for clinicians who care for the critically ill. This course will

review common and novel methods of ICU monitoring with a focus on cardio-respiratory monitoring. Fundamentals of monitoring theory will enable clinicians to better understand the data derived from monitoring as well as where errors are likely to occur. Workshops will allow participants to gain hands-on experience using clinical scenarios to understand how and when to employ different monitoring systems.

Chairing: D.A. Kaufman, MD, Bridgeport, CT
A. Artigas, MD, Sabadell, Spain

8:00 **Measurement And Error In ICU Monitoring**
A. Jubran, MD, Hine, IL

8:25 **Respiratory Monitoring 1: Gas Exchange And Respiratory Mechanics**
S.R. Holets, RRT, Rochester, MN

8:55 **Respiratory Monitoring 2: Ventilator Waveforms, Basic Principles And Important Clinical Scenarios**
N.J. Meyer, MD, MS, Philadelphia, PA

9:25 *Break*

9:40 **Workshop 1: Respiratory Monitoring**

Station 1: Monitoring Of Oxygenation
D.A. Kaufman, MD, Bridgeport, CT

Station 2: Carbon Dioxide Monitoring
A. Artigas, MD, Sabadell, Spain

Station 3: Mechanical Ventilators And Waveforms
L. Blanch, MD, PhD, Sabadell, Spain

Station 4: Patient-Ventilator Asynchronies: How To Recognize And How To Treat
F. Lellouche, MD, PhD, Quebec, Canada

11:00 **Cardiovascular Monitoring 1: Physiological Basis And Clinical Goals Of Monitoring**
L.A. McIntyre, MD, Ottawa, Canada

11:30 **Cardiovascular Monitoring 2: Indwelling Catheters**
S.A. Magder, MD, Montreal, Canada

12:00 *LUNCH*

12:45 **Cardiovascular Monitoring 3: Ultrasound Methods**
X. Monnet, MD, Le Kremlin-Bicetre, France

1:15 **Cardiovascular Monitoring 4: Minimally And Non-Invasive Monitoring**
M.R. Pinsky, MD, Pittsburgh, PA

1:45 *Break*

2:00 **Workshop 2: Cardiovascular Monitoring**

Station 1: Monitoring With Central Venous And Pulmonary Artery Catheters
S.A. Magder, MD, Montreal, Canada

Station 2: Monitoring With Arterial Waveforms: FloTrac, LiDCO, PiCCO
Speaker To Be Announced

Station 3: Echocardiographic Assessment Of Cardiac Performance
X. Monnet, MD, Le Kremlin-Bicetre, France

Station 4: Non-Invasive Monitoring Of Cardiac Performance
M.R. Pinsky, MD, Pittsburgh, PA

3:20 **PRO: How Do We Know If ICU Monitoring Is Useful? Clinical Endpoints Are The Most Relevant Outcomes**
A. Garland, MD, MA, Winnipeg, Canada

3:40 **CON: How Do We Know If ICU Monitoring Is Useful? Clinical Endpoints Are The Most Relevant Outcomes**
M.J. Tobin, MD, Chicago, IL

CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG3 CLINICAL APPLICATIONS OF NOVEL DIAGNOSTICS AND BIOMARKERS FOR MANAGEMENT OF RESPIRATORY AND CRITICAL ILLNESS

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Clinical Problems; Critical Care

8:00 am-4:00 pm

Target Audience
Healthcare providers, at all levels of training who are caring for patients with pulmonary infections, respiratory diseases and critical illness; researchers with an interest in clinical research and translational science, and the application and interpretation of biomarkers in respiratory and critical illness

Objectives
At the conclusion of this session, the participant will be able to:

- understand how biomarkers are identified, validated, and applied in different clinical situations, and understand how to interpret results;
- gain knowledge in novel diagnostic strategies for evaluation of lower respiratory tract infections;
- know how to correctly apply validated biomarkers for diagnosis and management of respiratory tract infections and sepsis in clinical practice, resulting in improvements in antibiotic stewardship and patient outcomes.

This course will provide an overview of molecular diagnostics and different types of biomarkers in the diagnosis and management of respiratory infections and critical illness, and will provide participants the tools they need to determine whether the tests are useful for their clinical practices. Participants will learn how biomarkers are identified, validated, and applied in different clinical situations; understand how to interpret results; and gain knowledge of novel diagnostic strategies. They will learn how to apply validated biomarkers including procalcitonin for the diagnosis and appropriate antibiotic management of lower respiratory tract infections and sepsis in different patient populations.

Chairing: K.A. Crothers, MD, Seattle, WA
A. Cattamanchi, MD, San Francisco, CA
C.A. Hage, MD, Indianapolis, IN

8:00 **Welcome And Introduction**
K.A. Crothers, MD, Seattle, WA

8:10 **The How To Of Identifying, Qualifying, And Validating A Biomarker**
P.G. Woodruff, MD, MPH, San Francisco, CA

8:50 **Biomarkers For Diagnosis, Risk Stratification, And Prediction: How To Interpret And Apply To My Patient**
K.A. Crothers, MD, Seattle, WA

9:20 **Modern Diagnosis Of Community Acquired Bacterial And Viral Pneumonia: Beyond Conventional Microbiology Cultures**
G.W. Waterer, MBBS, PhD, Perth, Australia

10:00 *Break*

10:15 **Prognostic And Therapeutic Applications Of Biomarkers To Tailor Management In Bacterial Pneumonia**
N.C. Dean, MD, Murray, UT

10:55 **Fungal Pneumonias In The Immunocompromised Host: Biomarkers To Optimize Diagnosis And Management**
C.A. Hage, MD, Indianapolis, IN

11:35 **Moving Beyond Smear And Culture: Rapid Diagnosis Of Tuberculosis And Identification Of Drug Resistance**
A. Cattamanchi, MD, San Francisco, CA

12:05 *LUNCH*

1:05 **LAM And Other Novel Biomarkers For Tuberculosis: What The Clinician Should Know**
K.U.J. Dheda, MD, PhD, Cape Town, South Africa

1:35 **Using Biomarkers To Shed Light On Pleural Effusions**
Y.C.G. Lee, MBChB, PhD, Perth, Australia

2:15 **Chronic Obstructive Lung Disease: Can Biomarkers Discriminate Between Causes Of Acute Exacerbations And Pneumonia**
S. Sethi, MD, Buffalo, NY

2:45 *Break*

3:00 **Incorporating Biomarkers Into Sepsis Diagnosis And Management**
T.E. West, MD, MPH, Seattle, WA

3:30 **Novel Biomarkers In ARDS**
C.S. Calfee, MD, MAS, San Francisco, CA

CLINICAL

POSTGRADUATE COURSE

PG4 PULMONARY CARE OF CHILDREN WITH NEUROMUSCULAR DISEASE

R **Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.**

Member: $475 In Training Member: $300
Non Member: $550 In Training Non Member: $400

Assembly on Pediatrics

8:00 am-4:00 pm

Target Audience
Physicians, nurses, medical assistants and respiratory therapists who care for children with neuromuscular disease

Objectives
At the conclusion of this session, the participant will be able to:

- better diagnose the need for ventilatory support in children with neuromuscular disease;
- have new strategies to ventilate, and provide preventative pulmonary care for children with neuromuscular disease;
- integrate treatment options including discussions of medical device use, orthopedic intervention and end of life issues in their discussions regarding children with neuromuscular disease.

This course will provide an overview of current recommendations for the pulmonary care of children with neuromuscular diseases for medical providers. This comprehensive review will include perspectives from experts whose clinical practices focus on children with neuromuscular disease including neurology, pulmonology, orthopedics, and palliative care. A unique aspect of this course will be the opportunity for attendees to get hands-on experience with medical devices commonly used in the care of these complex patients including ventilators, bi-level positive airway pressure, CPAP, cough assist, high frequency chest wall oscillation, and sip and puff ventilators.

Chairing: B.M. McGinley, MD, Baltimore, MD
A.C. Halbower, MD, Aurora, CO
A.C. Koumbourlis, MD, MPH, Washington, DC

8:00 **Overview Of Common NM Disorders And Effects On Respiratory Strength**
T.O. Crawford, MD, Baltimore, MD

8:40 **Assessment Of Ventilation Needs**
H. Sawnani, MD, Cincinnati, OH

9:20 **Ventilation Strategies For Children With Neuromuscular Disease**
A.K. Simonds, PhD, London, United Kingdom

10:00 *Break*

10:20 **Obesity Hypoventilation**
M.B. Witmans, MD, Edmonton, Canada

11:00 **Monitoring Children On Home Vents**
D. Boroughs, MSN, RN, Philadelphia, PA
J. Dougherty, BSN, RN, CPN, CSN, Philadelphia, PA

11:40 **Preventative Pulmonary Care And Additional Testing**
O.H. Mayer, MD, Philadelphia, PA

12:20 *LUNCH*

1:20 **Palliative Care**
V. Battista, MS, RN, CPNP, Philadelphia, PA

2:00 **Spine And Chest Wall Surgery: When To Intervene And Effects On Chest Wall Shape, Size, And Ventilation**
R. Campbell, MD, Philadelphia, PA

2:40 *Break*

3:00 **Hands-On Experience**

Table 1: Airway Clearance Therapy
D. Brown, RT, Baltimore, MD

Table 2: Non-Invasive Ventilation
N. Yuan, MD, Palo Alto, CA

Table 3: Ventilators
T. Antisdel, RT, Aurora, CO

BASIC • TRANSLATIONAL

POSTGRADUATE COURSE

PG5 MODELING HUMAN LUNG DISEASE: A TOOLBOX FOR MEANINGFUL MEASUREMENTS

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Respiratory Structure and Function

8:00 am-4:00 pm

Target Audience

Scientific investigators interested in learning about various models of human lung disease and evidence-based approaches to making accurate and meaningful measurements

Objectives

At the conclusion of this session, the participant will be able to:

- learn new techniques related to human lung research;
- understand limitations and advantages of various techniques and models used in lung research;
- enhance the his/her research endeavors by understanding important techniques available to them.

This course will provide an overview of experimental models and techniques used to study human lung diseases. Emphasis will be placed on choosing the correct models and techniques to accurately measure lung function, lung morphometry, cell differentiation, and cell phenotype, to name but a few. Experts in the field will provide practical information for the beginner to the more advanced investigator, including commonly used newer techniques and models. Practical sessions will demonstrate, in real time, the approach to important experimental protocols, including lung morphometry, lung physiology testing, and flow cytometry analyses.

Chairing: M.R. Stampfli, PhD, Hamilton, Canada
E.S. White, MD, Ann Arbor, MI
Z. Borok, MD, Los Angeles, CA

8:00 **Modeling Complex Respiratory Diseases: Introduction**
M.R. Stampfli, PhD, Hamilton, Canada

8:15 **In Vivo, In Vitro, Ex Vivo: Which Way Do I Go?**
R.E. Morty, PhD, Giessen, Germany

8:35 **Exercise Physiology In Animal Models**
P. Wagner, MD, San Diego, CA

9:10 **Pulmonary Function Testing In Animals**
E.R. Spindel, MD, PhD, Beaverton, OR

9:45 *Break*

10:00 **Assessing Lung Morphometry**
D.M. Hyde, PhD, Davis, CA

10:35 **Flow Cytometry Of Lung Cell Populations**
S.D. Reynolds, PhD, Denver, CO

11:10 **Transgenic Animals In Lung Research**
A.T. Perl, PhD, Cincinnati, OH

11:45 *LUNCH*

12:35 **Animal And Tissue Imaging**
N.R. Labiris, PhD, Hamilton, Canada

1:10 **Expression Profiling And Systems Biology**
N. Kaminski, MD, Pittsburgh, PA

1:45 **Lung Morphometry: Practical Applications**
D.M. Hyde, PhD, Davis, CA

2:25 *Break*

2:40 **Flow Cytometry: Practical Applications**
M. Ghosh, PhD, Denver, CO

3:20 **Lung Physiology: Practical Applications**
E.R. Spindel, MD, PhD, Beaverton, OR

CLINICAL

POSTGRADUATE COURSE

PG6 TECHNOLOGICAL ADVANCES IN CLINICAL OUTPATIENT SLEEP MEDICINE

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $475 In Training Member: $300
Non Member: $550 In Training Non Member: $400

Assemblies on Sleep and Respiratory Neurobiology; Clinical Problems

8:00 am-4:00 pm

Target Audience

Patient care providers at pulmonary and pulmonary-sleep and sleep physicians; physicians in training; advanced practice nurses, physician assistants, respiratory therapists, sleep technologists, and nurses

Objectives

At the conclusion of this session, the participant will be able to:

- identify the indications and limitations of various PAP devices in the management of the spectrum of sleep disordered breathing;
- list the available portable monitoring systems commonly used in an outpatient setting and the available data provided to diagnose obstructive sleep apnea;
- understand the indications, limitations and technology underlying various actigraphy devices.

Technology to diagnose and treat sleep disordered breathing disorders is rapidly advancing. Despite rapid expansion of these newer technologies, there are few formal educational venues available to guide the practicing clinician in when and how to implement these technologies. Through morning didactic lectures and hands-on afternoon workshops attendees will obtain a comprehensive overview and practical experience in the use of: 1. PAP devices in the management of OSA; 2. bi-level, ASV, and AVAPS devices in the management of hypoventilation and CSA syndromes; 3. portable sleep apnea testing; and 4. actigraphy in clinical practice.

Chairing: N.S. Freedman, MD, Bannockburn, IL

8:00 **Positive Airway Pressure Treatment For Obstructive Sleep Apnea: Beyond The Basics**
N.S. Freedman, MD, Bannockburn, IL

9:00 **Bi-Level Devices In The Management Of Hypoventilation And Central Sleep Apnea Syndromes**
L.F. Wolfe, MD, Chicago, IL

10:00 *Break*

10:15 **Portable Sleep Apnea Testing: Types Of Devices, Supporting Data, Indications And Limitations**
D. Kirsch, MD, Boston, MA

11:00 **Actigraphy: Supporting Data, Indications And Limitations In Clinical Practice**
C.A. Goldstein, MD, Ann Arbor, MI

11:45 *LUNCH*

12:45 **Hands-On Workshops**

Workshop 1: Bi-Level And AVAPs Devices In The Management Of Hypoventilation And Neuromuscular Disease Syndromes
P.C. Gay, MD, Rochester, MN
L.F. Wolfe, MD, Chicago, IL

Workshop 2: Portable Sleep Apnea Testing In Clinical Practice
N.S. Freedman, MD, Bannockburn, IL
D. Kirsch, MD, Boston, MA

Workshop 3: CPAP, Bi-Level And APAP Devices In Treatment Of Obstructive Sleep Apnea
S. Sullivan, CNP, APN, Bannockburn, IL
N.S. Freedman, MD, Bannockburn, IL

Workshop 4: ASV Bi-level Therapy In The Management Of Central Sleep Apnea Syndromes
S.M. Caples, DO, Rochester, MN
A.M. Cartwright, MPAS, PA-C, Denver, CO

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG7 PEDIATRIC RESPIRATORY PHYSIOLOGY: WHAT'S RIGHT AND WHEN IT GOES WRONG

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Pulmonary Circulation; Sleep and Respiratory Neurobiology

8:00 am-4:00 pm

Target Audience

Fellows in training as well as established physicians in the practice of pediatric pulmonary, critical care, or neonatal medicine who are interested in reviewing basic physiology principles as they apply to clinical care

Objectives

At the conclusion of this session, the participant will be able to:

- apply physiologic measurements in the assessment of the respiratory system and its response to therapies;
- identify how physiologic measurements can be used to select interventions and enhance outcomes;
- understand the rationale for various physiological tests and determine when they should be used.

This course will consist of a series of paired lectures covering several topics in respiratory physiology. The first talk will review basic physiological principles of a clinically important topic, and the companion talk will illustrate abnormalities of that aspect of physiology seen in common respiratory disorders of children. An interactive format, using questions from the speakers and audience touch pads to give answers will be used to enhance audience participation, and to allow the participant to understand key concepts or to identify areas requiring additional study.

Chairing: H.B. Panitch, MD, Philadelphia, PA
J.L. Allen, MD, Philadelphia, PA

8:00 **Chest Wall Mechanics And Respiratory Muscles**
M.R. Wolfson, PhD, Philadelphia, PA

8:30 **Disorders Of The Respiratory Pump**
G.J. Redding, MD, Seattle, WA

9:00 **Airways And Airway Smooth Muscle**
H.B. Panitch, MD, Philadelphia, PA

9:30 **Asthma And Airway Disorders**
W.J. Morgan, MD, Tucson, AZ

10:00 *Break*

10:10 **Lung Mechanics**
G. Kurland, MD, Pittsburgh, PA

10:40 **Chronic Respiratory Failure**
T.G. Keens, MD, Los Angeles, CA

11:10 **Control Of Breathing**
S.L.D. Ward, MD, Los Angeles, CA

11:40 **Disorders Of Breathing**
D.E. Weese-Mayer, MD, Chicago, IL

12:10 *LUNCH*

12:50 **Pulmonary And Transitional Circulation**
S.H. Abman, MD, Aurora, CO

1:20 **Pulmonary Hypertension And Persistence Of The Fetal Circulation**
S. Lakshminrusimha, MD, Buffalo, NY

1:50 **Ventilation-Perfusion Relationships**
J.L. Allen, MD, Philadelphia, PA

2:20 *Break*

2:30 **Ventilation-Perfusion Mismatch In ARDS**
I.M. Cheifetz, ABP, MD, Durham, NC

3:00 **Blood Gases And Acid-Base Balance**
D.J. Weiner, MD, Pittsburgh, PA

3:30 **Breathing In Unusual Environments**
J.L. Kreindler, MD, Philadelphia, PA

CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG8 UNDER PRESSURE: THE RIGHT VENTRICLE IN HEALTH, EXERCISE, AND DISEASE

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Pulmonary Circulation; Clinical Problems; Critical Care

8:00 am-4:00 pm

Target Audience

Providers of lung health, in particular those who care for outpatients, inpatients, and the critically ill; those who need instruction in areas of medicine outside their specialty

Objectives

At the conclusion of this session, the participant will be able to:

- better understand the normal physiology and pathophysiology of the right ventricle in health, exercise, and disease;
- learn new findings about the evaluation and treatment of various forms of pulmonary hypertension, including pulmonary arterial hypertension, exercise-induced pulmonary hypertension, pulmonary hypertension related to lung disease, and pulmonary hypertension related to left heart disease;
- have new strategies for the management of right heart failure in the intensive care unit.

This course will review the current state of the art understanding of right ventricular structure and function in health, exercise, and disease. In the morning sessions, experts in each area will compare and contrast normal and abnormal responses to exercise and pulmonary vascular disease. The afternoon sessions will focus on the management of pulmonary hypertension, with particular attention to established and novel strategies for the treatment of right heart failure.

Chairing: S.C. Mathai, MD, MHS, Baltimore, MD
T. Lahm, MD, Indianapolis, IN
P.M. Hassoun, MD, Baltimore, MD

8:00 **Normal Structure And Function Of The Right Ventricle: Insights From MESA-RV**
S.M. Kawut, MD, MS, Philadephia, PA

8:30 **Hemodynamic Assessment In The 21st Century: Something Old And Something New**
R.J. Tedford, MD, Baltimore, MD

9:00 **Non-Invasive Assessment Of Right Ventricular Function: Ready For Prime Time?**
A. Vonk-Noordegraaf, MD, PhD, Amsterdam, Netherlands

9:30 **The Right Ventricle In Exercise: What's Normal And What's Not**
R. Naeije, MD, PhD, Brussels, Belgium

10:00 *Break*

10:15 **Should We Treat Exercise-Induced Pulmonary Hypertension? A Pro:Con Debate**
D.M. Systrom, MD, Boston, MA
P.R. Forfia, MD, MS, Philadelphia, PA

11:15 **The Pathophysiology Of Right Ventricular Failure: Beyond Pressure**
S.C. Mathai, MD, MHS, Baltimore, MD

11:45 *LUNCH*

12:45 **What's Now And What's New: Treatment Of Right Ventricular Dysfunction In Pulmonary Hypertension**
S.L. Archer, MD, Chicago, IL

1:15 **An Obstructed And Restricted View: Pulmonary Hypertension In Lung Disease**
T. Lahm, MD, Indianapolis, IN

1:45 **Pulmonary Hypertension And Heart Disease: A Look From The Left**
M.M. Redfield, MD, Rochester, MN

2:15 *Break*

2:30 **Between A Rock And A Hard Place: Medical Management Of Right Ventricular Failure In The ICU**
J.R. Klinger, MD, Providence, RI

3:15 **Pulmonary Hypertension In The 21st Century ICU: Failure No More?**
M. Hoeper, MD, Hannover, Germany

CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG9 UPDATE IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE MANAGEMENT

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation

8:00 am-4:00 pm

Target Audience

Physicians, nurses and therapists, clinical and basic researchers, clinical trialists, physicians in training

Objectives

At the conclusion of this session, the participant will be able to:

- understand novel approaches to assessment of COPD patients;
- review novel aspects of therapy for COPD and the role of new bronchodilators and anti-inflammatory agents;
- describe interventions to use for management of COPD exacerbations, how to provide effective pulmonary rehabilitation and manage cardiovascular comorbidity.

This course will provide an update on the key advances in the management of COPD. There have been interesting new papers on topics such as use of imaging, biomarkers, early COPD, management of exacerbations and more understanding of cardiovascular risk and comorbidity. Over the past year there have been new papers on use of novel bronchodilators and this will be an opportunity to review the field. Airway infection is also an important topic in COPD though physicians are not clear as to how to approach this issue and thus will be discussed in the course.

Chairing: J.A. Wedzicha, MD, London, United Kingdom
S. Sethi, MD, Buffalo, NY
P.M. Calverley, MBCHB, Liverpool, United Kingdom

8:00 **Implementation Of The New GOLD Strategic Document Recommendations**
J. Vestbo, MD, Copenhagen, Denmark

8:30 **Physiological Changes In Early COPD And Relation To Management**
D.E. O'Donnell, MD, Kingston, Canada

9:00 **Use Of Biomarkers In COPD Assessment And Management**
A. Agusti, MD, Barcelona, Spain

9:30 **What Have We Learned About The Role Of Imaging In COPD Management?**
M.K. Han, MD, MS, Ann Arbor, MI

10:00 *Break*

10:15 **Management Of The Acute COPD Exacerbation**
J.A. Wedzicha, MD, London, United Kingdom

10:45 **Integrated Care Programs To Reduce Hospitalizations**
A. Anzueto, MD, San Antonio, TX

11:15 **How To Use Bronchodilators In COPD**
P.M. Calverley, MBCHB, Liverpool, United Kingdom

11:45 **Anti-Inflammatory Therapies In COPD**
F.J. Martinez, MD, MS, Ann Arbor, MI

12:15 *LUNCH*

1:15 **Long Term Antibiotic And Macrolide Therapy In COPD**
S. Sethi, MD, Buffalo, NY

1:45 **New Concepts In Pulmonary Rehabilitation**
M. Decramer, PhD, Leuven, Belgium

2:15 **Management Of Cardiovascular Comorbidity In COPD**
G.J. Criner, MD, Philadelphia, PA

2:45 *Break*

3:00 **How To Manage The Overlap Between Asthma And COPD**
N. Barnes, MD, London, United Kingdom

3:30 **Future Approaches To The Management Of COPD**
K.F. Rabe, MD, PhD, Grosshansdorf, Germany

CLINICAL

POSTGRADUATE COURSE

PG10 AN UPDATE ON THE DIAGNOSIS AND MANAGEMENT OF INTERSTITIAL LUNG DISEASE

R **Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.**

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology

8:00 am-4:00 pm

Target Audience
Clinicians, nurses, other allied health staff, researchers

Objectives
At the conclusion of this session, the participant will be able to:

- diagnose patients with specific forms of ILD;
- develop new strategies to manage the care of patients with ILD;
- improve the quality of life and health status of patients with ILD through comprehensive management.

This course provides an introduction and update on the diagnosis and management of interstitial lung disease (ILD), with particular attention to the chronic fibrotic ILDs and sarcoidosis. Discussion of the clinical, radiological, and pathological approaches to the diagnosis of ILD will be supplemented by case presentations that illustrate the multidisciplinary nature of diagnosis in action. Additional talks will focus on the comprehensive management of ILD including novel therapies, symptoms management, and lung transplantation.

Chairing: G. Raghu, MD, Seattle, WA
H.R. Collard, MD, San Francisco, CA

8:00 **Approach To Diagnosing Interstitial Lung Disease (ILD)**
F.J. Martinez, MD, MS, Ann Arbor, MI

8:30 **Pathogenesis Of Fibrosis And Implications For Therapy**
T.M. Maher, MB, PhD, London, United Kingdom

9:00 **Genetics Of Interstitial Lung Disease**
J.E. Loyd, MD, Nashville, TN

9:30 **Managing Patients With Chronic Fibrotic Interstitial Lung Disease**
V. Cottin, MD, PhD, Lyon, France

10:00 *Break*

10:10 **Managing The Patient With Sarcoidosis**
D.A. Culver, DO, Cleveland, OH

10:40 **Radiology Of Interstitial Lung Disease 101**
J. D. Godwin, MD, Seattle, WA

11:00 **Pathology Of Interstitial Lung Disease 101**
K.D. Jones, MD, San Francisco, CA

11:20 **Case Discussions With Previous Speakers And Chairs**
C.J. Ryerson, MD, Vancouver, Canada

12:10 *LUNCH*

12:55 **The Future Is Bright: Clinical Trials In Pulmonary Fibrosis**
L. Richeldi, MD, Modena, Italy

1:40 **Symptom Management In Interstitial Lung Disease**
S.K. Danoff, MD, PhD, Baltimore, MD

2:10 **Acute Exacerbation Of Interstitial Lung Disease**
D. Kim, MD, Seoul, Korea

2:40 *Break*

2:50 **Pulmonary Rehabilitation And Oxygen Therapy For Interstitial Lung Disease**
A.E. Holland, PhD, Melbourne, Australia

3:20 **Lung Transplantation For Interstitial Lung Disease**
S.M. Bhorade, MD, Chicago, IL

BASIC • CLINICAL

POSTGRADUATE COURSE

PG11 MANAGING CYSTIC FIBROSIS IN 2013: THE ERA OF GENOMIC MEDICINE

R **Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.**

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Clinical Problems; Microbiology, Tuberculosis and Pulmonary Infections; Pediatrics; Respiratory Structure and Function

8:00 am-4:00 pm

Target Audience
Adult and pediatric pulmonologists, trainees in adult and pediatric pulmonology, nurse practitioners, respiratory therapists, physiotherapists, physician assistants, clinical and basic scientists

Objectives
At the conclusion of this session, the participant will be able to:

- describe the genetic and pathophysiological defects causing disease and impairment in cystic fibrosis;
- understand microbiology and infection control issues regarding cystic fibrosis patients and describe current and evolving management of pulmonary and extra-pulmonary manifestations of cystic fibrosis;
- have a clear understanding of the organization and integration of the care of patients with cystic fibrosis.

There has been a major explosion in understanding genetic mechanisms of cystic fibrosis in recent years. This has led to major ongoing improvements in the management of people with cystic fibrosis. This course provides an in depth state of the art review of the management of respiratory and non-respiratory manifestations of cystic fibrosis. It will include the spectrum from the healthy newborn child all the way through to multi-organ failure and death.

Chairing: C.G. Gallagher, MD, Dublin, Ireland
M.F. Katz, MD, Houston, TX

8:00 **Diagnosis Of Cystic Fibrosis**
B. Plant, MD, Cork, Ireland

8:30 **Pathophysiology Of Cystic Fibrosis Lung Disease**
F.A. Ratjen, MD, Toronto, Canada

9:00 **Infection Control And Multi-Resistant Organisms In Cystic Fibrosis**
D.E. Tullis, MD, Toronto, Canada

9:30 **Detecting Early Lung Disease In Cystic Fibrosis: What Works?**
S.D. Davis, MD, Indianapolis, IN

10:00 *Break*

10:15 **Managing The Stable Cystic Fibrosis Patient: How To Prevent Decline**
S. Elborn, MD, Belfast, United Kingdom

10:45 **Treatment Of New And Evolving Organisms In CF**
A. Jones, MD, Manchester, United Kingdom

11:15 **Acute Exacerbations Of Cystic Fibrosis**
C.G. Gallagher, MD, Dublin, Ireland

11:45 **Recent Advances In Imaging In CF**
J.D. Dodd, MD, Dublin, Ireland

12:15 *LUNCH*

1:30 **Managing Non-Cystic Fibrosis Bronchiectasis: What Works?**
A.E. O'Donnell, MD, Washington, DC

2:00 **Diabetes And Hormones In Cystic Fibrosis**
M. Katz, MD, Houston, TX

2:30 **Managing Malnutrition And Muscle Dysfunction In Cystic Fibrosis**
L.C. Lands, MD, PhD, Montreal, Canada

3:00 **How Disease Altering Therapy Is Changing The Goals Of Treatment In Cystic Fibrosis**
B. Ramsey, MD, Seattle, WA

3:30 **General Discussion**

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG12 EVOLVING CONCEPTS IN LUNG TRANSPLANTATION

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation

8:00 am-4:00 pm

Target Audience
Pulmonologists, nurses, scientists, and other healthcare providers interested in lung transplantation for advanced lung disease

Objectives
At the conclusion of this session, the participant will be able to:

- examine and discuss current concepts of mechanisms and mediators of lung allograft injury and rejection;
- compare findings in animal models of primary allograft reperfusion injury and acute and chronic allograft rejection with clinical and translational research in human lung transplantation;
- gain an understanding of risk factors and mediators involved in primary graft dysfunction and lung allograft rejection that can be useful in performing clinical research and adopting strategies to optimize and sustain post-transplant lung allograft function and patient survival.

This course will examine and discuss basic principles of lung transplantation with a focus on our current understanding of transplant immunology, primary graft dysfunction, acute and chronic rejection, and autoimmunity. The translation of basic research findings to newer approaches that promote improved allograft function and patient survival will be emphasized.

Chairing: K.C. Meyer, MD, MS, Madison, WI
S.M. Palmer, MD, Durham, NC

8:00 **Key Issues In Lung Transplantation: An Overview**
K.C. Meyer, MD, MS, Madison, WI

8:30 **Basics Of Transplant Immunology: Allorecognition**
T. Martinu, MD, Durham, NC

9:00 **Innate Immunity: What Is Its Role In Acute And Chronic Allograft Rejection?**
J.L. Todd, MD, Durham, NC

9:30 **Antibody-Mediated Rejection: What Is Its Role In Allograft Rejection, And How Is It Detected?**
A.R. Glanville, MD, Sydney, Australia

10:00 *Break*

10:15 **Autoimmunity, Alloimmunity, And Graft Tolerance**
T. Mohanakumar, PhD, St. Louis, MO

10:45 **Evolving Strategies To Prevent Lung Allograft Rejection: What Does The Future Hold?**
A.J. Fisher, MD, PhD, Newcastle, United Kingdom

11:15 **Primary Graft Dysfunction: Mechanisms And Mediators**
J.D. Christie, MD, MS, Philadelphia, PA

11:45 **Animal Models Of Reperfusion Injury: Mediators, Prevention, And Implications For Obliterative Bronchiolitis**
D. Kreisel, MD, PhD, St. Louis, MO

12:15 *LUNCH*

1:15 **Lung Allograft Preservation And Ex Vivo Perfusion: New Developments And Clinical Trial Outcomes**
S. Keshavjee, MD, MSc, Toronto, Canada

1:45 **Airway And Tissue Ischemia As Mediators Of BOS**
M.R. Nicolls, MD, Stanford, CA

2:15 **Animal Models Of BOS: Key Chemokine And Cytokine Mediators**
J.A. Belperio, MD, Los Angeles, CA

2:45 *Break*

3:00 **Stem Cells And Obliterative Bronchiolitis: What Is The Connection?**
V.N. Lama, MD, MS, Ann Arbor, MI

3:30 **Diagnosis And Management Of BOS: New Concepts And Treatment Strategies**
S.M. Palmer, MD, Durham, NC

CLINICAL

POSTGRADUATE COURSE

PG13 UPDATE IN THORACIC IMAGING

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Microbiology, Tuberculosis and Pulmonary Infections; Pulmonary Circulation

8:00 am-4:00 pm

Target Audience
Pulmonologists and critical care physicians, residents and fellows, thoracic surgeons, allied health professionals

Objectives
At the conclusion of this session, the participant will be able to:

- explain the role of imaging in detection and management of the solitary pulmonary nodule;
- recognize the need for a multidisciplinary approach to diffuse lung disease;
- discuss the current status, risks, and benefits of lung cancer screening with patients.

This course will provide the learner with the current status of imaging for acute and chronic pulmonary diseases, including pulmonary embolism, solitary pulmonary nodule, pleural disease, pulmonary infection, and diffuse lung disease. The aims include helping clinicians understand the role of imaging in dealing with common problems and familiarizing clinicians with typical imaging findings of pulmonary disease.

Chairing: J.P. Kanne, MD, Madison, WI
J.M. Seely, MD, Ottawa, Canada

8:00 **Imaging Of Non-Thrombotic Pulmonary Vascular Disease: Pulmonary Hypertension And Vasculitis**
C.J. Dennie, MD, Ottawa, Canada

8:30 **Imaging Of Acute And Chronic Pulmonary Embolism**
S.L. Primack, MD, Portland, OR

9:00 **Solitary Pulmonary Nodule**
A.N. Leung, MD, Stanford, CA

9:30 *Break*

9:40 **Pleural Disease**
J.M. Seely, MD, Ottawa, Canada

10:10 **Pulmonary Infection**
L. Ketai, MD, Albuquerque, NM

10:40 **Chronic Obstructive Pulmonary Disease**
A.A. Bankier, MD, Boston, MA

11:10 *Break*

11:20 **Hot Topics In Thoracic Imaging: The Role Of MDCT In The Evaluation And Management Of Tracheobronchomalacia**
J.P. Kanne, MD, Madison, WI

11:40 **Hot Topics In Thoracic Imaging: New Technologies In Thoracic Imaging**
J.H. Chung, MD, Denver, CO

12:00 *LUNCH*

1:00 **Hot Topics In Thoracic Imaging: Update In Lung Cancer Screening**
D.A. Lynch, MB, MBBS, Denver, CO

1:20 **HRCT Of Diffuse Lung Disease**
J.P. Kanne, MD, Madison, WI

1:50 *Break*

2:00 **Case-Based Review Of ILD: Clinician's Role**
K.K. Brown, MD, Denver, CO

2:20 **Case-Based Review Of ILD: Radiologist's Role**
D.A. Lynch, MB, MBBS, Denver, CO

2:40 **Case-Based Review Of ILD: Pathologist's Role**
S.D. Groshong, MD, Denver, CO

3:00 **Case-Based Review Of ILD: Multidisciplinary Review**
K.K. Brown, MD, Denver, CO
S.D. Groshong, MD, Denver, CO
D.A. Lynch, MB, MBBS, Denver, CO

CLINICAL

POSTGRADUATE COURSE

PG14 PLEURAL DISORDERS

R **Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.**

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Clinical Problems; Microbiology, Tuberculosis and Pulmonary Infections

8:00 am-4:00 pm

Target Audience
Advanced practice nurses; cardio-thoracic surgeons; fellows-in-training; general medicine physician assistants; pulmonary physicians; registered nurses; respiratory therapist

Objectives
At the conclusion of this session, the participant will be able to:

- understand categorization of pleural fluids into transudates and exudates;
- understand the diagnosis and management of infectious pleural disorders, neoplastic pleural diseases, of pneumothorax and of connective tissue related pleural disorders, including within the critical care setting;
- learn about invasive diagnostic and therapeutic interventions in pleural diseases.

The goal of this course is to educate a sophisticated audience on the comprehensive details of diagnosis and management of pleural diseases. The faculty in this course are known leaders in their field, many of whom have participated in previous courses of this sort that have been presented at other national and international meetings. Topics include: analysis of pleural fluid, imaging of the pleura, tuberculosis, empyema, pneumothorax, connective tissue disease and the pleura, pleural disease in the critically ill patient, mesothelioma, the surgical approach to pleural disease, and management of malignant effusions.

Chairing: Y.C.G. Lee, PhD, Perth, Australia

8:00 **Analysis Of Pleural Fluid**
C.L. Tobin, MD, Perth, Australia

8:40 **Modern Imaging Of The Pleura**
F.V. Gleeson, MBBS, Oxford, United Kingdom

9:20 **Tuberculosis And The Pleura**
R.W. Light, MD, Nashville, TN

10:00 *Break*

10:10 **Management Of Empyema**
N.M. Rahman, MSc, PhD, Oxford, United Kingdom

10:50 **Management Of Pneumothorax**
M.H. Baumann, MD, MS, Jackson, MS

11:30 *LUNCH*

12:30 **Pleural Pearls: SLE And RA**
S.A. Sahn, MD, Charleston, SC

1:10 **Mesothelioma**
Y.C.G. Lee, PhD, Perth, Australia

1:50 **VATS, Thoracoscopy, And The Pulmonologist**
D.J. Feller-Kopman, MD, Baltimore, MD

2:30 *Break*

2:40 **Management Of Malignant Pleural Effusions**
N.A. Maskell, MD, Bristol, United Kingdom

3:20 **Pleural Disease In The Critically Ill**
D.R. Ouellette, MD, Detroit, MI

CLINICAL

POSTGRADUATE COURSE

PG15 LUNG CANCER: STATE OF THE ART IN 2013

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assembly on Clinical Problems

8:00 am-4:00 pm

Target Audience

Clinicians of various specialties (pulmonary medicine, thoracic surgery, pathology, radiology) who are involved in the care of patients with lung cancer

Objectives

At the conclusion of this session, the participant will be able to:

- apply recent advances in screening for lung cancer to develop multidisciplinary screening programs, and understand risks and benefits of screening for lung cancer;
- apply recent advances in the molecular characterization of lung cancer to the care of patients with advanced NSCLC, understand treatment options for elderly patients with NSCLC, and learn newer approaches to treatment including minimally invasive surgery and radiotherapy techniques in NSCLC;
- learn new approaches to the evaluation of the solitary pulmonary nodule.

This course will provide a comprehensive review of up to date clinical topics including screening, approach to pulmonary nodules, importance of adequate tissue acquisition for histology and molecular characterization as it pertains to treatment decisions. In addition we will discuss differences in lung cancer in women, treatment options for early stage disease, treatment of elderly patients and palliative care. The impact of tobacco and importance of cessation programs as well as risks or radiation from CT scans will be discussed. The session will end with an interactive tumor board.

Chairing: M.P. Rivera, MD, Chapel Hill, NC
D.J. Feller-Kopman, MD, Baltimore, MD

8:00 Introduction
M.P. Rivera, MD, Chapel Hill, NC

8:05 Global And Local Issues In Tobacco Control
J.K. Cataldo, PhD, RN, San Francisco, CA

8:30 CT Screening For Lung Cancer: Evidence Based Review
D.A. Arenberg, MD, Ann Arbor, MI

8:55 Radiation Risks Of CT Screening
E.A. Kazerooni, MD, Ann Arbor, MI

9:20 Lung Cancer In Women: Differences In Biology And Clinical Outcomes
M.P. Rivera, MD, Chapel Hill, NC

9:45 General Discussion

9:55 *Break*

10:05 The Solitary Pulmonary Nodule: When Do We Need To Do Something?
D.E. Ost, MD, Houston, TX

10:30 Bronchoscopic Approaches To The Solitary Pulmonary Nodule
M.M. Wahidi, MD, Durham, NC

10:55 Pretreatment Evaluation Of The Lung Cancer Patient
P.J. Mazzone, MD, Cleveland, OH

11:20 Tissue Acquisition And Specimen Processing: Optimizing Hitologic And Molecular Characterization Of Lung Cancer
D.J. Feller-Kopman, MD, Baltimore, MD

11:45 General Discussion

11:50 *LUNCH*

12:30 The Biology Of Lung Cancer: Update And Clinical Implications
C.A. Powell, MD, New York, NY

12:55 Staging Of NSCLC
L.T. Tanoue, MD, New Haven, CT

1:20 Minimally Invasive Thoracic Surgery
D. Molena, MD, Baltimore, MD

1:45 **Stereotactic Body Radiation In The Treatment Of Lung Cancer**
T.M. Zagar, MD, Chapel Hill, NC

2:10 **General Discussion**

2:20 *Break*

2:30 **Treatment Of Lung Cancer In Elderly Patients**
C.J. Langer, MD, Philadelphia, PA

2:55 **Palliative Care In Lung Cancer**
P. Lee, MD, Singapore, Singapore

3:20 **Panel Discussion**
C.J. Langer, MD, Philadelphia, PA
T.M. Zagar, MD, Chapel Hill, NC
D.J. Feller-Kopman, MD, Baltimore, MD
F.C. Detterbeck, MD, New Haven, CT

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG16 LUNG INNATE IMMUNITY: THE FRONTLINES OF HOST DEFENSE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Respiratory Cell and Molecular Biology

8:00 am-4:00 pm

Target Audience
Investigators and providers of lung health, postdoctoral fellows in training, and students with particular interest in understanding the scientific basis for disease susceptibility to lung infections

Objectives
At the conclusion of this session, the participant will be able to:

- identify new findings about the normal host defense response to microbial infections of the lungs;
- identify new strategies in the management of lung infections;
- improve understanding and identify critical areas of deficient knowledge in the area of lung infections.

The course will provide state of the art presentations by experts in the field, updating current knowledge and cutting-edge research in the area of lung innate immunity and host defense.

Chairing: H. Koziel, MD, Boston, MA
S.J. Skerrett, MD, Seattle, WA

8:00 **Sensing And Signaling Infection In The Lungs: TLRs and RLRs**
J. Imler, PhD, Strasbourg Cedex, France

8:30 **Cytosolic Immune Surveillance In The Lungs**
G. Nunez, MD, Ann Arbor, MI

9:00 **Myeloid C-Type Lectins And Host Defense**
G. Brown, PhD, Aberdeen, United Kingdom

9:30 **Basophils, Mast Cells, Eosinophils And Lung Host Defense**
S. Abraham, PhD, Durham, NC

10:00 *Break*

10:15 **Neutrophils In The Innate Immune Response To Pneumonia**
C.M. Doerschuk, MD, Chapell Hill, NC

10:45 **Natural IgM Antibodies And Complement In Pneumonia**
M.C. Carroll, PhD, Boston, MA

11:15 **Innate Lymphocytes: New Kids On The Block**
D. Umetsu, MD, PhD, Boston, MA

11:45 *LUNCH*

12:45 **Lung Dendritic Cells Link Innate And Adaptive Immunity**
K.Y. Vermaelen, MD, PhD, Ghent, Belgium

1:15 **Epithelial Cells In Lung Host Defenses: More Than A Barrier**
A.S. Prince, MD, New York, NY

1:45 **Airway Microbiome And Innate Immunity**
S. Lynch, PhD, San Francisco, CA

2:15 *Break*

2:30 **Trained Immunity: Reprogramming Myeloid Innate Responses To Infection**
M. Netea, MD, PhD, Nijmegen, Netherlands

3:00 **Genetic Variability In Innate Immunity And Susceptibility To Lung Infections**
M.M. Wurfel, MD, PhD, Seattle, WA

3:30 **Innate Determinants Of Vaccine Responses**
K. Subbarao, MDDS, MPH, Bethesda, MD

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG17 THE CELLULAR FOUNDATION OF PEDIATRIC RESPIRATORY DISEASE

R **Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.**

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Pediatrics; Clinical Problems; Critical Care; Respiratory Cell and Molecular Biology

8:00 am-4:00 pm

Target Audience
Pediatric pulmonary, pediatric critical care and neonatology fellows and faculty; nurses, adult pulmonologists, adult intensivists

Objectives
At the conclusion of this session, the participant will be able to:

- describe the genetic, molecular and cellular mechanisms underlying pediatric respiratory diseases, ranging from the premature baby to the critically ill child and the adolescent with cystic fibrosis;
- understand how cellular mechanisms influence pulmonary physiology and clinical presentations of pediatric respiratory disease;
- describe developmental differences in the response to lung injury and repair.

The objective of this unique course is to teach fundamental concepts of lung cell biology in a disease-based format that is relevant to pediatric pulmonologists, neonatologists and pediatric intensivists. Key principles include lung growth and development, cellular structure of the respiratory system, lung injury and repair, and lung immunity and inflammation. This course will be offered through a case-based lens.

Chairing: M.B. Hershenson, MD, Ann Arbor, MI
L.M. Rhein, MD, Boston, MA
I.M. Cheifetz, ABP, MD, Durham, NC

8:00 **Introduction: Lung Development**
M.B. Hershenson, MD, Ann Arbor, MI

8:55 **Respiratory Distress Syndrome And Bronchopulmonary Dysplasia**
L.M. Rhein, MD, Boston, MA

9:40 **Surfactant Proteins And Interstitial Lung Disease**
L.R. Young, MD, Nashville, TN

10:20 *Break*

10:30 **Pulmonary Hypertension In The Newborn, Congenital Heart Disease And Nitric Oxide**
J.R. Fineman, MD, San Francisco, CA

11:15 **Lung Fluid Composition And Clearance, ARDS And Mechanical Ventilation**
I.M. Cheifetz, ABP, MD, Durham, NC

12:10 *LUNCH*

1:10 **Genomics Of Lung Disease**
M.W. Quasney, MD, PhD, Milwaukee, WI

1:45 **Viral Bronchiolitis**
L. Bont, MD, PhD, Utrecht, Netherlands

2:25 *Break*

2:35 **Airway Inflammation In Cystic Fibrosis**
F.A. Ratjen, MD, Toronto, Canada

3:15 **Airway Inflammation In Asthma**
M.B. Hershenson, MD, Ann Arbor, MI

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG18 PULMONARY HYPERTENSION: FROM BENCH TO BEDSIDE

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Pulmonary Circulation; Clinical Problems; Critical Care

8:00 am-4:00 pm

Target Audience
Practicing pulmonologists and cardiologists, trainees, vascular biologists, physiologists, anyone interested in pulmonary circulation

Objectives
At the conclusion of this session, the participant will be able to:

- identify new discoveries in PH that may translate into development of future therapies;
- improve patients outcomes by review of current treatment guidelines;
- learn about novel therapeutic approaches and new clinical trials in pulmonary hypertension.

This course brings together international experts in pulmonary hypertension who will provide an update to the basic and clinical science in pulmonary arterial hypertension.

Chairing: I.R. Preston, MD, Boston, MA
J.R. Klinger, MD, Providence, RI

8:00 Introduction
N.S. Hill, MD, Boston, MA

8:15 Genetic Alterations In PAH
E.D. Austin, MD, Nashville, TN

8:45 The Role Of Inflammation In PAH
A.B. Waxman, MD, PhD, Boston, MA

9:15 Alterations In Lipid Metabolism In PAH
I.R. Preston, MD, Boston, MA

9:45 Alterations In Glucose Metabolism And PAH
R.T. Zamanian, MD, Stanford, CA

10:15 *Break*

10:35 Updated Clinical Classification Of Pulmonary Hypertension
M. Gomberg-Maitland, MD, Chicago, IL

11:05 Imaging Of The Lungs
D. Gopalan, FRCP, Cambridge, United Kingdom

11:35 PAH Or Non PAH-PH? Case Studies
N. Sood, MD, Columbus, OH

12:05 Treatment Targets In PAH
T.M. Bull, MD, Aurora, CO

12:35 *LUNCH*

1:35 Combination Therapies In PAH
D.B. Badesch, MD, Denver, CO

2:05 Prediction Of Outcomes In PAH
M.J.C. Humbert, MD, PhD, Clamart, France

2:35 *Break*

2:55 Management Of Right Ventricular Failure In The ICU
M.M. Hoeper, MD, Hannover, Germany

3:25 What The Future Holds
H.A. Ghofrani, MD, Giessen, Germany

3:55 Concluding Remarks
I.R. Preston, MD, Boston, MA

BEHAVIORAL • CLINICAL

POSTGRADUATE COURSE

PG19 KEY CONCEPTS AND ADVANCES IN PRACTICAL PULMONARY REHABILITATION

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Pulmonary Rehabilitation; Behavioral Science and Health Services Research; Clinical Problems; Nursing

8:00 am-4:00 pm

Target Audience
Clinicians who treat patients with COPD and other forms of chronic respiratory disease, including physicians, pulmonary fellows, medical residents, pulmonary rehabilitation specialists, physiotherapists, respiratory therapists, nurses, psychologists, behavioral specialists, exercise physiologists, nutritionists, occupational therapists, and social workers

Objectives
At the conclusion of this session, the participant will be able to:

- recognize and understand the organization and content of pulmonary rehabilitation programs;
- acknowledge and understand the necessity of and methods for patient assessment before, during and after the program;
- apply the new knowledge presented to improve patients' symptoms, exercise/activity tolerance and health status.

Since the 2006 ATS/ERS Statement on Pulmonary Rehabilitation, there has been considerable growth in our knowledge of its effectiveness and scope. The purpose of this course is to provide the audience with an update in the science, application and delivery of pulmonary rehabilitation, highlighting the new definition and key concepts and major advances in the field. Updates in program content and organization will be reviewed. The role of health behavior change in optimizing and maintaining benefits of PR will be discussed. The broad scope of applicability of PR across varying patient groups will be highlighted.

Chairing: C.L. Rochester, MD, New Haven, CT
R.L. ZuWallack, MD, Hartford, CT
M.A. Spruit, PhD, Horn, Netherlands

8:00 **Introduction**
M.A. Spruit, PhD, Horn, Netherlands

8:15 **New Definition Of Pulmonary Rehabilitation**
L. Nici, MD, Providence, RI

8:30 **Pulmonary Rehabilitation Program Organization, Setting And Patient Selection**
C.M. Garvey, FNP, MPA, MSN, Daly City, CA

9:05 **How To Test Exercise Performance And Muscle Strength**
A.E. Holland, MD, Melbourne, Australia

9:45 **Other Aspects Of Patient Assessment: The Numbers Tell The Tale**
S.C. Lareau, RN, MS, Aurora, CO

10:20 *Break*

10:30 **Update In The Science Of Exercise Training: The Usual Suspects And The New Kids On The Block**
I. Vogiatzis, PhD, Athens, Greece

11:05 **How To Do Exercise Training For Your Patient**
K. Hill, PhD, Perth, Australia

11:45 **Physical Activity: How Many Steps A Day Keep The Doctor Away?**
F. Pitta, PhD, PT, Londrina, Brazil

12:20 *LUNCH*

12:55 **Collaborative Self-Management: Soon Learnt, Soon Forgotten?**
J. Bourbeau, MD, Montreal, Canada

1:30 **Pulmonary Rehabilitation Earlier In The Course Of The Disease: Are We Going For GOLD 2?**
S.J. Singh, PhD, Leicester, United Kingdom

2:05 **Pulmonary Rehabilitation In The Peri-Exacerbation Period: A Mission Impossible?**
W.D.C. Man, MD, London, United Kingdom

2:40 *Break*

2:50 **Pulmonary Rehabilitation For Persons With Respiratory Disorders Other Than COPD: Can We Broaden The Scope?**
C.L. Rochester, MD, New Haven, CT

3:25 **Maintenance Of Benefits From Pulmonary Rehabilitation: A Future Perspective**
R. ZuWallack, MD, Hartford, CT

CLINICAL

POSTGRADUATE COURSE

PG20 RESPIRATORY PHYSIOLOGY MASTER CLASS

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Respiratory Structure and Function; Clinical Problems; Critical Care

8:00 am-4:00 pm

Target Audience

Practicing clinicians (including physicians and mid-level providers) and trainees whose primary clinical focus is pulmonary and/or critical care medicine

Objectives

At the conclusion of this session, the participant will be able to:

- Understand and describe the basic principles of respiratory physiology that affect the transport of oxygen from the environment to the tissues;
- describe the manner in which the core principles or respiratory physiology are altered in special populations including pregnant women and the obese and apply this understanding to their care at the bedside;
- describe the manner in which the respiratory system responds to stress such as sustained high level exercise and hypobaric hypoxia.

This course will provide a case-based comprehensive review of core principles of respiratory physiology, including advanced instruction in respiratory mechanics, gas exchange, blood gas transport, control of breathing and the pulmonary circulation. Additional sessions will be devoted to special patient populations including obese and pregnant individuals and how the respiratory system functions under stresses such as exercise and hypobaric hypoxia. Emphasis will be placed throughout the seminar on the bedside application of the principles covered in each lecture.

Chairing: A.M. Luks, MD, Seattle, WA
R.W. Glenny, MD, Seattle, WA

8:00 **Introduction**
A.M. Luks, MD, Seattle, WA

8:10 **Core Respiratory Physiology Principles: Mechanics**
D.R. Hess, PhD, RRT, Boston, MA

8:55 **Core Respiratory Physiology Principles: Gas Exchange**
R.W. Glenny, MD, Seattle, WA

9:40 **Core Respiratory Physiology Principles: Blood Gas Transport**
P.D. Wagner, MD, La Jolla, CA

10:25 *Break*

10:35 **Core Respiratory Physiology Principles: The Pulmonary Circulation**
R. Naeije, PhD, Brussels, Belgium

11:20 **Core Respiratory Physiology Principles: Control Of Breathing**
J.A. Dempsey, PhD, Madison, WI

12:05 *LUNCH*

12:50 **Respiratory Physiology In Special Patient Populations: Pregnancy**
S.E. Lapinsky, MD, Toronto, Canada

1:35 **Respiratory Physiology In Special Patient Populations: Obesity**
P.G. Carvalho, MD, Boise, ID

2:20 *Break*

2:30 **The Respiratory System Under Stress: Exercise**
S.R. Hopkins, MD, PhD, La Jolla, CA

3:15 **The Respiratory System Under Stress: High Altitude**
A.M. Luks, MD, Seattle, WA

BEHAVIORAL • CLINICAL

POSTGRADUATE COURSE

PG21 MEASURES OF SLEEP DISORDERED BREATHING SEVERITY AND HEALTH-RELATED OUTCOMES

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $400 In Training Member: $250
Non Member: $475 In Training Non Member: $350

Assemblies on Sleep and Respiratory Neurobiology; Behavioral Science and Health Services Research; Nursing; Pediatrics

8:00 am-4:00 pm

Target Audience

Clinicians caring for patients with sleep disorders; those conducting clinical research in sleep apnea; fellows and trainees

Objectives

At the conclusion of this session, the participant will be able to:

- apply approaches in their sleep center for the assessment and characterization of sleep disordered breathing (SDB) using in-center and out-of-center testing approaches;
- learn how and when to appropriately integrate assessment of cardiovascular, neurocognitive, and metabolic outcomes pertinent to patients with SDB;
- learn strategies on how to quantify and optimize CPAP adherence.

This course will provide attendees with a comprehensive review of current approaches to: 1. assess and characterize sleep disordered breathing; 2. quantify and optimize CPAP adherence; and 3. assess important outcomes in SDB (e.g. metabolic, quality of life, cardiovascular, neurocognitive function). Speakers will discuss how these approaches can be implemented or translated into clinical practice. Four key areas will be discussed using small group discussions including assessment and characterization of SDB, optimization of CPAP adherence and the use of quality of life measures, case-based led discussions of SDB and cardiovascular disease, and neurocognitive and metabolic outcomes and SDB.

Chairing: S.P. Patil, MD, PhD, Baltimore, MD
M.J. Morrell, PhD, London, United Kingdom

8:00 **Welcome And Course Introduction**
S.P. Patil, MD, PhD, Baltimore, MD

8:05 **The AHI, ODI, And Other Metrics Of SDB Severity: Part 1**
I.A. Ayappa, PhD, New York, NY

8:20 **The AHI, ODI, And Other Metrics Of SDB Severity: Part 2**
H. Schneider, MD, PhD, Baltimore, MD

8:35 **Assessment Of The Upper Airway In Clinical Practice: Lessons Learned From Airway Imaging**
R.J. Schwab, MD, Philadelphia, PA

9:05 **Strategies For The Rational Use Of Portable Monitoring In Diagnosing SDB: Lessons Learned From Clinical Research**
D.J. Gottlieb, MD, MPH, Boston, MA

9:35 *Break*

9:45 **Quantifying And Optimizing CPAP Adherence**
M. Aloia, PhD, Denver, CO

10:15 **Characterizing Sleepiness And QOL In Clinical Practice**
T.E. Weaver, PhD, RN, Chicago, IL

10:45 **Neuroimaging And Neurocognitive Assessment In SDB: What Should The Sleep Clinician Follow?**
M.J. Morrell, PhD, London, United Kingdom

11:15 *Break*

11:20 **Morning Breakout Session 1: Approaches To The Assessment And Characterization Of SDB/Approaches To Optimizing CPAP Adherence And Utilizing QOL Measures**
S.P. Patil, MD, PhD, Baltimore, MD
I.A. Ayappa, PhD, New York, NY
R.J. Schwab, MD, Philadelphia, PA
D.J. Gottlieb, MD, MPH, Boston, MA
T.E. Weaver, PhD, RN, Chicago, IL
M. Aloia, PhD, Denver, CO

12:20 *LUNCH*

1:10 **Cardiac Arrhythmias In SDB: A Cardiologist's Perspective**
S. Bansal, MD, MPH, Baltimore, MD

1:40 **Characterizing Cardiovascular Function In SDB: The Role Of The Sleep Clinician**
M. Kohler, MD, Zurich, Switzerland

2:10 **Metabolic And Inflammatory Markers In SDB**
N.M. Punjabi, MD, PhD, Baltimore, MD

2:40 *Break*

2:55 **Breakout Session 2: Neurocognitive/ Metabolic Outcomes And SDB/Cardiovascular Outcomes And SDB Case Discussions**
M.J. Morrell, PhD, London, United Kingdom
S. Bansal, MD, MPH, Baltimore, MD
N.M. Punjabi, MD, PhD, Baltimore, MD
M. Kohler, MD, Zurich, Switzerland

3:55 **Course Wrap-Up**
S.P. Patil, MD, PhD, Baltimore, MD

BEHAVIORAL • CLINICAL

POSTGRADUATE COURSE

PG22 BUILDING EFFECTIVE TEAMS AND IMPLEMENTING CHANGE: THINGS WE NEED TO KNOW AND SHOULD HAVE LEARNED A LONG TIME AGO

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $400 In Training Member: $250
Non Member: $475 In Training Non Member: $350

Education Committee; Assemblies on Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Clinical Problems; Critical Care; Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections; Nursing; Pediatrics; Pulmonary Circulation; Pulmonary Rehabilitation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function; Sleep and Respiratory Neurobiology

8:00 am-4:00 pm

Target Audience
Those with clinical, research, or administrative responsibilities

Objectives
At the conclusion of this session, the participant will be able to:

- create appreciation for, and expertise within the teamwork approach to problem solving, planning, and operational implementation;
- study and understand the practical skills for leaders that are needed to pursue interdisciplinary and programmatic work relationships in the pulmonary, critical care, and sleep community;
- learn effective methods to implement change in the work environment.

The complexity of any work environment necessitates interdisciplinary communication and teamwork. These competencies apply to almost all jobs. They are often assumed to be present although only rarely taught. This course will start to develop future leaders in the fields of pulmonary, critical care, and sleep medicine. Attendees will learn about and then practice the skills needed to transition from a "first job" to a leadership position. The course will help to improve implementing change, building effective teams, dealing with difficult people, and ultimately job satisfaction.

Chairing: M. Moss, MD, Aurora, CO
J.M. Beck, MD, Denver, CO
P.A. Kritek, MD, Seattle, WA

8:00 **Leadership Styles And What Makes An Effective Team?**
E.N. Brooks, MBA, Aurora, CO

9:00 **Team Building Activities And Debriefing #1**
E.N. Brooks, MBA, Aurora, CO

10:00 *Break*

10:15 **Six Easy Steps To Implement Change**
M. Moss, MD, Aurora, CO

11:00 **Change Style Inventory And Debriefing**
M. Moss, MD, Aurora, CO

11:45 *LUNCH*

12:45 **Team Building Activities And Debriefing #2**
E.N. Brooks, MBA, Aurora, CO

1:30 **How To Deal With Challenging People**
J.M. Beck, MD, Denver, CO

2:15 *Break*

2:30 **Dealing With Challenging Individual Activities**
P.A. Kritek, MD, Seattle, WA

3:30 **Wrap Up**
E.N. Brooks, MBA, Aurora, CO

BEHAVIORAL • CLINICAL

POSTGRADUATE COURSE

PG23 BUILDING BLOCKS OF QUALITY IMPROVEMENT: PRACTICAL TOOLS FOR THE CLINICIAN

R **Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.**

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Quality Improvement Committee; Assembly on Clinical Problems

8:00 am-4:00 pm

Target Audience
Physicians, nurses, respiratory therapists and other clinical care providers with an interest in learning about the field of quality improvement, including practical tools for implementation

Objectives
At the conclusion of this session, the participant will be able to:

- become familiar with the background and history behind quality improvement efforts in healthcare with a specific understanding in regards to quality improvement in pulmonary healthcare;
- gain basic skills to initiate and track quality improvement efforts within their scope of practice in order to improve care delivery to pulmonary patients;
- become familiar with how to motivate for changes as well as mechanisms to lead to academic involvement in quality improvement.

A wealth of clinical evidence exists giving us information to on how to best care for our patients. However, we often fail to consistently act on this information, leading to significant variations in practice across providers and gaps in evidence-based care. The science of quality improvement exists to help clinicians reduce the variation and close the gap. In this course, through a series of didactic lectures and interactive breakout sessions the learner will become familiar with the background of quality improvement as well as be given practical skills for improving patient care through implementing the Model for Improvement.

Chairing: B. Patel, MD, Houston, TX
A.L. Prestridge, MD, Chicago, IL

8:00 **History And Background Of Quality Improvement**
A.L. Prestridge, MD, Chicago, IL

8:15 **Introduction To Science Of Quality Improvement**
R.A. Mularski, MD, Portland, OR

8:45 **Breakout Session 1**
A.L. Prestridge, MD, Chicago, IL

9:30 **An Overview Of Quality Measures And Public Reporting**
C.R. Cooke, MD, MSc, Ann Arbor, MI

10:00 *Break*

10:15 **Breakout Session 2**
B. Patel, MD, Houston, TX

11:00 **When Is It Quality Improvement Vs. Research?**
Speaker To Be Announced

11:30 **Breakout Session 3**
A.L. Prestridge, MD, Chicago, IL

12:15 *LUNCH*

1:00 **Breakout Session 4**
B. Patel, MD, Houston, TX

1:45 **Motivating For Change**
Speaker To Be Announced

2:15 **Reports Of Change**
A.L. Prestridge, MD, Chicago, IL

2:45 *Break*

3:00 **Lessons From Patient Safety**
Speaker To Be Announced

3:30 **Publishing Quality Improvement**
Speaker To Be Announced

CLINICAL

POSTGRADUATE COURSE

PG24 PULMONARY AND CRITICAL CARE REVIEW: BUILT AROUND 2012 ABIM MODULES

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $350 In Training Member: $200
Non Member: $425 In Training Non Member: $300

Assemblies on Critical Care; Clinical Problems

8:00 am-4:00 pm

Target Audience
Pulmonary and critical care clinicians seeking evidence-based reviews, particularly those engaged in Maintenance of Certification

Objectives
At the conclusion of this session, the participant will be able to:

- critically review and interpret recent literature in pulmonary and critical care medicine;
- apply recent literature in pulmonary and critical care medicine to clinical practice;
- complete the 2012 ABIM Pulmonary and Critical Care SEP module.

Led by expert faculty, some of whom serve on the ABIM, this interactive group learning session is a review of pulmonary and critical care topics designed around the most recent ABIM self-assessment modules. The course will utilize a pulmonary module (annual update, 10 points) and critical care medicine module (annual update, 10 points). In addition to providing a high quality clinical review of topics in pulmonary and critical care medicine, this session provides ABIM recertifying physicians with an opportunity to complete two recertification modules while at the ATS International Conference.

Chairing: J.T. Poston, MD, Chicago, IL
L.A. Sonna, MD, PhD, Portland, OR

8:00 **Introduction**
J.T. Poston, MD, Chicago, IL

8:30 **Critical Care Review**
J.B. Hall, MD, Chicago, IL

10:00 *Break*

10:15 **Critical Care Review**
J.T. Poston, MD, Chicago, IL

11:45 *LUNCH*

12:45 **Pulmonary Diseases Review**
M.L. Osborne, MD, PhD, Portland, OR

2:15 *Break*

2:30 **Pulmonary Diseases Review**
J. Mandel, MD, San Diego, CA

CLINICAL

POSTGRADUATE COURSE

PG25 BRONCHOSCOPY COURSE AND WORKSHOP

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $475 In Training Member: $300
Non Member: $550 In Training Non Member: $400

Assembly on Clinical Problems

8:00 am-4:00 pm

Target Audience
Pulmonary, thoracic surgery fellows in training, allied health professionals, anesthesiologists and those interested in quality improvements and implementation of clinical programs

Objectives
At the conclusion of this session, the participant will be able to:

- educate participants on the techniques and principles of bronchoscopy, using both didactic teaching methods as well as hands on training;
- utilize planned attendee self-learning elements, both prior to and after live activity to tailor the development of the on-site course content and maximize the incorporation of new skills;
- support the standardization practice of bronchoscopy,training performed by pulmonary physicians.

The bronchoscopy course and workshop addresses evidence based bronchoscopy topics pertinent to core skills in an accredited pulmonary fellowship program. Techniques include various diagnostic skills with airway examination, biopsy of lung parenchyma and lymph nodes, as well as incorporating new technologies to apply to management of patients with chest and/or airway diseases.

Chairing: A. Ernst, MD, Boston, MA
J.A. Gorden, MD, Seattle, WA
A.W. Sung, MD, New York, NY

8:00 **Quality Improvement Tools**
A.W. Sung, MD, New York, NY

8:20 **Indications And Contraindications Of Bronchoscopy**
J.A. Gorden, MD, Seattle, WA

8:40 **Airway Anatomy And Pathologies**
D.H. Sterman, MD, Philadelphia, PA

9:00 *Break*

9:10 **Credentialing And Business Considerations**
A. Ernst, MD, Boston, MA

9:30 **Lung Cancer Staging**
K. Yasufuku, MD, Toronto, Canada

9:50 **EBUS/Radial EBUS And EUS**
F.J. Herth, MD, PhD, Heidelberg, Germany

10:10 *Break*

10:20 **Complications And Management**
M.G. Slade, MD, Cambridge, United Kingdom

10:40 **High Risk Bronchoscopy**
S. Rafeq, MD, Boston, MA

11:00 **Core Diagnostic Techniques**
C.T. Gillespie, MD, Chicago, IL

11:20 **Bronchoscopy Of The Child**
A.G. Vicencio, MD, New York, NY

11:40 **Lunch**

12:20 **Surgical Considerations Of The Airways**
T. Weiser, MD, White Plains, NY

12:40 **Setting New Programs: Introducing New Technologies**
K.L. Kovitz, MD, Elk Grove Village, IL

1:00 **Hands-On Demonstrations**
A. Ernst, MD, Boston, MA
K.L. Kovitz, MD, Elk Grove Village, IL
T. Weiser, MD, White Plains, NY
A.G. Vicencio, MD, New York, NY
C.T. Gillespie, MD, Chicago, IL
S. Rafeq, MD, Boston, MA
M.G. Slade, MD, Cambridge, United Kingdom
K. Yasufuku, MD, Toronto, Canada
D.H. Sterman, Philadelphia, PA
A.W. Sung, MD, New York, NY
J.A. Gorden, Seattle, WA
F.J. Herth, MD, PhD, Heidelberg, Germany

BEHAVIORAL • CLINICAL

NURSING WORKSHOP

WN1 RESPIRATORY NURSING SKILLS UPDATE

R Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited.

Member: $125 In Training Member: $125
Non Member: $150 In Training Non Member: $125

Assembly on Nursing

8:00 am-4:00 pm

Target Audience
Nurses and advance nurse practitioners who work in a clinical setting with patients suffering from respiratory diseases

Objectives
At the conclusion of this session, the participant will be able to:

- apply the basic concepts of oxygenation and the implications of inadequate oxygenation as it relates to pulmonary disorders;
- learn updated concepts of spirometry and conduct high quality basic spirometric testing;
- learn new findings about the principles of bi-level non-invasive ventilation and apply problem solving techniques for mask fitting.

Participants of this workshop will receive didactic content from ATS clinical experts followed by hands-on demonstrations of practical topics including oxygenation, oxygen delivery devices, spirometry, proper inhaler technique, and principles of bi-level non-invasive ventilation, problem solving techniques for bi-level mask fitting, ABG interpretation and radiographic "red flags" for common pulmonary disorders.

Chairing: M.J. Fletcher, RN, MS, Warwick, United Kingdom
L.F. Reinke, PhD, ARNP, Edmonds, WA

8:00 **Introduction**
M.J. Fletcher, RN, MS, Warwick, United Kingdom
L.F. Reinke, PhD, ARNP, Edmonds, WA

8:05 **ATS Patient Education Materials**
K.O. Lindell, PhD, RN, Pittsburgh, PA

8:10 **The Critical Elements Of Asthma And COPD Self-Management: Exactly The Same And Completely Different**
M.R. George, PhD, RN, AEC, Philadelphia, PA

8:45 **Infectious Diseases**
K.A. Feemster, MD, MPH, MSHPR, Philadelphia, PA

9:30 **Oxygen 101: Top Ten Things You Need To Know**
F. Tasota, RN, MSN, Bessemer, PA

10:15 *Break*

10:30 **Basic Spirometry: The Practicalities And Pitfalls**
C. Loveridge, RGN, BSc, Warwick, United Kingdom

11:30 **Non-Invasive Ventilation, CPAP And Bi-Level (BIBAP): What Is The Difference? The Real Issues**
D.E. Hart, MN, Auckland, New Zealand

12:15 *LUNCH*

1:15 **Station 1: Spirometry**
C. Loveridge, RGN, BSc, Warwick, United Kingdom

1:50 **Station 2: Inhaler Overview And Techniques**
C.A. Vitari, BSN, RN, Pittsburgh, PA

2:20 *Break*

2:35 **Station 3: Non-Invasive Ventilation Devices**
D.E. Hart, MN, Auckland, New Zealand

3:10 **Station 4: Oxygen Equipment Techniques**
A. Schneidman, MS, CNS, RN, Phoenix, AZ

3:40 **Panel Discussion: Nursing Skills Update**
M.J. Fletcher, RN, MS, Warwick, United Kingdom
L.F. Reinke, PhD, ARNP, Edmonds, WA

4:30 pm-5:30 pm

OPENING CEREMONY

The American Thoracic Society invites you to attend the Opening Ceremony as the official start of the 2013 International Conference. The Ceremony will showcase our host city, Philadelphia, and provide a keynote talk relevant to the science and practice of pulmonary, critical care and sleep medicine. The Ceremony will be followed by a social gathering with light refreshments where attendees can meet up with friends and colleagues.

5:30 pm-6:30 pm

S1 CAREER DEVELOPMENT EXCHANGE

The Career Development Exchange is an annual networking event for fellows, residents, other trainees and first time conference attendees. The Exchange is an informative and resource-filled activity, in which residents, fellows, post docs, IP members, and other junior professionals can network with peers and colleagues who are well advanced with their career paths.

The Membership Committee, Training Committee, and the Members In Transition & Training Committee of the ATS jointly host the Career Development Exchange.

R Registration is required to obtain an audience count. Tickets will not be issued; however, Conference badges are required for admission.

Space is limited. There is no additional fee. Cocktails and hors d'oeuvres will be served.

accompanied by five questions for inclusion in pre/post questionnaires. The learner will be eligible for MOC points on successful completion of said knowledge assessment.

Chairing: M.B. Hershenson, MD, Ann Arbor, MI
M.A. Nevin, MD, Chicago, IL

6:45 **Pediatric Asthma: Diagnosis And Severity Classifications**
M.A. Nevin, MD, Chicago, IL

7:15 **Pediatric Asthma: Testing And Management**
W.J. Morgan, MD, Tucson, AZ

CLINICAL

PEDIATRIC CLINICAL CORE CURRICULUM

PCC1 PEDIATRIC ASTHMA

Pediatric Core Curriculum Working Group

6:45 am-7:45 am

Target Audience
Pediatric pulmonary and critical care physicians, young faculty members, fellow physicians in allergy, pulmonary and ICU.

Objectives
At the conclusion of this session, the participant will be able to:

- describe the pathophysiology of asthma and the clinical assessment and care of children with asthma;
- identify and manage infants and children with childhood interstitial lung disease;
- describe the pathophysiology and management of bronchopulmonary dysplasia and the pathophysiology, identification and management of pulmonary hypertension in infants and children.

The pediatric clinical core curriculum sessions will be comprised of three one-hour sessions on subsequent ATS 2013 conference days. Sessions will cover core curriculum topics pertinent to the practice and expertise of pediatric pulmonary medicine. Each topic will be

CLINICAL

CLINICAL CORE CURRICULUM

CC1 PULMONARY CLINICAL CORE CURRICULUM

Clinical Core Curriculum Working Group

7:00 am-8:30 am

Target Audience
Internists and subspecialists in pulmonary, critical care and sleep medicine who work in a clinical setting and are currently engaged in maintenance of certification

Objectives
At the conclusion of this session, the participant will be able to:

- remain current with the growth of information relevant to their medical practice in pulmonary, critical care, and sleep medicine;
- evaluate their knowledge and skills in key areas of pulmonary, critical care, and sleep medicine, as well as receive feedback on their understanding as a result of a pre-test/post-test comparison;
- support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements.

The ATS Clinical Core Curriculum symposia focus on a 3-year content cycle of key medical content in the areas of pulmonary, critical care and sleep medicine. The topics are also aligned with corresponding Part II maintenance of certification modules. This symposium is intended to assist clinicians with staying current with the growth of information relevant to their medical practice, as well as provide an opportunity to evaluate individual knowledge and skills.

Chairing: J.M. Beck, MD, Denver, CO

Vascular Diseases

7:00 **Thromboemboli, Deep Venous And Thrombosis, Pulmonary Embolism**
V.F. Tapson, MD, Durham, NC

7:30 **Pulmonary Hypertension And Veno-Occlusive Disease**
R.N. Channick, MD, Boston, MA

8:00 **Alveolar Hemorrhage Syndromes And Vasculitis**
S.K. Frankel, MD, Denver, CO

CLINICAL

YEAR IN REVIEW

A1 CLINICAL YEAR IN REVIEW 1

8:45 am-10:45 am

Target Audience
Providers of lung health, those providing for both common and rare diseases and those with a single disease focus who wish to learn about the latest advances in disparate areas of pulmonary and critical care medicine

Objectives
At the conclusion of this session, the participant will be able to:

- identify new findings in pulmonary and critical care that are directly relevant to patient care;
- understand how new findings in pulmonary and critical care medicine augment current guidelines and modify approaches to common and rare pulmonary diseases;
- identify and consider how quality improvement strategies can be applied in diverse clinical environments in pulmonary and critical care medicine.

The 2013 Clinical Year in Review will review advances over the last year in critical areas of pulmonary and critical care medicine including prevalent pulmonary and critical illnesses. Novel topics proposed this year include health disparities in pulmonary and critical care medicine and systems-based approaches to the organization and delivery of critical care services.

Chairing: E.R. Sutherland, MD, MPH, Denver, CO
H.R. Collard, MD, San Francisco, CA
R.D. Stapleton, MD, MSc, Burlington, VT

8:45 **Radiology**
E. Kazerooni, MD, Northville, MI

9:15 **Lung Cancer**
J.A. Kern, MD, Denver, CO

9:45 **Interventional Pulmonology**
C.L. Channick, MD, Boston, MA

10:15 **Asthma**
C.E. Brightling, MBBS, Leicester, United Kingdom

BEHAVIORAL • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A2 CURRENT CONTROVERSIES IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE TREATMENT

Assemblies on Clinical Problems; Behavioral Science and Health Services Research; Nursing; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Clinicians, researchers, nurses, respiratory therapists, fellows and residents in training

Objectives
At the conclusion of this session, the participant will be able to:

- understand the current controversial therapies in COPD;
- learn and understand the need for new data regarding the specific therapies;
- understand the value of evidence based medicine and how it applies to COPD treatment.

This session will use international experts to provide balanced information regarding various aspects of controversial therapy in COPD that has much interest for the clinical as well as clinical investigator.

Chairing: G.J. Criner, MD, Philadelphia, PA
A. Anzueto, MD, San Antonio, TX
B.R. Celli, MD, Boston, MA

8:15 **A Patient's Perspective**
Speaker To Be Announced

8:25 **Should Treatment For COPD Begin At Earlier Disease Stages?**
B.R. Celli, MD, Boston, MA

8:45 **Choosing Inhaled Corticosteroids Vs. PDE-4 Inhibitors: Which Patient For Which Drug?**
K.F. Rabe, MD, PhD, Grosshansdorf, Germany

9:05 **What Is The Role Of Prophylactic Antibiotics To Prevent Exacerbation?**
J.A. Wedzicha, MD, London, United Kingdom

9:25 **Is There A Role For Self Management Of COPD To Prevent Re-Hospitalization?**
J. Bourbeau, MD, Montreal, Canada

9:45 **When And How Should Cardiovascular Comorbidity Be Treated?**
W. MacNee, MD, PhD, Edinburgh, United Kingdom

10:05 **Is There A Role For Anti-Oxidant Therapy?**
A. Anzueto, MD, San Antonio, TX

10:25 **Can Phenotyping Be Used To Direct Treatment In COPD?**
G.J. Criner, MD, Philadelphia, PA

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A3 FELLOWS CASE CONFERENCE

Training Committee; Members in Transition Committee

8:15 am-10:45 am

Target Audience
Clinicians, nurses, fellows, internal medicine residents, medical students, basic science researchers looking to broaden their clinical acumen to facilitate translational research and clinical/translational researchers involved in trials focused on adults with pulmonary and critical care diseases

Objectives
At the conclusion of this session, the participant will be able to:

- recognize clinical, radiographic and pathologic findings of difficult and/or rare disease processes;
- gain insight into clinical decision making skills as demonstrated by master clinicians, radiologists and pathologists which will improve the quality of learners practice and improve quality of life for his /her patients;
- develop strategies to evaluate patients with various types of symtomatology.

This session will consist of unique cases presented and discussed by fellows with a panel of clinical experts to moderate the discussion and provide commentary. The cases will provide new insights into disease pathogenesis, diagnosis or treatment. Selected cases will include clear clinical, radiographic and pathologic findings. Finally, the discussion will yield important teachings for both fellows and seasoned clinicians.

Chairing: B. Carlin, MD, Pittsburgh, PA

8:15 **Challenging Case Presentations**
Speaker To Be Announced

10:00 **Expert Reviews**
Speaker To Be Announced

BEHAVIORAL • CLINICAL

CRITICAL CARE TRACK

A4 IMPROVING ICU DECISION MAKING AT THE END OF LIFE: CUTTING EDGE STRATEGIES

Assemblies on Critical Care; Behavioral Science and Health Services Research; Nursing

8:15 am-10:45 am

Target Audience
Clinicians (physicians and nurses), researchers, administrators, and policymakers; anyone involved in critical care and other pulmonary diseases

Objectives
At the conclusion of this session, the participant will be able to:

- use new knowledge about end of life ICU-based prognostication, decision making, and communication to improve patient centered outcomes;
- improve the process of end of life care by understanding effective behaviors and techniques for improving shared decision making;
- describe novel research in mechanisms and interventions relevant to end of life decision making and understand opportunities for related research.

Content will provide concrete tools and a useful framework to engage in more effective patient centered shared decision making in ICUs. This session addresses using cutting edge topics relevant to clinicians, researchers, patients, and families. Specific content includes: effective decision making concepts, prognostication, a practical approach, new approaches to decisional support, and involvement of palliative care consultants. Novel aspects include the use of short talks with an extended speaker audience summary discussion, as well as each speaker's framing of talks around an initial illustrative clinical case. This session will foster discussion, increase audience participation, and reduce didacticism enhancing attendee value.

Chairing: C.E. Cox, MD, MPH, Durham, NC
D.B. White, MD, Pittsburgh, PA
P.E. Spronk, MD, PhD, Apeldoorn, Netherlands

8:15 **Moving Beyond Rationality: Critical Concepts That Can Improve Our Clinical And Research Approach To Surrogate End Of Life Decision Making**
D.B. White, MD, Pittsburgh, PA

8:35 **Patient Or Family Navigators In The ICU: A Concept That's Right For Critical Illness?**
J.R. Curtis, MD, MPH, Seattle, WA

8:55 **New Approaches To Decisional Support In The ICU: Decision Aids, Audiovisual Supplements, And Electronic Media**
C.E. Cox,MD, MPH, Durham, NC

9:15 **Can A Health Systems Approach Improve The ICU Approach To Futility, Appropriate Care, And Death And Dying?**
P.E. Spronk, MD, PhD, Apeldoorn, Netherlands

9:35 **Managing Intractable Conflict, Futility, And Difficult Conversations**
E. Azoulay, MD, PhD, Paris, France

9:55 **What Is The Optimal Role For Palliative Care Consultants In The ICU?**
S.D. Block, MD, Boston, MA

10:15 **Panel Discussion On Improving ICU Decision Making At The End Of Life**
R.D. Truog, MD, Boston, MA

BASIC • TRANSLATIONAL

SCIENCE CORE

A5 A HITCHHIKER'S GUIDE TO MECHANOBIOLOGY: HOW MATRIX-CYTOSKELETON INTERACTIONS DRIVE CELL BEHAVIOR

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Basic researchers, clinical researchers and clinicians who are interested in the pathogenesis of multiple pulmonary and critical illnesses, including pulmonary fibrosis, asthma, pulmonary hypertension, lung injury and sepsis

Objectives
At the conclusion of this session, the participant will be able to:

- understand how interactions of the cytoskeleton and the extracellular matrix in the "cell ECM unit" govern a wide range of cell behaviors in the lung;
- learn and understand how these interactions critically contribute to the development and progression of a broad range of pulmonary and critical illnesses, such as pulmonary fibrosis and airway remodeling, lung injury and sepsis;
- understand the rationale for emerging pharmacological strategies that will treat pulmonary and critical illnesses by targeting the matrix-cytoskeletal interactions of the "cell ECM" unit.

The concept that mechanical forces affect biological behaviors is old, but development of new investigative tools has led to an explosion of research revealing how these forces profoundly impact most fundamental cell behaviors, including survival, proliferation, and differentiation. Mechanical forces are sensed and transmitted through a coordinated unit of the cell cytoskeleton and the extracellular matrix. This "cell-ECM unit" transduces forces into biochemical signals that contribute to most diseases; manipulating ECM-cytoskeletal interactions consequently has extremely broad therapeutic potential. This symposium will review mechanisms through which ECM-cytoskeletal interactions control cell behaviors, and pathways through which mechanical forces contribute to lung disease.

Chairing: A.M. Tager, MD, Boston, MA
M. Konigshoff, MD, PhD, Munich, Germany
J. Roman, MD, Louisville, KY

8:15 A Hitchhiker's Guide To Mechanobiology: An Introduction To The "Extracellular Matrix Cell Unit"
J. Eyckmans, PhD, Philadelphia, PA

8:35 TGF-Beta Activation By Mechanical Forces Transmitted Through The Matrix
M.R.J. Kolb, MD, PhD, Hamilton, Canada

8:55 Control Of TGF-Beta Activation By Alphav Containing Integrins: All Roads Lead To Rho
G.R. Jenkins, MD, PhD, Nottingham, United Kingdom

9:15 Increased Stiffness Of The Liver Precedes Matrix Deposition: Lessons For Lung Fibrosis
R.G. Wells, MD, Philadelphia, PA

9:35 The Puzzle Of Inflammation And Fibrosis: Is Vimentin The Missing Piece?
K.M. Ridge, PhD, Chicago, IL

9:55 Control Of Pro-Fibrotic Gene Expression By The Matrix
D.J. Tschumperlin, PhD, Boston, MA

10:15 Control Of Pro-Fibrotic Gene Expression By The Cytoskeleton: The Myocardin Related Transcription Factor (MRTF) Pathway
A.M. Tager, MD, Boston, MA

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A6 RIGHT VENTRICULAR METABOLIC SHIFT AND ISCHEMIA IN PULMONARY ARTERIAL HYPERTENSION

Assemblies on Pulmonary Circulation; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Pulmonologists, cardiologists, basic scientists, graduate and post doctoral trainees, and nurses with an interest or focus in pulmonary vascular disease and pulmonary heart disease including pulmonary arterial hypertension and right heart failure

Objectives
At the conclusion of this session, the participant will be able to:

- acquaint pulmonologists with the developmental and metabolic distinctions between the right and left ventricles;

- introduce the audience to normal cardiac metabolism and highlight disorders that are therapeutically relevant in the RVH that accompanies PAH and review state of the art in imaging RV function in PAH;
- review state of the art on metabolic interventions that target the RV in PAH.

RV remodeling is a result of functional and structural adaptation to chronic pressure-volume overload. The RV's ability to sustain output with increased afterload determines symptom severity and is an important determinant of presentation and survival in patients with PAH. Progressive pulmonary vascular remodeling results in adaptive RV hypertrophy. With progression of vascular and cardiac remodeling there is regional ischemia leading to increased production of ROS in mitochondria, miDNA damage, and progressive mitochondrial dysfunction, and RV failure. An understanding of the RV response to changes in load and the relevant pathways will advance our understanding of pulmonary vascular and RV dysfunction.

Chairing: A.B. Waxman, MD, PhD, Boston, MA
A. Hemnes, MD, Nashville, TN

8:15 **Development Of The Cardiopulmonary Vascular System**
E.E. Morrisey, PhD, Philadelphia, PA

8:40 **Introduction To Cardiac Metabolism For The Pulmonologist**
G. Lopaschuk, MD, Edmonton, Canada

9:05 **Metabolic Changes In The Hypertrophied RV-Therapeutic Implications Of Enhancing Glucose Oxidation**
S.L. Archer, MD, Chicago, IL

9:30 **Is The Hypertrophied RV Ischemic?**
N.F. Voelkel, MD, Richmond, VA

9:55 **Measuring The RV: Physiology And Function In The Face Of Pressure Load And Metabolic Change**
A.J. Peacock, MD, Glasgow, United Kingdom

10:20 **Opportunities To Simultaneously Target Metabolism In The Pulmonary Vasculature And RV**
E.D. Michelakis, MD, Edmonton, Canada

There will be a 5-minute discussion after each talk.

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

A7 HOSPITAL READMISSIONS: THE NEXT CHALLENGE IN PULMONARY MEDICINE PRACTICE

Assemblies on Behavioral Science and Health Services Research; Clinical Problems

8:15 am-10:45 am

Target Audience
Clinical providers of all disciplines (physicians, nurses, pharmacists, social workers); persons with administrative responsibilities; clinical, epidemiological, behavioral sciences, economical, and health services researchers

Objectives
At the conclusion of this session, the participant will be able to:

- describe the frequency of readmission in patients with respiratory disease;
- identify individual patient and healthcare system factors whose modification could decrease the frequency of hospital readmissions;
- learn new findings about different initiatives and programs being tested to decrease readmissions.

The current session will review the frequency with which readmissions occur, the factors associated with this outcome, and the role of the different participants in the process of care in the prevention of this phenomenon. American and European experiences will review and discuss the role of hospitalists, care pathways, and predischarge planning, for prevention of readmissions.

Chairing: C.H. Martinez, MD, MS, MPH, Ann Arbor, MI
N.A. Hanania, MD, MS, Houston, TX

8:15 **Hospital Readmissions: Defining The Role Of The Practitioner, Scientist And Policymaker**
D.H. Au, MD, MS, Seattle, WA

8:25 **Transitions Of Care: Identifying The Key Stakeholders In The Readmission Process**
J.A. Krishnan, MD, PhD, Chicago, IL

8:45 **COPD, Asthma, And Pneumonia: Revisiting Predictors Of Readmission In Respiratory Patients**
J.D. Thornton, MD, MPH, Cleveland, OH

9:05 **The Hospitalist Movement And Its Impact On The Process Of Care And Post-Discharge Outcomes**
G. Sharma, MD, MPH, Galveston, TX

9:20 **Pre And Post Discharge Planning Initiatives To Reduce Readmissions**
M.V. Williams, MD, Chicago, IL

9:40 **Care Pathways And Readmissions: European Experiences And Current Research**
M. Decramer, MD, PhD, Leuven, Belgium

9:55 **Will The Affordable Care Act Alter The Readmission Landscape?**
C.R. Cooke, MD, MSc, Ann Arbor, MI

BEHAVIORAL • BASIC
CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A8 ENVIRONMENTAL CHANGE AND GLOBAL PUBLIC HEALTH

Assemblies on Environmental and Occupational Health; Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Microbiology, Tuberculosis and Pulmonary Infections; Pediatrics; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Basic scientists and providers of respiratory care and public health, serving patients from susceptible subpopulations, including children, the elderly, those with existing cardiopulmonary disease or affected by natural environmental disasters

Objectives
At the conclusion of this session, the participant will be able to:

- understand the global issues surrounding environmental and climate changes that impact respiratory and public health;
- understand how basic scientists may become more involved in addressing environmental issues associated with climate change;
- provide physicians with the tools to address climate change in the treatment of patients.

There is an increasing concern of how a changing world environment is affecting global public health. Climate change is contributing to increased population exposure to aeroallergens and secondary pollutants associated with adverse cardiorespiratory health effects. This session is designed for scientists and healthcare providers to gain a better understanding of the public health effects of climate change and to support evidence-based global health policy. The audience will be provided with examples of global issues and recommendations.

Chairing: K.E. Pinkerton, PhD, Davis, CA
D.L. Costa, ScD, Research Triangle Park, NC

8:15 **Understanding Environmental Factors And Climate Change On Global Public Health**
W.N. Rom, MD, MPH, New York, NY

8:35 **Climate Change, Air Pollution, And Interaction With Allergens**
C. Carlsten, MD, MPH, Vancouver, Canada

8:55 **Climate Change, Housing And Respiratory Health**
J.J. Jaakkola, MD, Oulu, Finland

9:15 **Desertification, Water, Food And The Vulnerability Of Low Resource Countries**
H. Bayram, MD, PhD, Gaziantep, Turkey

9:35 **European Perspective Of Environmental Factors And Climate Change On Public Health**
I. Annesi-Maesano, DSc, MD, PhD, Paris, France

9:55 **Human Vulnerability On Climate Change And Adaption Strategies**
M. Akpinar-Elci, MD, MPH, St. George, Grenada

10:15 **The Role Of Regulatory Decision Making In Mitigating The Impacts Of Environmental And Climate Changes In Public Health**
D.L. Costa, ScD, Research Triangle Park, NC

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A9 A TOP-DOWN VIEW: INTEGRATING EPIDEMIOLOGIC, CLINICAL, AND BASIC PERSPECTIVES ON PNEUMOCOCCAL PNEUMONIA

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Allergy, Immunology and Inflammation

8:15 am-10:45 am

Target Audience
Epidemiologists, clinicians, fellows, and basic scientists

Objectives
At the conclusion of this session, the participant will be able to:

- understand the global burden of pneumococcal pneumonia and recognize conditions that contribute to greater susceptibility;
- describe the methods used to diagnose pneumococcal pneumonia and the effectiveness of biomarkers to predict clinical outcomes;
- identify virulence factors and mechanisms that regulate the innate immune response against pneumococcal pneumonia.

Despite advances in the prevention and treatment of pneumococcal pneumonia, Streptococcus pneumoniae is still the leading cause of community-acquired pneumonia and death from infectious disease. The presentations in this symposium will begin with a global and epidemiologic view of the disease and cover clinically relevant issues such as susceptibility, diagnosis, and prognostic biomarkers. The presentations will then progressively become more focused and move deeper into the mechanisms of the host response to colonization, pneumococcal virulence factors, and finally, the molecular mechanisms of the pulmonary innate immune response.

Chairing: P. Mancuso, PhD, Ann Arbor, MI
C. Feldman, DSc, MD, PhD, Johannesburg, South Africa
S.B. Gordon, MD, Liverpool, United Kingdom
R. Menendez, MD, PhD, Valencia, Spain

8:15 **Is The Pneumococcus Still A Virulent Pathogen?**
C. Feldman, DSc, MD, PhD, Johannesburg, South Africa

8:40 **Genetic Susceptibility To Pneumococcal Pneumonia**
G.W. Waterer, MBBS, PhD, Perth, Australia

9:05 **Diagnosis And Prognostic Biomarkers Of Clinical Outcomes In Pneumococcal Pneumonia**
R. Menendez, MD, PhD, Valencia, Spain

9:30 **Human Pneumococcal Carriage-Risks And Benefits**
S.B. Gordon, MD, Liverpool, United Kingdom

9:55 **Pneumococcal Virulence Factors In Colonization And Disease**
J.N. Weiser, MD, PhD, Philadelphia, PA

10:20 **Role Of Transcription Factors In The Innate Immune Response To Pneumococcal Pneumonia**
J.P. Mizgerd, ScD, Boston, MA

There will be a 5-minute discussion after each talk.

BEHAVIORAL • BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A10 APPLYING NOVEL MODELS AND MECHANISTIC APPROACHES TO PEDIATRIC RESPIRATORY DISEASE

Assemblies on Pediatrics; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Pediatric and adult pulmonologists, neonatologists, clinical and translational researchers

Objectives
At the conclusion of this session, the participant will be able to:

- identify novel approaches to understanding the pathogenesis of childhood lung diseases;
- discuss the role of 'omic' mechanisms in early lung disease;

• describe relevant models for childhood lung disease.

Emerging technologies and tools for discovery are changing the face of medicine. The objective is to provide those focused on pediatric lung health with the latest advances in molecular approaches to the study of early disease pathogenesis. All presenters will focus on strategies and tools that can be readily applied for translational research in pediatric populations.

Chairing: S.D. Davis, MD, Indianapolis, IN
L.R. Young, MD, Nashville, TN

8:15 **The Challenges And Opportunities In Pediatric Lung Research**
L.R. Young, MD, Nashville, TN

8:25 **Modeling Lung Development And Disease**
D.A. Stoltz, MD, PhD, Iowa City, IA

8:50 **Transcriptional Profiling In BPD**
T.J. Mariani, PhD, Rochester, NY

9:10 **Using Transcriptomics (RNAseq) To Measure Inflammation And Immunity In Childhood Lung Disease**
J.K. Kolls, MD, Pittsburgh, PA

9:35 **Translational And Genomic Approaches To Pediatric Sleep Disorders**
D. Gozal, MD, Chicago, IL

10:00 **Genomic Origins Of Asthma**
S.T. Weiss, MD, MS, Boston, MA

10:25 **Molecular Determinants Of Pulmonary Hypertension**
E.D. Austin, MD, Nashville, TN

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

A11 NOCTURNAL NON-INVASIVE VENTILATION: THEORY, EVIDENCE, AND CURRENT BEST PRACTICE

Assemblies on Sleep and Respiratory Neurobiology; Behavioral Science and Health Services Research; Clinical Problems; Nursing

8:15 am-10:45 am

Target Audience

Providers, including physicians, respiratory technologists, and nurses tasked with treating ventilatory failure in a team based setting and needing instruction and update in the optimal use of nocturnal non-invasive ventilation in diverse patient groups; administrators in ICUs and respiratory therapy departments; respiratory physiologists and clinical investigators interested in development of novel approaches to nocturnal non-invasive ventilation

Objectives

At the conclusion of this session, the participant will be able to:

• appreciate the clinical and biologic basis of application of nocturnal non-invasive ventilation (nNIV) in patients with ventilatory insufficiency; understand the technical specifications, indications, and limitations related to the major modes of nNIV;

• have optimal strategies to assess limitations, efficacy, adherence, and patient outcomes related to the major modes of nNIV, and gain the knowledge to apply novel nNIV technology;

• apply state of the art evidence to the application of nNIV in patients with COPD and overlap syndrome, heart failure, obesity hypoventilation, and neuromuscular disorders including amyotrophic lateral sclerosis; and envision future research imperatives regarding the application and monitoring of nNIV in patients with severe cardio-respiratory disorders requiring ventilatory support.

This symposium brings together master clinicians and scientists in the field of nocturnal non-invasive ventilation, to offer prospective and experienced clinicians and investigators alike a firm and practical basis for understanding the rationale for application of nocturnal non-invasive ventilation in patients with a wide range of severe cardio-respiratory disorders including heart failure, COPD, obesity hypoventilation, and neuromuscular weakness who may benefit from acute and/or long term ventilatory support, along with practical knowledge regarding state of the art clinical applications and research imperatives, much of which practitioners will not be immediately conversant or experienced with.

Chairing: R.C. Basner, MD, New York, NY
N.S. Hill, MD, Boston, MA

8:15 **Nuts And Bolts: Tried And New nNIV Modalities And Features**
S. Parthasarathy, MD, Tucson, AZ

8:40 **nNIV For COPD And Overlap Syndrome**
S. Nava, MD, Bologna, Italy

9:05 **nNIV For Sleep-Disordered Breathing In Heart Failure**
S. Javaheri, MD, Mason, OH

9:30 **nNIV In Obesity Hypoventilation Syndrome: Modes, Methods, And Measures**
A.J. Piper, PhD, Sydney, Australia

9:55 **nNIV In Neuromuscular Disorders: Forget The FVC?**
A.D. Atkeson, MD, New York, NY

10:20 **Optimizing And Tracking nNIV Adherence**
D.E. Hart, MN, Auckland, New Zealand

There will be a 5-minute discussion after each talk.

CLINICAL • TRANSLATIONAL

ATS/ERS JOINT SYMPOSIUM

A12 SEVERE ASTHMA: GRADING THE CURRENT EVIDENCE AND PLANNING FOR THE FUTURE

ATS-ERS Severe Asthma Task Force; Assembly on Allergy, Immunology and Inflammation

8:15 am-10:45 am

Target Audience
Pulmonologists, allergists, nurses, respiratory therapists, translational scientists

Objectives
At the conclusion of this session, the participant will be able to:

- review and understand recommendations on use of biomarkers in severe asthma;
- understand the recommendations on treatment options in severe asthma;
- review and understand the current and emerging concepts of asthma phenotyping in relation to endotypes.

This session will summarize our current understanding of severe asthma and its phenotypes from a clinical and scientific perspective. It will introduce the GRADE concept utilized to address clinical questions of interest to clinicians regarding the current use of biomarkers to phenotype patients, as well as addressing the current approaches to therapy using the same methods. It will expand on these current findings to explore the future possibilities to enhance the treatment of severe asthma.

Chairing: K.F. Chung, MD, PhD, London, United Kingdom
S.E. Wenzel, MD, Pittsburgh, PA

8:15 **GRADE: An Explanation Of The Approach**
J.L. Brozek, MD, PhD, Hamilton, Canada

8:30 **The Value Of Sputum Eosinophils And Exhaled NO In Severe Asthma Phenotyping**
C.E. Brightling, MBBS, Leicester, United Kingdom

8:50 **Anti-Allergic Approaches: Anti-IgE And Beyond**
W.G. Teague, MD, Charlottesville, VA

9:10 **Corticosteroid Insensitive Asthma: Methotrexate And Beyond**
K.F. Chung, MD, PhD, London, United Kingdom

9:30 **Macrolides And Anti-Fungal In Severe Asthma And Beyond**
P.G. Gibson, MBBS, Sydney Australia

9:50 **Bronchial Thermoplasty And Beyond**
L. Boulet, MD, Quebec, Canada

10:10 **From Phenotype To Endotype: Solidifying The Pathways Through Emerging Therapies**
S.E. Wenzel, MD, Pittsburgh, PA

10:30 **Panel Discussion: Summarizing the Current State Of Severe Asthma**
S.E. Wenzel, MD, Pittsburgh, PA

8:15 am-10:45 am

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.

11:30 am-1:00 pm

SECTION MEMBERSHIP MEETINGS

The Section meetings are open to all ATS members and other interested individuals. Items to be discussed include the Sections' current projects and future directions.

TERRORISM AND INHALATION DISASTERS

Chairing: C.E. Sandrock, MD, MPH, Sacramento, CA

THORACIC ONCOLOGY

Chairing: J.R. Jett, MD, Denver, CO
C.A. Powell, MD, New York, NY
E.A. Hirschowitz, MD, Lexington, KY

The section membership meeting on
Genetics and Genomics
will be held on Sunday, May 19, 6:30 pm - 8:30pm

11:30 am-1:00 pm

S2 ATS DIVERSITY FORUM

The annual Diversity Forum focuses on diversity within the fields of pulmonary, critical care and sleep medicine, research and academic careers.

The forum will feature a guest speaker who will address issues related to diversity followed by a question and answer session. We also hope for vibrant discussion and networking among attendees and the speaker.

The Diversity Forum is sponsored by the ATS Membership Committee and will be hosted by **Yolanda Mageto, MD, MPH**.

R **Registration is required to obtain an audience count. Tickets will not be issued; however, Conference badges are required for admission.**
Space is limited. There is no additional fee for this Forum. A plated lunch will be served.

CLINICAL

WORKSHOP

WS1 DIAGNOSTIC APPROACH TO THE PERIPHERAL LUNG NODULE

Registration Fee: $95.00 (includes box lunch.)
Attendance is limited. Pre-registration is required.

Assembly on Clinical Problems

11:30 am-1:00 pm

Target Audience
Pulmonologists, thoracic surgeons, physicians in training

Objectives
At the conclusion of this session, the participant will be able to:
outline the optimal a lung nodule.

- outline the optimal approach to the solitary lung nodule;
- learn about current and emerging bronchoscopic approaches to the solitary lung nodule;
- gain hands-on practice in bronchoscopic technology that target the peripheral lung nodule.

The session will discuss the current evidence and approach to the peripheral lung nodule, and evaluate clues and signs that would lead the chest physicians to an observation strategy vs. sampling or resection. A one-hour hands-on session will expose the learners to current bronchoscopic technology that can reach the peripheral lung nodule such as radial endobronchial ultrasound and navigation bronchoscopy.

Chairing: M.M. Wahidi, MD, Durham, NC

11:30 Evidence-Based Approach To The Peripheral Lung Nodule
M.K. Gould, MD, MS, Los Angeles, CA

11:50 Bronchoscopic Approaches To The Peripheral Lung Nodule
M.M. Wahidi, MD, Durham, NC

12:00 Hands-On Demonstrations

Station 1
C.R. Lamb, MD, Burlington, MA
M.M. Wahidi, MD, Durham, NC

Station 2
N.A. Ninan, MD, New Orleans, LA
A.I. Musani, MD, Denver, CO

Station 3
D.J. Feller-Kopman, MD, Baltimore, MD
A.W. Sung, MD, New York, NY

Station 4
A.C. Chen, MD, St. Louis, MO
K. Mahmood, MD, Durham, NC

BASIC • CLINICAL • TRANSLATIONAL

WORKSHOP

WS2 PRIORITIZING FOR ACADEMIC SUCCESS

Registration Fee: $75.00 (includes box lunch.)
Attendance is limited. Pre-registration is required.

Assemblies on Respiratory Structure and Function; Allergy, Immunology and Inflammation; Critical Care; Pediatrics; Pulmonary Circulation; Respiratory Cell and Molecular Biology

11:30 am-1:00 pm

Target Audience
Graduate students, postdoctoral fellows, clinical fellows, physician-scientists, and junior or mid-level investigators interested in sharpening their professional skills. Attendees will leave the workshop with practical tips that will enhance their likelihood of academic success

Objectives
At the conclusion of this session, the participant will be able to:

- improve their career-development skills;
- identify what constitutes a good scientific question;
- gain practical knowledge that will maximize their likelihood of academic success.

Whether you are writing a dissertation, submitting a research paper, applying for research funding, or preparing a scientific presentation, here is a workshop that will guide, inspire, and empower you. Join a panel of three successful academicians as they discuss the tricks of the trade. Critical topics of discussion will include: (1) Writing for Impact; (2) Presenting to Your Audience; and (3) Developing a Good Scientific Question. Short lectures will be followed by a panel-audience question and answer session. Participants will leave the workshop equipped with practical knowledge that will maximize their likelihood of academic success.

Chairing: R. Krishnan, PhD, Boston, MA
A.A. Zeki, MD, Sacramento, CA

11:30 Writing For Impact
J.J. Fredberg, PhD, Boston, MA

11:50 Presenting To Your Audience
J.G.N. Garcia, MD, Chicago, IL

12:10 Developing A Good Scientific Question
S.C. Erzurum, MD, Cleveland, OH

12:30 Audience-Panel Discussion
R. Krishnan, PhD, Boston, MA

NATIONAL INSTITUTE OF NURSING RESEARCH/NIH

L1 NATIONAL INSTITUTE OF NURSING RESEARCH AND OTHER RESEARCH FUNDING OPPORTUNITIES: A ROUNDTABLE DISCUSSION

12:00 pm-1:00 pm

Target Audience
Nurse investigators and other researchers who are interested in funding opportunities

Objectives
At the conclusion of this session, the participant will be able to:

- describe the research priorities of each funding agency represented on the panel;
- discuss practical steps that researchers take to improve their chances for success, including common pitfalls and how to avoid them;
- identify a funding agency that is most closely aligned with the attendee's research interests.

This session will discuss funding opportunities available for nurse researchers and other pulmonary and critical care scientists through the NINR and other agencies including ATS, RWJ Foundation, VA System, Kaiser, PCORI, and the American Lung Association. Panelists will introduce their agencies' primary focus of interest, offer suggestions for successful applications, and be available after the session for individual consultations.

Chairing: D.M. Donesky, PhD, RN, San Francisco, CA
C.L. French, RN, MS, Worcester, MA

12:00 National Institute Of Nursing Research
K. Huss, DNSC, RN, Bethesda, MD

12:05 American Lung Association
J. Reardon, MSN, Hartford, CT

12:10 Patient Centered Outomes Research Institute
L. Frank, PhD, Washington, DC

12:15 Kaiser Permanente
R.A. Mularski, MD, MSHS, MCR, Portland, OR

12:20 RWJ Foundation Nurse Faculty Scholars Program
J. Bellot, PhD, RN, Philadelphia, PA

12:25 Department Of Veterans Affairs
A.C. Alt-White, PhD, RN, Washington, DC

12:30 ATS Program Of Research
M.S. Badr, MD, Detroit, MI

12:35 Panel Discussion

ALA ASTHMA CLINICAL RESEARCH CENTERS

L2 SOY ISOFLAVONES IN ASTHMA (SOYA) AND ASTHMA AND NASAL STEROIDS (STAN)

12:00 pm-1:00 pm

Target Audience
Physicians, clinical scientists, nurses, paraprofessionals, educators, healthcare providers

Objectives
At the conclusion of this session, the participant will be able to:

- understand the role of diet in asthma;
- evaluate whether the addition of treatment with nasal steroids improves asthma control;
- possibly identify a novel, safe and relatively inexpensive treatment for patients with asthma; and potentially will have a substantial impact on public health in the United States.

The ALA Asthma Clinical Research Centers' (ACRC) purpose is to conduct clinical trials with practical importance to both adults and children with asthma. Two of the trials were the SOYA and STAN Trials. The SOYA Trial tested the novel hypothesis that dietary supplementation with soy isoflavones was an effective treatment in patients with poorly controlled asthma. The STAN Trial was to determine if treatment of chronic rhinitis and/or sinusitis improved control of asthma in children and adults.

Chairing: W.C. Bailey, MD, Birmingham, AL
R.A. Wise, MD, Baltimore, MD

12:00 **SOYA Rationale And Design**
C. Bime, MD, Baltimore, MD

12:15 **SOYA Results**
L.J. Smith, MD, Chicago, IL

12:30 **STAN Rationale And Design**
L.B. Gerald, PhD, MSPH, Tucson, AZ

12:45 **STAN Results**
A.E. Dixon, MD, Burlington, VT

NATIONAL CENTER FOR ENVIRONMENTAL HEALTH/CDC

L3 UPDATE FROM CDC'S NATIONAL ASTHMA CONTROL PROGRAM

12:00 pm-1:00 pm

Target Audience
Clinicians, physicians, nurses, respiratory therapists and asthma educators serving patients with asthma and their families

Objectives
At the conclusion of this session, the participant will be able to:

- improve quality of asthma education provided to patients;
- learn about the importance of asthma self-management education in improving patient quality of life;
- recognize the role of state health departments in improving the lives of people with asthma.

CDC's National Asthma Control Program (NACP) was created in 1999 to help the millions of people with asthma in the United States gain control over their disease. The NACP funds states to help them improve surveillance of asthma, train health professionals, educate individuals with asthma and their families, and explain asthma to the public. The NACP collects data on state-specific levels to focus efforts and resources where they are needed. CDC's funded programs have improved the quality of asthma care, improved asthma management in schools, and fostered policies to help reduce air pollution.

Chairing: P.L. Garbe, DVM, MPH, Atlanta, GA

12:00 **CDC National Asthma Control Program Overview**
P.L. Garbe, DVM, MPH, Atlanta, GA

12:15 **Asthma Management In Missouri Schools**
B. Francisco, PhD, Columbia, MO

12:30 **Oregon Asthma Program: Supporting Asthma Self-Management Through Federally Qualified Health Centers**
C.B. Railsback, MPH, Portland, OR

12:45 **Physician Education To Prevent Asthma Hospitalizations In Southeastern New Mexico**
G. Jaramillo, MS, Santa Fe, NM

U.S. CRITICAL ILLNESS AND INJURY TRIALS GROUP

L4 INTEGRATING EMERGENCY CARE INTO CRITICAL CARE AND PULMONARY RESEARCH

12:00 pm-1:00 pm

Target Audience
Individuals that do research, teach, or provide care for the critically ill or injured

Objectives
At the conclusion of this session, the participant will be able to:

- integrate emergency and pre-ICU care to advance critical care and pulmonary clinical and outcomes research;
- learn new findings in emergency care research;
- improve collaboration between experts in emergency care, critical care and pulmonary medicine.

Leaders from the recent NIH Roundtables on Emergency Care Research, the evolving NIH Office of Emergency Care Research, NIH funded emergency research networks, critical care research networks, and an integrated emergency/critical illness and injury trial group will identify their goals and objectives and provide updates on recent progress and ongoing plans to integrate emergency and critical care research. Attendees will learn of the spectrum of emergency care research, be updated on advances in emergency care treatment, and understand the challenges and potential opportunities to integrate emergency and pre-ICU care into critical care research.

Chairing: C. Cairns, MD, Chapel Hill, NC

Speakers and Talks To Be Announced

DIVISION OF LUNG DISEASES/NHLBI/NIH

L5 TB SYSTEMS BIOLOGY: STUDYING MECHANISMS OF LATENCY AND REACTIVATION

12:00 pm-1:00 pm

Target Audience
Providers of lung health, particularly those with an interest in tuberculosis and other chronic/persistent lung infections, including members of the MTPI Assembly; Pulmonary and Critical Care Fellows in training; Basic researchers on lung biology and lung microbial pathogenesis

Objectives
At the conclusion of this session, the participant will be able to:

- diagnose and manage latent TB infection;
- improve the understanding of the spectrum of TB latency;
- learn new findings about host responses during LTBI and reactivation disease.

The content of the session will include a brief review of our current understanding of the clinical condition of latent TB infection, including clinical and diagnostic parameters, as well as risk factors associated with reactivation disease. The majority of the session will address unanswered questions pertaining to TB latency and reactivation. The speakers will highlight the use of novel experimental models and approaches to elucidate the basic biology of these conditions, and discuss how this information may contribute to improved diagnosis and treatment options.

Chairing: H. Peavy, MD, Bethesda, MD
S. Bennett, MD, Seattle, WA

12:00 Overview Of The TBSB Consortium On TB Latency And Reactivation
S. Bennett, MD, Seattle, WA

12:07 A Multidisciplinary Approach To Understanding TB Latency And Reactivation
P.C. Karakousis, MD, Baltimore, MD
D. Kaushal, PhD, New Orleans, LA

12:24 Mapping And Modeling Host-Pathogen Interactions In TB Latency And Reactivation
M. Gennaro, MD, Newark, NJ

12:36 Proteomics And MTB Latency
W.H. Boom, MD, Cleveland, OH

12:48 Spectrum Of Latency: Modeling In Vivo And In Silico
P.L. Lin, MD, MSC, Pittsburgh, PA

DIVISION OF LUNG DISEASES/NHLBI/NIH

L6 UPDATE ON THE NHLBI-SPONSORED LONG-TERM OXYGEN TREATMENT TRIAL (LOTT)

12:00 pm-1:00 pm

Target Audience
COPD patients, pulmonary physicians, clinical researchers and administrators

Objectives
At the conclusion of this session, the participant will be able to:

- understand the use of O2 COPD patients;
- understand the effect of O2 use in COPD patients.

The Chair will introduce historical reasons for the LOTT trial. A first talk will illustrate the rationale and challenges of oxygen treatment clinical trials. The following talks will present the design of the LOTT trial. The final presentation will report on the recruitment strategies and characteristics of LOTT enrollees.

Chairing: A. Fuhlbrigge, MD, Boston, MA

12:00 Historical Reasons For LOTT
A. Fuhlbrigge, MD, Boston, MA

12:05 Rationale And Challenges Of Oxygen Treatment Clinical Trials
F.J. Martinez, MD, MS, Ann Arbor, MI

12:20 Design Of The LOTT Trial
D.H. Au, MD, Seattle, WA

12:35 Recruitment Strategies And Characteristics Of LOTT Enrollees
G.J. Criner, MD, Philadelphia, PA

DIVISION OF LUNG DISEASES/NHLBI/NIH

L7 HISPANIC COMMUNITY HEALTH STUDY (HCHS): NOVEL DISCOVERIES OF SLEEP HEALTH DISPARITIES AND CARDIOMETABOLIC DISEASE

12:00 pm-1:00 pm

Target Audience
Pulmonary and sleep clinicians; clinicians and researchers interested in sleep disordered breathing and other causes of sleep deficiency, cardiometabolic disease, and minority health; public health policy makers; practitioners serving Hispanic American patients

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the evidence-based relationship between sleep disordered breathing and cardiometabolic risk in the context of minority health;
- apply new knowledge about sleep disordered breathing and cardiometabolic risk to patient evaluation and decision making in the minority health clinical setting;
- improve the clinical care of individuals presenting with possible symptoms of sleep disordered breathing and other indices of sleep deficiency.

HCHS will present novel discoveries from this landmark investigation of minority health, demonstrating cardiometabolic disease risk associated with SDB. New findings will reveal variation in the prevalence and risk factors for SDB across 6 U.S. Hispanic groups, as well as a disproportionate burden of SDB to cardiometabolic risk among young to middle-aged U.S. Hispanic adults. Unique associations between acculturation, gender, sleep symptoms (i.e. sleepiness), and cardiometabolic risk have emerged from the HCSH data. The novelty of the HCHS study design and hypotheses tested will be discussed, and future directions for SDB research, based on HCHS findings will be presented.

Chairing: A.D. Laposky, PhD, Bethesda, MD
S.S. Redline, MD, MPH, Boston, MA

12:00 Risk Factors For Sleep Disordered Breathing Vary Across U.S. Hispanic Groups
N.A. Shah, MD, Bronx, NY

12:15 Hispanic Community Health Study: Scientific Aims And Study Design For Advancing Sleep And Minority Health Research
S.S. Redline, MD, MPH, Boston, MA

12:30 The Contribution Of Sleep Disordered Breathing To Cardiometabolic Risk In U.S. Hispanics
A.R. Ramos, MD, Miami, FL

12:45 The Influence Of Acculturation On Sleep Disorders And Cardiometabolic Health
S.R. Patel, MD, Boston, MA

DIVISION OF LUNG DISEASES/NHLBI/NIH

L8 SUBPOPULATIONS AND INTERMEDIATE OUTCOME MEASURES IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (SPIROMICS)

12:00 pm-1:00 pm

Target Audience
Clinical pulmonary researchers; healthcare providers with interest in the clinical diversity of COPD

Objectives
At the conclusion of this session, the participant will be able to:

- learn about COPD sub-phenotypes;;
- learn about genetics of COPD;
- understand imaging in COPD.

Chronic obstructive pulmonary disease (COPD) is a heterogeneous syndrome with varied clinical presentations and probably diverse molecular mechanisms of pathogenesis. SPIROMICS is an observational clinical research study designed to characterize the heterogeneity of COPD at both clinical and molecular levels and use these data to identify 1) more homogeneous patient subpopulations for inclusion in future clinical trials and 2) measures of disease severity that may be useful as outcome measures for trials. This course will describe the design of the study and present baseline data for this cohort, including clinical characteristics, CT image characteristics, selected biomarkers, and genetic data.

Chairing: S.I. Rennard, MD, Omaha, NE
D. Couper, PhD, Chapel Hill, NC

12:00 SPIROMICS: Objectives And Study Design
S.I. Rennard, MD, Omaha, NE

12:15 Status and Opportunities For Data Analysis
D. Couper, PhD, Chapel Hill, NC

12:30 CT Imaging
E.A. Hoffman, PhD, Iowa City, IA

12:40 Biospecimens And Biomarkers
W.K. O'Neal, PhD, Chapel Hill, NC

12:50 Genetic Data
D.A. Meyers, PhD, Winston-Salem, NC

MEET THE PROFESSOR SEMINARS

R **Registration Fee: $70.00 (includes box lunch.)**
Attendance is limited. Pre-registration is required.

12:00 pm-1:00 pm

MP401 MANAGEMENT OF DIFFICULT ASTHMA
C.H. Fanta, MD, Boston, MA

MP402 ILD EVALUATION: DETECTING OCCULT CONNECTIVE TISSUE DISEASE
A. Fischer, MD, Denver, CO

MP403 PULMONARY NON-TUBERCULOUS MYCOBACTERIAL INFECTIONS: A CASE-BASED APPROACH
A.E. O'Donnell, MD, Washington, DC

MP404 DIAGNOSTIC APPROACH TO DYSPNEA
M.R. Pratter, MD, Camden, NJ

MP405 NEUROLOGIC DISASTERS IN THE MEDICAL ICU
T.P. Bleck, MD, Chicago, IL

MP406 NON-INVASIVE ACCESS TO THE HUMAN LUNG
S.D. Spivack, MD, MPH, Bronx, NY

MP407 ANTIBIOTICS FOR PNEUMONIA: PRINCIPLES OF PROPER USAGE
M.S. Niederman, MD, Mineola, NY

MP408 CARING FOR THE VENTILATOR DEPENDENT CHILD AT HOME: WHAT WE HAVE LEARNED IN FOUR DECADES
T.G. Keens, MD, Los Angeles, CA

MP409 PULMONARY VASCULAR COMPLICATIONS OF LIVER DISEASE
S.M. Kawut, MD, MS, Philadelphia, PA

MP410 PULMONARY REHABILITATION USING TELEHEALTH
R.S. Goldstein, MD, Toronto, Canada
M.K. Stickland, PhD, Edmonton, Canada

MP411 NOVEL ACQUIRED RESISTANCE OF MOLECULAR-TARGETED THERAPY FOR LUNG CANCER
S. Yano, MD, PhD, Kanazawa, Japan

MP412 CLINICAL COURSE AND PREDICTION OF SURVIVAL IN IDIOPATHIC PULMONARY FIBROSIS
T.E. King, MD, San Francisco, CA

MP413 DIAPHRAGM EMG: CURRENT CONCEPTS
Y. Luo, PhD, Guangzhou, China

MP414 OBESITY HYPOVENTILATION SYNDROME: INTERNATIONAL PERSPECTIVE ON PATHOPHYSIOLOGY AND TREATMENT STRATEGIES
J. Pepin, PhD, ScD, Grenoble, France
B. Mokhlesi, MD, Chicago, IL

THEMATIC SEMINAR SERIES

TSS1 INTEGRATED INTERSTITIAL LUNG DISEASE CARE

R **Registration Fee: $140.00 for the full series (includes continental breakfast and box lunch.)**
Attendance is limited. Pre-registration is required.

This is a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The topics and schedule for each part are listed below.

Sunday, May 19, 12:00 pm-1:00 pm

Multidisciplinary Management Of IPF: A Practical Approach To Applying The Lessons We Have Learned
S.K. Danoff, MD, PhD, Baltimore, MD

Monday, May 20, 7:00 am-8:00 am

Current Management Strategies For Comorbidities In ILD
C.D. Fell, MD, MSc, Calgary, Canada

Tuesday, May 21, 7:00 am-8:00 am

Advances In Symptom Management In ILD
K.O. Lindell, PhD, RN, Pittsburgh, PA

1:00 pm-2:00 pm

VISIT THE EXHIBIT HALL

Take this opportunity between sessions to visit the Exhibit Hall to gain practical knowledge to advance care and research. Exhibitors will be on hand to provide information on pharmaceutical products, medical equipment, publications and research services.

BEHAVIORAL • CLINICAL • TRANSLATIONAL

YEAR IN REVIEW

A81 NURSING YEAR IN REVIEW

Assembly on Nursing

2:00 pm-4:30 pm

Target Audience
Nurses, physicians, physical therapists, respiratory therapists, pharmacists, and researchers in behavioral medicine interested in translational research

Objectives
At the conclusion of this session, the participant will be able to:

- apply recent lessons learned in research and clinical practice related to palliative care, tuberculosis, and sleep to other practice settings;
- discuss recent advances in critical care related to integrative therapies, pediatrics, and advanced practice nursing;
- identify patient care trends in pulmonary, critical care and sleep, and innovative responses to those trends from both a research and a clinical perspective.

This session will provide an overview of recent advances in the areas of sleep, critical care, and pulmonary research and practice from a nursing perspective, with application of lessons learned across practice settings.

Chairing: D.M. Donesky, PhD, RN, San Francisco, CA
C.L. French, RN, MS, Worcester, MA

2:00 **Nursing Considerations Related To Sleep**
T.E. Weaver, PhD, RN, Chicago, IL

2:20 **Lessons Learned From Tuberculosis**
M.B. Kane, MSc, Dublin, Ireland

2:40 **Pediatric Critical Care**
M.A.Q. Curley, PhD, RN, Philadelphia, PA

3:00 **Integrative Therapies For Symptom Management With Critically Ill Patients**
L.L. Chlan, PhD, RN, Minneapolis, MN

3:20 **Advanced Practice Providers In The Hospital Setting**
M. Donovan-Johnson, DNP, ACNP-BC, New York, NY

3:40 **Palliative Care: Challenges And Opportunities**
R. Disler, RN, MSc, Sydney, Australia

4:00 **Three Late-Breaking Abstract Presentations**
D.M. Donesky, PhD, RN, San Francisco, CA

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A82 CLINICAL CHALLENGES IN LUNG CANCER: PRACTICING WITH LIMITED EVIDENCE

Assembly on Clinical Problems

2:00 pm-4:30 pm

Target Audience
All practitioners providing care to patients with lung cancer, including pulmonologists, thoracic surgeons, and oncologists

Objectives
At the conclusion of this session, the participant will be able to:

- choose management strategy for marginally operable patient with lung cancer or patient with Stage IIA-N2 disease;
- apply new guidelines for management of ground glass opacities;
- appropriately use EBUS-bronchoscopy for mediastinal staging of patients with lung cancer.

There are now numerous guidelines to assist practitioners to choose appropriate strategies for the diagnosis and management of lung cancer. As advances have progressed in the development of new diagnostic and therapeutic modalities, important clinical questions regarding the roles of these new modalities exist with a limited evidence base. This session will examine several important clinical scenarios where limited evidence exists regarding the appropriate management approach.

Chairing: A. Vachani, MD, Philadelphia, PA
F.C. Detterbeck, MD, New Haven, CT
D.A. Arenberg, MD, Ann Arbor, MI

2:00 **A Patient's Perspective**
Speaker To Be Announced

2:05 **Treatment Of The "Marginally Operable" Patient: The Case For Limited Resection**
J.S. Donington, MD, New York, NY

2:30 **Treatment Of The "Marginally Operable" Patient: The Case For SBRT**
R. Timmerman, MD, Dallas, TX

2:55 **Stage IIIA-N2 Disease: Who Gets Surgery?**
D.A. Arenberg, MD, Ann Arbor, MI

3:20 **EBUS: TBNA Of The "Normal" Mediastinum**
A. Vachani, MD, Philadelphia, PA

3:40 **Adjuvant Treatment Of Resected Stage I-IIIA With A Sensitizing Mutation In EGFR**
G.J. Riely, MD, PhD, New York, NY

4:05 **Management Of Multiple GGOs: Case Studies And Panel Discussion**
F.C. Detterbeck, MD, New Haven, CT

There will be a 5-minute discussion after each talk.

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A83 GREAT CASES: CLINICAL, RADIOLOGIC AND PATHOLOGIC CORRELATIONS BY MASTER CLINICIANS

Council of Chapter Representatives

2:00 pm-4:30 pm

Target Audience
Clinicians in the fields of pulmonary and critical care medicine, thoracic surgery and infectious disease

Objectives
At the conclusion of this session, the participant will be able to:

- integrate the clinical presentation, radiographic and pathologic findings for 10 challenging cases;
- describe the clinical reasoning and differential diagnosis of master clinicians and radiologists;
- describe underlying pathology of challenging cases and review key points in diagnosis and management.

There are now numerous guidelines to assist practitioners to choose appropriate strategies for the diagnosis and management of lung cancer. As advances have progressed in the development of new diagnostic and therapeutic modalities, important clinical questions regarding the roles of these new modalities exist with a limited evidence base. This session will examine several important clinical scenarios where limited evidence exists regarding the appropriate management approach.

Chairing: L. Nici, MD, Providence, RI
D.J. Upson, MD, MA, Albuquerque, NM

2:00 **Master Clinicians**
S.I.S. Rounds, MD, Providence, RI
M.I. Schwarz, MD, Aurora, CO
T.W. Ferkol, MD, St. Louis, MO

3:30 **Master Radiologist**
J.D. Newell, MD, Denver, CO

4:00 **Master Pathologist**
T.V. Colby, MD, Scottsdale, AZ

BEHAVIORAL • BASIC
CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

A84 SEPSIS THERAPEUTICS AND CLINICAL TRIALS: WHAT WENT WRONG?

Assemblies on Critical Care; Behavioral Science and Health Services Research; Clinical Problems; Nursing

2:00 pm-4:30 pm

Target Audience
Physicians, nurses, allied health professionals, basic scientists, physicians-in-training

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings about the flaws with animal models and translation into human trials in sepsis;
- Learn new findings about definitions and risk assessment in patients with sepsis;
- have new strategies to manage the care of sepsis patients.

In the last 2 years, several multi-center, international trials in sepsis have either been negative or halted early because of harm. After an epic investment in time, funds, and personnel, there are currently no proven immunomodulatory therapeutics for the treatment of critically ill septic patients, leaving basic scientists, trialists, and bedside clinicians wondering what went wrong and where we go next. The purpose of this session is to reflect the evaluation process that is currently underway. The session will review this long history of failed interventions and how we develop recommendations, that are evidence-based for practicing clinicians who treat sepsis.

Chairing: M.M. Levy, MD, Providence, RI
S. Opal, MD, Providence, RI

2:00 **The Immune Response In Sepsis: Where Are We Now?**
S. Opal, MD, Providence, RI

2:25 **Animal Models In Sepsis: Where Have We Gone Wrong?**
Speaker To Be Announced

2:45 **Sepsis Clinical Trials: What Went Wrong?**
B.T. Thompson, MD, Boston, MA

3:10 **Sepsis Clinical Trials: Can We Improve?**
Speaker To Be Announced

3:35 **Definitions And Risk Assessment In Sepsis: Are They Helpful Or Accurate?**
J. Vincent, MD, PhD, Brussels, Belgium

4:00 **Recommendations For Sepsis Management: Is There A Minimum Standard Of Care?**
M.M. Levy, MD, Providence, RI

BASIC • TRANSLATIONAL

SCIENCE CORE

A85 METHODS TO STUDY LUNG INJURY AND REPAIR

Assemblies on Allergy, Immunology and Inflammation; Pediatrics; Pulmonary Circulation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Students, fellows, researchers and lead investigators involved in discovery and translational research on lung inflammation, injury, repair, and development

Objectives
At the conclusion of this session, the participant will be able to:

- appreciate the impact of the microenvironment on tissue repair processes and inflammation;
- understand how to apply emerging technologies to trace cells that contribute to, and to assess cell responses during injury repair;
- understand methods that can be applied to develop multicellular, 3D culture models to assess tissue injury and repair.

This session is designed to demonstrate emerging concepts and methods relevant to tissue modeling, development and cell-tissue interactions in multiple organ systems. Speakers will discuss how these approaches may be applied in the context of studying fundamental mechanisms of lung injury, repair, disease and their potential for developing new therapies and diagnostic techniques. It is anticipated that participants will gain insight that can be applied in their own research programs.

Chairing: A.J. Halayko, PhD, Winnipeg, Canada
L. Schnapp, MD, Seattle, WA
S.J. Wadsworth, PhD, Vancouver, Canada

2:00 **Extracellular Matrix Degradation And Remodeling In Development And Disease**
V.M. Weaver, PhD, San Francisco, CA

2:25 **Three-Dimensional Human Lung Models To Study Lung Disease And Formation Of Fibrosis**
J.E. Nichols, PhD, Galveston, TX

2:50 **Assessing Autophagy In Lung Inflammation And Injury**
A.M.K. Choi, MD, Boston, MA

3:15 **Molecular And Mechanical Mechanisms Controlling Myofibroblast Formation And Fibrotic Activity**
B. Hinz, PhD, Toronto, Canada

3:40 **Tracing Cell Populations That Contribute To Lung Remodeling**
C.E. Barkauskas, MD, Durham, NC

4:05 **Live Imaging Of The Lung To Assess Injury And Repair Processes**
M.R. Looney, MD, San Francisco, CA

There will be a 5-minute discussion after each talk.

BEHAVIORAL • BASIC
CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A86 MITOCHONDRIA AND THEIR GENOME: MORE THAN JUST A POWERHOUSE

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Pulmonary Circulation; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Translational, basic, and clinical scientists engaged in research and/or practice focusing on the critically ill patient at risk for acute lung injury and multiple organ system dysfunction, chronic lung diseases such as pulmonary hypertension and chronic obstructive pulmonary disease

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the cellular response to oxidative mtDNA damage, the pathways maintaining mtDNA integrity, and how such pathways can be exploited for therapeutic purposes;
- understand and learn about mitochondrial Damage Associated Molecular Patterns as a new pathway of intercellular communication in multiorgan system failure;
- learn how circulating bone marrow-derived progenitor cells transfer mitochondria to septic lung cells as a means of enhancing ATP production and improving survival.

Rapidly accumulating evidence supports a critical role for mitochondrial dysfunction in the pathogenesis of lung injury and multiple organ system failure. As the details of mitochondrial involvement in these processes come into clearer focus, mitochondria-related biomarkers and signaling pathways have emerged as potential new strategies for intervention. This symposium will, first, highlight the expanding role of mitochondrial function and dysfunction as determinants of outcome in acute lung injury and multi-organ system failure, and second,

identify new molecular targets for assessment and intervention in these disorders.

Chairing: A.M.K. Choi, MD, Boston, MA
M.N. Gillespie, PhD, Mobile, AL

2:00 **Mitochondria And Compartmentalized ROS Dependent Signaling**
P.T. Schumacker, PhD, Chicago, IL

2:25 **Mitochondrial DNA: A Sentinel Molecule Governing Lung Cell Responses To Oxidant Stress**
M.N. Gillespie, PhD, Mobile, AL

2:50 **Mitochondrial Biogenesis: A Critical Determinant Of Survival In Critical Illness**
C.A. Piantadosi, MD, Durham, NC

3:15 **Progenitor To Resident Lung Cell Mitochondrial Transfer Rescues Lung Cells From Bioenergetic Crisis In Sepsis**
J. Bhattacharya, MBBS, MD, MSc, PhD, New York, NY

3:40 **Circulating Mitochondria DNA: A Biomarker And Predictor Of Sepsis And ARDS**
A.M.K. Choi, MD, Boston, MA

4:05 **Dendritic Cells Are Critical Sensors Of Mitochondrial Danger Signals**
E.D. Crouser, MD, Columbus, OH

CLINICAL

SCIENTIFIC SYMPOSIUM

A87 HOW TO INTERPRET THE MINIMAL IMPORTANT DIFFERENCE IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE CLINICAL TRIALS

Assemblies on Pulmonary Rehabilitation; Clinical Problems

2:00 pm-4:30 pm

Target Audience
Respirologists, nurses, physiotherapists, respiratory therapists, kinesiologists, clinical researchers

Objectives
At the conclusion of this session, the participant will be able to:

- understand the concept of minimal important difference (MID) and learn how this value can be determined;
- learn how to use the MID to help interpret the results of clinical trials in pulmonary medicine;
- discuss the potential limitations and drawbacks of MID.

Traditionally, the scientific community has relied on the statistical significance of changes in outcomes to assess their relevance. Statistical and clinical significances are not synonymous and the interpretation of clinical trials should be done from a broader perspective taking into account both aspects (statistical and clinical) of the treatment effect. The minimal important difference (MID) is a concept that was introduced to attempt to assist in interpreting the relevance of study results. The purpose of this symposium will be to discuss the concept of MID and highlight the recent research in this area.

Chairing: F. Maltais, MD, Quebec, Canada
M.A. Puhan, MD, PhD, Baltimore, MD

2:00 **General Introduction To The Concept Of MID**
B.J. Make, MD, Denver, CO

2:20 **MID Of Pulmonary Function Tests**
J.F. Donohue, MD, Chapell Hill, NC

2:40 **Methods To Determine MID Of HRQL**
H. Gelhorn, PhD, Golden, CO

3:00 **MID Of The 6-Minute Walking Test**
M.A. Puhan, MD, PhD, Baltimore, MD

3:20 **MID Of Cycling Exercise Tests**
F. Maltais, MD, Quebec, Canada

3:40 **MID Of The Shuttle Walking Tests**
V. Pepin, PhD, Montreal, Canada

4:00 **Understanding The MID Concept And Its Limitations**
J. Bourbeau, MD, Montreal, Canada

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A88 CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN NON-SMOKERS: THE TROJAN HORSE IN A GLOBAL TROY

Assemblies on Allergy, Immunology and Inflammation; Clinical Problems; Environmental and Occupational Health; Pulmonary Rehabilitation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Providers of lung health, public health providers, those with clinical and administrative responsibilities, those needing instruction in areas of medicine outside of their specialty

Objectives
At the conclusion of this session, the participant will be able to:

- identify new findings on the epidemiology of non-smoking related COPD and the burden that this is placing on patient health and global health resources;
- apply the new knowledge regarding identification and prevention of exposures such as biomass fuels and indoor cooking apparatus;
- use the information presented to improve the quality of life/health status or his/her patients by preventing exposure to known environmental factors responsible for non-smoking related COPD.

COPD is a global epidemic and although cigarette smoking is the most common cause in developed countries, in developing counties where the increases in COPD are greatest, 50% of COPD is not associated with smoking but with other risk factors such as exposure to biomass fuels in poorly ventilated homes as well as various occupational exposures. There is also a strong link to pulmonary tuberculosis. In under developed countries 20-30% of COPD patients in the community are non-smokers. There is an urgent need for more research to understand how non-smoking COPD differs from smoking COPD.

Chairing: G.P. Downey, MD, Denver, CO
P.J. Barnes, DSc, MD, London, United Kingdom

2:00 **Introduction And Overview**
G.P. Downey, MD, Denver, CO

2:10 **Mechanisms Of Non-Smoking COPD**
Y. Tesfaigzi, PhD, Albuquerque, NM

2:35 **Non-Smoking COPD In North America**
D. Sin, MD, Vancouver, Canada

3:00 **Non-Smoking COPD In South Asia**
S.S. Salvi, MD, PhD, Pune, India

3:25 **Non-Smoking COPD In Latin America**
R. Perez-Padilla, MD, Mexico City, Mexico

3:45 **Non-Smoking COPD In Asia**
S. Muro, MD, Kyoto, Japan

4:05 **Non-Smoking COPD: The Need For More Research**
P.J. Barnes, DSc, MD, London, United Kingdom

CLINICAL

SCIENTIFIC SYMPOSIUM

A89 BEYOND THE EPR 3/GINA GUIDELINES: INCORPORATING THE RESULTS OF RECENT PEDIATRIC ASTHMA TRIALS INTO CLINICAL CARE

Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Clinical Problems

2:00 pm-4:30 pm

Target Audience
Pediatric and adult physicians, nurses, respiratory therapists, and trainees who care for children and adolescents with asthma; investigators involved in clinical trials and translational research, especially those who are involved in asthma research

Objectives
At the conclusion of this session, the participant will be able to:

- describe current guideline based asthma care and to identify gaps in the treatment portion of the guidelines;

- interpret the results of recently published clinical trials, understand their limitations and know how they might fit into the current guidelines;
- consider how the guidelines may differ in the future as more is learned about asthma phenotype clusters, endotypes and genotypes.

The management of patients with asthma is primarily driven by guidelines originating from the NIH expert panel recommendations published in 2007 and the Global Initiative for Asthma. These guidelines were based upon the best evidence available at the time they were written. However, many new clinical trials have been published in recent years, and it is often difficult for the clinician to determine how these new studies fit into guideline-based care. In this session, speakers will provide an overview of many of the recently published clinical trials, review their limitations, and discuss how they fit into the guidelines.

Chairing: J. Chmiel, MD, MPH, Cleveland, OH
C.M. Kercsmar, MD, MS, Cincinnati, OH

2:00 **Pediatric Asthma: What Areas Could Be Updated In The Guidelines?**
S.J. Szefler, MD, Denver, CO

2:20 **Mild Asthma: Stepping Up**
L.B. Bacharier, MD, St. Louis, MO

2:40 **Mild Asthma: Stepping Down**
F.D. Martinez, MD, Tucson, AZ

3:00 **Moderate Asthma: Stepping Up**
R.F. Lemanske, MD, Madison, WI

3:20 **Moderate Asthma: Stepping Down**
A. Bush, MD, London, United Kingdom

3:40 **Anti-IgE: Where Can It Be Useful In Pediatric Asthma?**
S.J. Szefler, MD, Denver, CO

4:00 **Beyond The Guidelines To Personalized Care: Filling In The Gaps**
A.M. Fitzpatrick, PhD, Atlanta, GA

4:20 **Panel Discussion**

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A90 WHEN CONVENTIONAL DRUGS AREN'T ENOUGH: ENHANCING THE IMMUNE SYSTEM IN PULMONARY INFECTIONS

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Allergy, Immunology and Inflammation; Clinical Problems

2:00 pm-4:30 pm

Target Audience
Pulmonary and critical care physicians, researchers in immunology and infections, trainees, nurses, respiratory therapists

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings about potential mechanisms of lung immunodulation;
- understand and learn new strategies for the prevention of tuberculosis and drug resistant bacterial lung infections;
- learn new strategies for the treatment of drug resistant tuberculosis, bacterial pneumonia, and non-tuberculous mycobacteria.

The increasing prevalence of drug resistant and difficult to treat lung infections highlights the need for novel approaches to prevention and treatment. In this session important clinical settings will be addressed where antimicrobials alone are inadequate to treat pulmonary infections, and potential strategies for augmenting the immune response to these infections will be discussed. Topics covered will include: approaches to drug resistant bacteria (TB and NTM), preventing TB transmission, and use of macrolides. This session will explore what these specific areas teach us about lung immunity and how to exploit this new knowledge to support the host.

Chairing: A.M. Anandaiah, MD, Boston, MA
J.M. Keane, MD, Dublin, Ireland
K.U.J. Dheda, MD, PhD, Cape Town, South Africa

2:00 **XDR TB: What Else Can We Do?**
K.U.J. Dheda, MD, PhD, Cape Town, South Africa

2:25 **Preventing Transmission: Attacking TB Outside The Host**
K.P. Fennelly, MD, MPH, Gainesville, FL

2:50 **Driving The Macrophage: Stimulating Lung Innate Immunity To MTb**
J.M. Keane, MD, Dublin, Ireland

3:15 **MDR Bacteria: When Drugs Are The Problem, Not Just The Solution**
S.M. Moskowitz, MD, Boston, MA

3:40 **NTM: When Were Drugs Ever Enough?**
K.N. Olivier, MD, MPH, Bethesda, MD

4:05 **Macrolide Therapy: Novel Mechanisms Of A Conventional Drug**
T.R. Aksamit, MD, Rochester, MN

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A91 THERAPEUTIC STRATEGIES IN IDIOPATHIC PULMONARY FIBROSIS: DEBATES BETWEEN BENCH AND BEDSIDE: A PRO-CON DEBATE

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Clinical Problems; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Clinicians, fellows, radiologists, basic scientists

Objectives
At the conclusion of this session, the participant will be able to:

- understand current controversies in IPF;
- improve strategies of managing patients with IPF in clinical practice;
- learn about novel therapeutic targets for IPF.

This program will address complementary topics with direct relevance to the design of trials in IPF. These topics span basic investigation to human disease diagnosis and management. a) Are animal models useful in developing novel therapies? b) What is the role of surgical biopsy in older patients with parenchymal lung disease with a non-diagnostic CT? c) What are the best endpoints for Phase III trials? d)Is the epithelial mesenchymal interface an appropriate target for developing new therapies? Each topic will be presented with a 10 minute PRO and CON perspective, followed by a 5 minute expert rebuttal and an open discussion.

Chairing: M.R.J. Kolb, MD, PhD, Hamilton, Canada
F.J. Martinez, MD, MS, Ann Arbor, MI
P.J. Sime, MD, Rochester, NY

2:00 **PRO: Animal Models Are Useful In The Development Of Novel Therapies For IPF**
D. Sheppard, MD, San Francisco, CA

2:19 **CON: Animal Models Are Useful In The Development Of Novel Therapies For IPF**
T.E. King, MD, San Francisco, CA

2:38 **PRO: Patients Over 65 With Consistent But Not Diagnostic CT Require Surgical Lung Biopsy**
K.K. Brown, MD, Denver, CO

2:57 **CON: Patients Over 65 With Consistent But Not Diagnostic CT Require Surgical Lung Biopsy**
C.D. Fell, MD, MSc, Calgary, Canada

3:16 **PRO: All Cause Mortality Is The Optimal Endpoint For Phase III Studies In IPF**
G. Raghu, MD, Seattle, WA

3:35 **CON: All Cause Mortality Is The Optimal Endpoint For Phase III Studies In IPF**
J. Behr, MD, Bochum, Germany

3:54 **PRO: The Epithelial Mesenchymal Interface Is The Most Promising Target For Novel Therapies In IPF**
M. Selman, MD, Mexico City, Mexico

4:12 **CON: The Epithelial Mesenchymal Interface Is The Most Promising Target For Novel Therapies In IPF**
N. Kaminski, MD, Pittsburgh, PA

There will be a 5-minute discussion after each talk.

2:00 pm-4:30 pm

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.

4:45 pm-6:30 pm

AWARDS SESSION

Amberson Lecture

The Amberson Lecturer is an individual with a career of major lifetime contributions to clinical or basic pulmonary research and/or clinical practice. The Lecture is given in honor of James Burns Amberson, an international authority on chest disease and tuberculosis.

Lecturer: David A. Schwartz, MD, Aurora, CO

Trudeau Medal

The Trudeau Medalist is an individual with lifelong major contributions to prevention, diagnosis and treatment of lung disease through leadership in research, education, or clinical care. This award was established in 1926 and is given in honor of Edward Livingston Trudeau, a founder and the first president of the American Lung Association.

Awardee: Jonathan M. Samet, MD, MS, Los Angeles, CA

Distinguished Achievement Award

The Distinguished Achievement Award is given to individuals who have made outstanding contributions to fighting respiratory disease through research, education, patient care, or advocacy.

Awardees: Polly E. Parsons, MD, Burlington, VT
Alan L. Plummer, MD, Atlanta, GA

World Lung Health Award

The World Lung Health Award is given to individuals with recognized contributions to world lung health in the area of basic or clinical research, delivery of healthcare, continuing education or care of patients with lung disease.

Awardee: Ethel Jane Carter, MD, Providence, RI

Outstanding Educator Award

The Outstanding Educator Award recognizes lifetime contributions in education and mentoring in the fields of pulmonary, critical care or sleep medicine. This award honors excellence in clinical or research education as it relates to pulmonary disease.

Awardee: Leslie H. Zimmerman, MD, San Francisco, CA

Jo Rae Wright Award for Outstanding Science

The Jo Rae Wright Award for Outstanding Science is based on demonstrated potential for significant scientific achievement and contributions. This award is aimed at the rising generation of individuals who will be tomorrow's leaders in science.

Awardee: Peter Chen, MD, Seattle, WA

Public Service Award

The Public Service Award is presented for contributions in the public health arena related to respiratory disease and medicine.

Awardee: Kathleen Kreiss, MD, Morgantown, WV

6:30 pm-8:30 pm

SECTION MEMBERSHIP MEETING

The Section meetings are open to all ATS members and other interested individuals. Items to be discussed include the Sections' current projects and future directions.

GENETICS AND GENOMICS

Chairing: M. Aldred, PhD, Cleveland, OH
P. Woodruff, MD, MPH, San Francisco, CA

6:30 pm-8:30 pm

ASSEMBLY MEMBERSHIP MEETINGS

The thirteen Assemblies are the primary groups of the American Thoracic Society. Each Assembly holds an annual Membership Meeting at the International Conference. All Assembly members and other interested individuals are invited to attend.

The Assembly Membership Meetings provide an update on the Assembly's activities via the Assembly's Leadership and provide Assembly members the chance to have input on future directions, information on how to get involved and networking opportunities. Voting results for the Assembly's future leaders will also be announced.

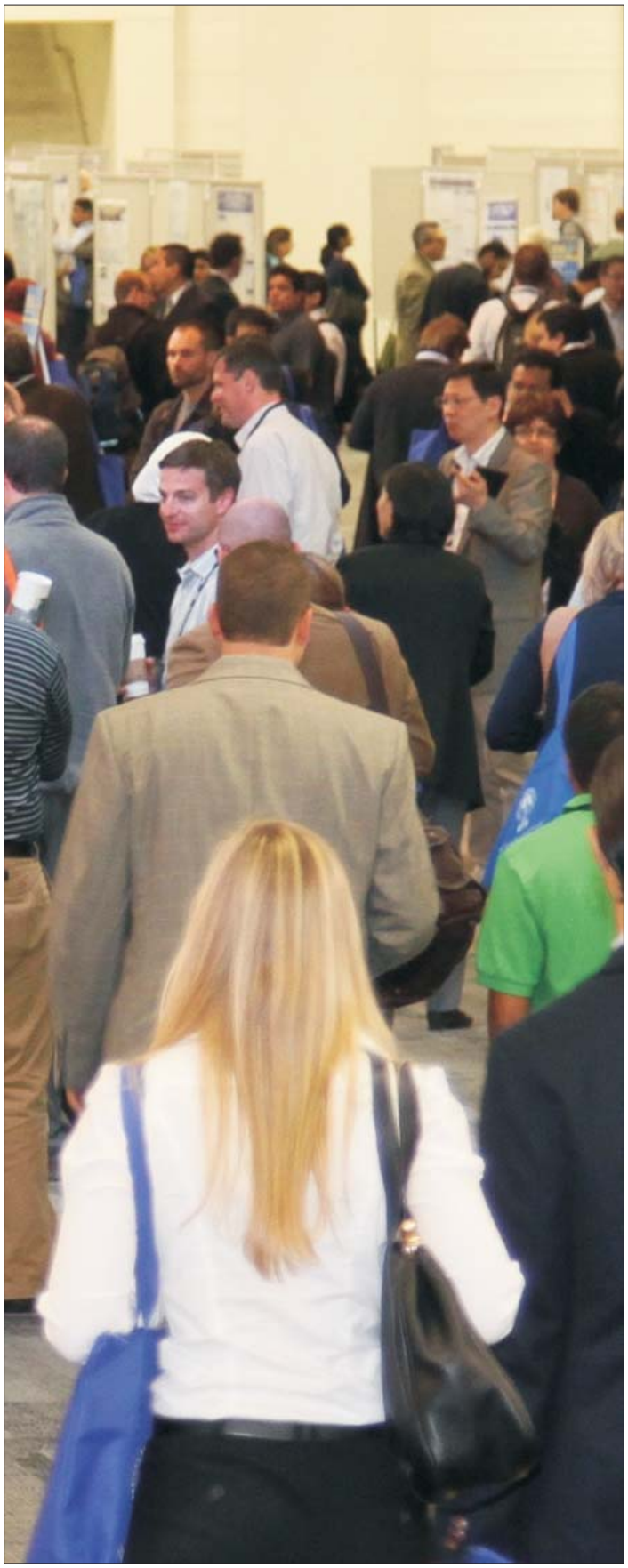
The Assembly Membership Meetings will be held on Monday, May 20, 5:00 pm-7:00 pm, with the exception of the Assemblies on Behavioral Science and Health Services Research and Pediatrics (see below.)

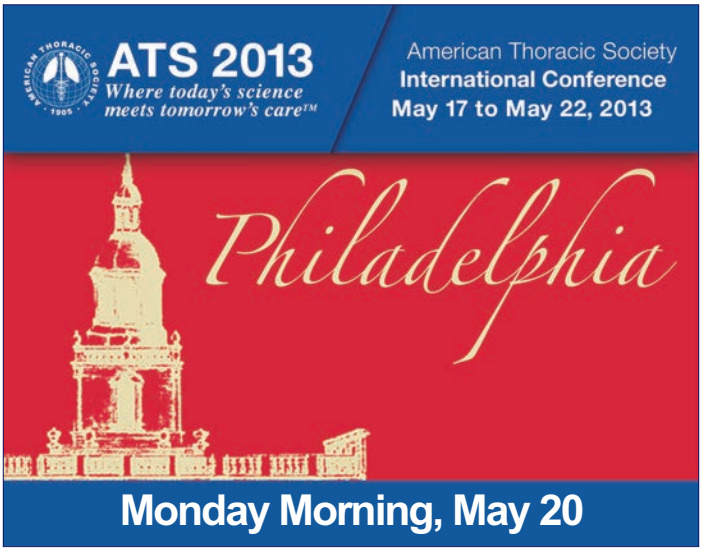
BEHAVIORAL SCIENCE AND HEALTH SERVICES RESEARCH

Chairing: J.A. Krishnan, MD, PhD, Chicago, IL

PEDIATRICS

Chairing: H.B. Panitch, MD, Philadelphia, PA





CLINICAL

PEDIATRIC CLINICAL CORE CURRICULUM

PCC2 INTERSTITIAL LUNG DISEASE AND DIFFUSE ALVEOLAR HEMORRHAGE SYNDROMES

Pediatric Core Curriculum Working Group

6:45 am-7:45 am

Target Audience
Pediatric pulmonary and critical care physicians, young faculty members, fellow physicians in allergy, pulmonary and ICU

Objectives
At the conclusion of this session, the participant will be able to:

- describe the pathophysiology of asthma and the clinical assessment and care of children with asthma;
- identify and manage infants and children with childhood interstitial lung disease;
- describe the pathophysiology and management of bronchopulmonary dysplasia and the pathophysiology, identification and management of pulmonary hypertension in infants and children.

The pediatric clinical core curriculum sessions will be comprised of three one-hour sessions on subsequent ATS 2013 conference days. Sessions will cover core curriculum topics pertinent to the practice and expertise of pediatric pulmonary medicine. Each topic will be accompanied by five questions for inclusion in pre/post questionnaires. The learner will be eligible for MOC points on successful completion of said knowledge assessment.

Chairing: T.G. Keens, MD, Los Angeles, CA
M.A. Nevin, MD, Chicago, IL

6:45 **ILD: Pathology And Pathophysiology**
R.R. Deterding, MD, Aurora, CO

7:05 **ILD: Diagnosis And Management**
L.R. Young, MD, Nashville, TN

7:25 **Evaluation And Management Of Alveolar Hemorrhage Syndromes**
L.L. Fan, MD, Aurora, CO

THEMATIC SEMINAR SERIES

TSS1 INTEGRATED INTERSTITIAL LUNG DISEASE CARE

R **Registration Fee: $140.00 for the full series (includes continental breakfast.)**
Attendance is limited. Pre-registration is required.

This is part 2 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The program for the full series is included with the Sunday, May 19, 12:00 pm program.

Monday, May 20, 7:00 am-8:00 am

Current Management Strategies For Comorbidities In ILD
C.D. Fell, MD, MSc, Calgary, Canada

THEMATIC SEMINAR SERIES

TSS2 MANAGING DIFFICULT PATIENTS WITH CHRONIC COUGH: A PRO-CON DEBATE

Registration Fee: $140.00 for the full series (includes continental breakfast and box lunch.)
Attendance is limited. Pre-registration is required.

This is a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The topics and schedule for each part are listed below.

Monday, May 20, 7:00 am-8:00 am

Protocols For Managing Chronic Cough. Current Approach: Anatomic Diagnostic Protocol
L. McGarvey, MD, Belfast, United Kingdom

Protocols For Managing Chronic Cough. New Paradigm: Cough Hypersensitivity Syndrome
S.S. Birring, MD, London, United Kingdom

Tuesday, May 21, 7:00 am-8:00 am

Therapy For Gastroesophageal Reflux Reduces Cough Severity: PRO
P. Dicpinigaitis, MD, Bronx, NY

Therapy For Gastroesophageal Reflux Reduces Cough Severity: CON
K.F. Chung, MD, PhD, London, United Kingdom

Tuesday, May 21, 12:00 pm-1:00 pm

Therapy For Upper Airway Cough Reduces Cough Severity: PRO
S.L. Spector, MD, Los Angeles, CA

Therapy For Upper Airway Cough Reduces Cough Severity: CON
A. Morice, BA, Cottingham, United Kingdom

SUNRISE SEMINARS

R **Registration Fee: $65.00 (includes continental breakfast.)**
Attendance is limited. Pre-registration is required.

7:00 am-8:00 am

SS101 GENDER DIFFERENCES IN ASTHMA
M. Khosravi, MD, Lexington, KY
F. Marti, PhD, Lexington, KY

SS102 MASS CRITICAL CARE: PREPARING YOUR ICU
E.L. Daugherty, MD, MPH, Baltimore, MD

SS103 ADVANCES IN LUNG TRANSPLANT
D.P. Albon, MD, Winston Salem, NC

SS104 CARING FOR THE CRITICAL ILLNESS SURVIVOR
G. Netzer, MD, MSCE, Baltimore, MD

SS105 ADVANCES IN MALIGNANT PLEURAL MESOTHELIOMA
T. Peikert, MD, Rochester, MN

SS106 CLINICAL AND RESEARCH IMPLICATIONS OF COPD AS A SYSTEMIC DISEASE
J.M. Bon, MD, Pittsburgh, PA

SS107 THE ROLE OF GERD IN RHEUMATOLOGIC AND NON-RHEUMATOLOGIC ILD
J. Malo, MD, Tucson, AZ

SS108 THE ART OF PROGNOSTICATION: UNDERSTANDING THE IMPACT OF COMORBIDITIES ON PATIENT OUTCOME
M. Macrea, MD, MPH, PhD, Salem, VA

SS109 SHOULD EVERY INSTITUTION DEVELOP A LOW DOSE CT LUNG CANCER SCREENING PROGRAM?
R. Kumar, MD, Philadelphia, PA

SS110 CLINICAL EVALUATION OF PATIENTS WITH INTERSTITIAL LUNG DISEASE
R. Vij, MD, Chicago, IL

SS111 ACUTE KIDNEY INJURY AND RENAL REPLACEMENT THERAPY: WHAT'S NEW FOR INTENSIVISTS
M.G.S. Shashaty, MD, MSCE, Philadelphia, PA

SS112 REAL-WORLD SPIROMETRY: AVOIDING TECHNICAL PITFALLS AND CHOOSING AN INTERPRETATION ALGORITHM
M.C. Townsend, PhD, Pittsburgh, PA

SS113 PULMONARY HYPERTENSION IN IDIOPATHIC PULMONARY FIBROSIS
B.N. Rivera-Lebron, MD, MS, Philadelphia, PA

SS114 APPLYING PULMONARY REHABILITATION CONCEPTS ACROSS THE CONTINUUM FROM ICU TO THE OUTPATIENT
E.P. Riesenfeld, MD, Cooperstown, NY

SS115 ALTERED EPIGENETIC PATTERNS IN PULMONARY FIBROSIS
S.K. Huang, MD, Ann Arbor, MI

SS116 SMALL AIRWAY MEASUREMENTS FROM TODDLER TO OLD AGE
P. Robinson, MD, Glebe, Australia

SS117 SLEEP DISORDERED BREATHING IN PREGNANCY
G.R. Bourjeily, MD, Providence, RI

CLINICAL

CLINICAL CORE CURRICULUM

CC2 SLEEP MEDICINE CLINICAL CORE CURRICULUM

Clinical Core Curriculum Working Group

7:00 am-8:30 am

Target Audience
Internists and subspecialists in pulmonary critical care, and sleep medicine who work in a clinical setting and are currently engaged in maintenance of certification

Objectives
At the conclusion of this session, the participant will be able to:

- remain current with the growth of information relevant to their medical practice in pulmonary, critical care, and sleep medicine;
- evaluate their knowledge and skills in key areas of pulmonary, critical care, and sleep medicine, as well as receive feedback on their understanding as a result of a pre-test/post-test comparison;
- support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements.

The ATS Clinical Core Curriculum symposia focus on a 3-year content cycle of key medical content in the areas of pulmonary, critical care and sleep medicine. The topics are also aligned with corresponding Part II maintenance of certification modules. This symposium is intended to assist clinicians with staying current with the growth of information relevant to their medical practice, as well as provide an opportunity to evaluate individual knowledge and skills.

Chairing: B.A. Phillips, MD, MPH, Lexington, KY

Sleep Evaluation

7:00 Sleep History And Physical Examination
B.A. Phillips, MD, MPH, Lexington, KY

7:30 PSG And Sleep Scoring
R.S. Rosenberg, PhD, Darien, IL

8:00 Clinical Uses Of Actigraphy
J.L. Martin, PhD, North Hills, CA

CLINICAL

YEAR IN REVIEW

B1 CLINICAL YEAR IN REVIEW 2

8:45 am-10:45 am

Target Audience
Providers of lung health, those providing for both common and rare diseases and those with a single disease focus who wish to learn about the latest advances in disparate areas of pulmonary and critical care medicine

Objectives
At the conclusion of this session, the participant will be able to:

- identify new findings in pulmonary and critical care that are directly relevant to patient care;
- understand how new findings in pulmonary and critical care medicine augment current guidelines and modify approaches to common and rare pulmonary diseases;
- identify and consider how quality improvement strategies can be applied in diverse clinical environments in pulmonary and critical care medicine.

The 2013 Clinical Year in Review will review advances over the last year in critical areas of pulmonary and critical care medicine including prevalent pulmonary and critical illnesses. Novel topics proposed this year include health disparities in pulmonary and critical care medicine and systems-based approaches to the organization and delivery of critical care services

Chairing: E.R. Sutherland, MD, MPH, Denver, CO
H.R. Collard, MD, San Francisco, CA
R.D. Stapleton, MD, MSc, Burlington, VT

8:45 ILD
H.R. Collard, MD, San Francisco, CA

9:15 Respiratory Infections
M.L. Metersky, MD, Farmington, CT

9:45 Cystic Fibrosis
J.M. Pilewski, MD, Pittsburgh, PA

10:15 Health Disparities In Pulmonary, Critical Care And Sleep Medicine
J.C. Celedon, MD, PhD, Pittsburgh, PA

BASIC • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B2 EXACERBATIONS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE: CURRENT STATE OF KNOWLEDGE

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Providers of lung health dealing with COPD, clinical and basic researchers in the field of COPD and respiratory infections, clinicians and researchers outside the field of COPD who are interested in immunological aspects and biomarkers of progression of chronic lung diseases

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings about the frequency and importance of exacerbation, current knowledge about how bacterial and viral infections cause exacerbations;
- help in better design of clinical trial by improving patient selection and improving the understanding of the biomarkers of exacerbations;
- learn about the experimental therapeutics and mechanisms of exacerbations.

COPD exacerbations due to bacterial and viral infections are associated with faster loss of lung function, impaired quality of life, increased mortality, and greater costs of healthcare. An estimated 10% of patients with frequent and severe exacerbations account for 70% of the total healthcare use. A major goal of COPD treatment is to prevent exacerbations, minimize their severity, and recurrences. A panel of clinical and basic researchers will provide the state of knowledge on bacterial and viral exacerbations, novel mechanisms and therapeutic targets and development of biomarkers for assessing the efficacy of therapeutic agents in clinical trials.

Chairing: S.S. Biswal, PhD, Baltimore, MD
M.R. Stampfli, PhD, Hamilton, Canada
S.L. Johnston, MD, PhD, London, United Kingdom

8:15 Exacerbations- Epidemiology, Outcome And Improvements In Measurements
P.W. Jones, PhD, London, United Kingdom

8:40 Current Knowledge Of Bacterial Exacerbations
S. Sethi, MD, Buffalo, NY

9:05 Current Knowledge Of Viral Exacerbations
S.L. Johnston, MD, PhD, London, United Kingdom

9:30 **Preclinical Models Of COPD Exacerbations And Immunological Mechanisms**
M.R. Stampfli, PhD, Hamilton, Canada

9:55 **Novel Mechanisms Of Host Defense And Experimental Therapeutics Of Exacerbation**
S.S. Biswal, PhD, Baltimore, MD

10:20 **The Search For Biomarkers Of COPD Exacerbations: Patient Selection And Assessment Of Efficacy**
R. Tal-Singer, PhD, King of Prussia, PA

BASIC • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B3 NEXT GENERATION TREATMENTS FOR LUNG DISEASE: GENE THERAPY AND TRANSPLANTABLE SCAFFOLDS

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Providers of lung health; clinicians; researchers with interest in gene therapy, tissue engineering, or transplantable scaffolds

Objectives
At the conclusion of this session, the participant will be able to:

- become familiar with emerging therapies for lung diseases that are currently difficult to treat;
- improve ability to discuss emerging therapies for lung disease in response to patient questions;
- learn about the use of transplantable scaffolds in regenerative therapies.

The initial promise of gene or cell therapy to treat human diseases has been long postponed after setbacks to the field dampened early optimism. The lung, pleura, and airways have large, accessible epithelial surfaces that are attractive targets for gene or cell therapy. Major parallel advances in molecular biology and tissue engineering have occurred in the past 10 years, ushering in the next generation of lung disease treatments. This session will explore the delivery of normal genes, RNAi, cells, and tissues to the lung for the treatment of genetic lung diseases, malignancies, and infections.

Chairing: S.M. Albelda, MD, Philadelphia, PA
A.A. Wilson, MD, Boston, MA

8:15 **Human Gene Therapy Trials For Alpha-1 Antitrypsin Deficiency**
T.R. Flotte, MD, Worcester, MA

8:35 **Gene Therapy For Lung Malignancy**
S.M. Albelda, MD, Philadelphia, PA

9:00 **Lung Directed Gene Transfer To Prevent Respiratory Infections**
J.M. Wilson, MD, PhD, Philadelphia, PA

9:30 **In Vivo RNAi For Treatment Of Lung Disease**
A.A. Wilson, MD, Boston, MA

9:50 **Restoring CFTR Function In The Lung**
P.B. McCray, MD, Iowa City, IA

10:15 **Transplantable Scaffolds For The Lung**
P. Macchiarini, MD, PhD, Stockholm, Sweden

There will be a 5-minute discussion after each talk.

CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

B4 LOOKING TO THE FUTURE OF ACUTE RESPIRATORY DISTRESS SYNDROME CLINICAL TRIALS

Assemblies on Critical Care; Clinical Problems; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Critical care clinicians, pulmonary and critical care researchers (clinical, translational, basic), critical care trainees

Objectives
At the conclusion of this session, the participant will be able to:

- identify reasons for the recent lack of positive ARDS clinical trials, including implications for patient care;

- understand potential new approaches to drug, target and patient selection for clinical trials in ARDS;
- gain an improved understanding of the challenges of clinical trial design in critical care settings.

Despite years of hard work and significant financial support from funding agencies, most recent large-scale clinical trials of novel therapies for the acute respiratory distress syndrome (ARDS) have been negative. New approaches to drug, target and patient selection may be needed in order to successfully identify effective therapies for ARDS. In this session, experts in clinical and translational research in ARDS will review potential approaches to improving the design of future ARDS clinical trials. Topics to be covered will include Phase II clinical trials, early ARDS, patient heterogeneity, pre-clinical approaches to drug and target selection, and long-term and patient-centered outcomes.

Chairing: B.T. Thompson, MD, Boston, MA
C.S. Calfee, MAS, MD, San Francisco, CA

8:15 A Patient's Perspective
Speaker To Be Announced

8:20 We Need Better Pre-Clinical Data
M.A. Matthay, MD, San Francisco, CA

8:45 We Need Better Phase II Trials
D.F. McAuley, MBBCh, MD, Belfast, United Kingdom

9:10 We Need To Start Clinical Trials Earlier
M.N. Gong, MD, MS, Bronx, NY

9:35 We Need To Focus On Severe ARDS
L.J. Brochard, MD, Geneva, Switzerland

10:00 We Need To Decrease Patient Heterogeneity
C.S. Calfee, MD, MAS, San Francisco, CA

10:20 We Need To Focus On Longer Term Outcomes
M.S. Herridge, MD, MPH, Toronto, Canada

There will be a 5-minute discussion after each talk.

BASIC

SCIENCE CORE

B5 EXCITING TECHNOLOGICAL ADVANCES FOR UNDERSTANDING THE EXTRACELLULAR MATRIX

Assemblies on Respiratory Structure and Function; Allergy, Immunology and Inflammation; Clinical Problems; Pulmonary Circulation; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Basic and translational scientists, clinicians, pulmonologists, fellows, trainees and members of pharmaceutical companies

Objectives
At the conclusion of this session, the participant will be able to:

- understand the fundamental role played by the extracellular matrix (ECM) in disease pathogenesis, normal tissue development and homeostasis;
- describe the state of the art technologies that are advancing our understanding of the role that ECM plays in directing the cell behavior and disease pathologies in the lung;
- appreciate how these technological advances are creating new opportunities for delineating disease mechanisms and defining targets for therapeutic development.

The role of the extracellular matrix has recently been recognized in the regulation of disease pathophysiology. The challenge now is to develop methodologies that allow us to probe the complex interactions driving these processes. This session will highlight novel technologies that are emerging as key tools for unraveling and characterizing the changes in the ECM and how these are overcoming the challenges of therapeutic targeting of the ECM in ameliorating lung disease.

Chairing: J.K. Burgess, PhD, Sydney, Australia
D.J. Tschumperlin, PhD, Boston, MA

8:15 **State Of The Art MS Technology Applications In Lung Disease**
G. Marko-Varga, PhD, Lund, Sweden

8:40 **Mechanochemical Dynamics Of Lung ECM That Direct Normal/Pathogenic Cell Phenotypes**
T.H. Barker, PhD, Atlanta, GA

9:05 **Matrix Architecture Defines The Preferential Localization And Migration Of T Cells Into The Stroma Of Human Lung Tumors**
E. Donnadieu, PhD, Paris, France

9:30 **Understanding The Role Of The ECM In Lung Regeneration And Repair**
E.S. White, MD, Ann Arbor, MI

9:55 **Novel Mouse Models For Studying Remodeling Of Blood Vessels And Lymphatics In The Lungs**
D.M. McDonald, MD, PhD, San Francisco, CA

10:20 **Current And Future Modalities For Imaging Of Extracellular Matrix Remodelling In Asthmatics In Vivo**
S.B. Fain, PhD, Madison, WI

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B6 INFLUENCE OF ESTROGENS ON THE PULMONARY CIRCULATION AND RIGHT VENTRICLE: FROM BENCH TO BEDSIDE

Assemblies on Pulmonary Circulation; Clinical Problems; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Respiratory and critical care physicians endothelial cell and vascular biologists, embryologists, pediatricians, cardiologists, hematologists, pharmaceutical scientists, and, broadly, scientists working on various aspects of lung, pulmonary and systemic vascular disease

Objectives
At the conclusion of this session, the participant will be able to:

- understand changes in estrogen synthesis and estrogen metabolism in various forms of PAH;
- learn and understand effect of estrogen, gender and mediating factors such as serotonin in various models of PAH;
- understand the potential of inhibition of aromatase, CYP1B1 and other metabolic enzymes in PAH.

There is a higher incidence of PAH in women than men. There has been a wealth of published information over the last year suggesting estrogens and estrogen metabolism influences the development of PAH and/or may influence penetrance in females and BMPR2 mutation carriers. This symposium will examine the role of estrogens, estrogen metabolism, estrogen receptors and the interactions of estrogens and estrogen metabolism on BMPR-II function and disease penetrance. It will discuss recent clinical approaches to PAH with estrogenic drugs.

Chairing: M.R. MacLean, PhD, Glasgow, United Kingdom
C.E. Ventetuolo, MD, MS, Providence, RI
E.D. Austin, MD, Nashville, TN

8:15 **Bench To Bedside: Biologic Measures And Therapeutic Interventions Of Estrogens In Humans**
E.D. Austin, MD, Nashville, TN

8:35 **Estrogen Receptor Mediated Signaling In Normoxia And Hypoxia**
T. Lahm, MD, Indianapolis, IN

8:55 **Gender, In Pneumonectomy/Monocrotaline PAH: Therapeutic Response**
R.J. White, MD, PhD, New York, NY

9:15 **Sex, Sex Hormones, And The RV Phenotype: Humans**
C.E. Ventetuolo, MD, MS, Providence, RI

9:35 **Sex Influences On RV Phenotype: Mouse**
A. Hemnes, MD, Nashville, TN

9:55 **Estrogen Synthesis And Metabolism In PAH: Effect Of Serotonin**
M.R. MacLean, PhD, Glasgow, United Kingdom

10:15 **Aromatase In Portopulmonary Hypertension**
S.M. Kawut, MD, MS, Philadelphia, PA

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B7 DRUG AND COMPANION DIAGNOSTIC DISCOVERY AND DEVELOPMENT FOR RESPIRATORY DISEASE

Assemblies on Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Clinical Problem

8:15 am-10:45 am

Target Audience

Basic scientists and clinicians interested in the current approaches to discovery and development of new therapeutics and diagnostic biomarkers for lung disease

Objectives

At the conclusion of this session, the participant will be able to:

- learn about ongoing research to translate pathway research to new therapeutic treatments for lung disease. Specific mention of companion diagnostic development is used as a specific example that requires early collaboration at the time of target and biomarker discovery.
- gain a better appreciation of the drug (and other modalities) discovery process, especially in the academic and government setting. Highlights for a successful leverage of industry expertise and investment when appropriate will be discussed;
- provide a forum to exchange experiences and make contacts to facilitate pursuit of new treatments and diagnostic development.

The symposium is a collaboration between the ATS Drug/Device Discovery and Development Committee and the Washington University School of Medicine. The focus is look at efforts to establish a drug discovery program in pulmonary medicine in an academic setting. The symposium was developed to include experiences from academic/ industry collaborations to help communicate the successful interactions needed to develop new medicines and/or companion diagnostics. The presentations will present the academic activities and how these efforts can be interfaced with Industry or Academic Industrial spin-off's to create additional opportunities for medicines development and approval.

Chairing: J.G. Matthews, MBBS, PhD, San Francisco, CA
T.F. Reiss, MD, Nashville, TN
M.J. Holtzman, MD, St. Louis, MO

8:15 **The Drug Discovery Paradigm In Academia**
M.J. Holtzman, MD, St. Louis, MO

8:45 **Utilizing Biomarkers To Identify Asthma Subgroups For Targeted Therapy**
J.V. Fahy, MD, San Francisco, CA

9:15 **How To Translate a Biomarker Into A Companion Diagnostic**
J.R. Arron, MD, PhD, South San Francisco, CA

9:45 **Respiratory Drug Development: How Do We Get Novel Medicines To Patients?**
I. Uings, BSc, Stevenage, United Kingdom

10:15 **Translational Therapeutics At The NIH**
J. McKew, PhD, Rockville, MD

BASIC

SCIENTIFIC SYMPOSIUM

B8 EMERGING CONCEPTS DRIVING AIRWAY HYPERRESPONSIVENESS IN ASTHMA

Assemblies on Respiratory Structure and Function; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience

Basic scientists, physiologists, pulmonologists, fellows and residents, graduate research trainees interested in pathophysiology and emerging treatment options associated with airway hyperresponsiveness in asthma

Objectives

At the conclusion of this session, the participant will be able to:

- describe the relationship between airway structure/function and AHR in asthma;
- understand the mechanisms by which AHR in asthma develops;

- describe new therapeutic targets to prevent or reverse AHR in asthma.

Airway hyperresponsiveness (AHR) is a clinical hallmark of chronic obstructive airways diseases, such as asthma, and is associated with acute and chronic airway inflammation. This symposium presents new understanding of mechanisms at the tissue, cell and molecular levels that can drive AHR in allergic asthma. An integrated program is planned to provide insight on emerging concepts that are likely to underpin AHR and will help us further understand or even reconsider current understanding on mechanisms that in particular affect airway smooth muscle function and AHR.

Chairing: D. Schaafsma, PhD, Winnipeg, Canada
R. Gosens, PhD, Groningen, Netherlands

8:15 **A Patient's Perspective**
Speaker To Be Announced

8:20 **Alternative Mechanisms For Bronchodilation: The Bitter Experience**
S.B. Liggett, MD, Tampa, FL

8:45 **Ca(2+) Dynamics In Asthma: Implications For Structural And Functional Remodeling Of Airway Smooth Muscle?**
J.P.T. Ward, PhD, London, United Kingdom

9:09 **Neural Control Of AHR During The Early And Late Asthmatic Response: A Revision Of Current Concepts**
M.G. Belvisi, PhD, London, United Kingdom

9:33 **Regulation Of Airway Smooth Muscle Contraction By Changes In Extracellular pH**
R.B. Penn, PhD, Baltimore, MD

9:57 **The Impact Of Smooth Muscle Gene Expression And Extracellular Matrix On Airway Function In Asthma**
P.J. Sterk, MD, PhD, Amsterdam, Netherlands

10:21 **IL-17 As A Driving Force Behind Airway Hyperresponsiveness In Asthma?**
D. Sheppard, MD, San Francisco, CA

There will be a 5-minute discussion after each talk.

CLINICAL

SCIENTIFIC SYMPOSIUM

B9 SURVEILLANCE, EARLY DETECTION, AND PREVENTION OF OCCUPATIONAL LUNG DISEASES

Assembly on Environmental and Occupational Health

8:15 am-10:45 am

Target Audience
Pulmonary physicians and other providers such as nurses, respiratory therapists, and administrators engaged in providing occupational health surveillance, with special attention to spirometry in the occupational setting and aspects of implementing respiratory protection for those with potentially hazardous inhalational exposures

Objective
At the conclusion of this session, the participant will be able to:

- understand recent findings and state of the art approaches to occupational health surveillance for work-related airways diseases and pneumoconiosis;
- understand key considerations in designing a health surveillance program for workers exposed to an emerging occupational respiratory hazard before its adverse health effects have been fully documented;
- understand lessons from the literature on spirometry in the occupational setting, including test performance, training of personnel, and approach to evaluating and using longitudinal spirometry data to identify individuals with excessive loss of pulmonary function as targets for intervention.

This session will provide an update on aspects of occupational health surveillance and respiratory protection relevant to the pulmonary healthcare provider. Information will be provided about several settings of current interest and will also provide evidence-based guidance on spirometry in the occupational setting drawn from a recent systematic literature review and on use of respiratory protection in occupational settings drawn from current consensus standards.

Chairing: S.M. Tarlo, MBBS, Toronto, Canada
D.N. Weissman, MD, Morgantown, WV

8:15 **Medical Surveillance For Occupational Airways Diseases: State Of The Art**
C.A. Redlich, MD, MPH, New Haven, CT

8:45 **Update On Medical Surveillance For Workers At Risk Of Pneumoconiosis**
E.L. Petsonk, MD, Morgantown, WV

9:15 **Occupational Respiratory Disease Surveillance For Workers Exposed To Emerging Hazards: What Have We Learned?**
D.N. Weissman, MD, Morgantown, WV

9:45 **Spirometry In The Occupational Setting: Lessons From A Systematic Review Of The Literature**
S.M. Tarlo, MBBS, Toronto, Canada

10:15 **Update On Respiratory Protection In The Occupational Setting: Current Consensus Standards**
P.I. Harber, MD, MPH, Tucson, AZ

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B10 CONTROVERSIES IN SLEEP APNEA PATHOPHYSIOLOGY: AN EXPERT DEBATE

Assembly on Sleep and Respiratory Neurobiology

8:15 am-10:45 am

Target Audience
Scientists studying sleep apnea pathophysiology, clinicians caring for patients with sleep disordered breathing

Objectives
At the conclusion of this session, the participant will be able to:

- understand the role of arousals in OSA;
- learn and understand the mechanisms of ventilatory instability in OSA;
- apply conceptual models to pharyngeal collapse.

This session will address several of the latest controversies surrounding the pathogenesis of sleep disordered breathing. Specific topics include: 1) the role of arousals in the pathogenesis of sleep apnea; 2) appropriate models for describing the mechanisms and timing of pharyngeal collapse during sleep; and 3) the role of PCO2 in triggering ventilatory instability. While the session focuses on physiological mechanisms, when possible practical applications will be emphasized to aid the clinician treating patients with these disorders.

Chairing: D.J. Eckert, PhD, Sydney, Australia
I.A. Ayappa, PhD, New York, NY
S.P. Patil, MD, PhD, Baltimore, MD

8:15 **Arousals Predispose To Subsequent Upper Airway Collapse: PRO**
M.K. Younes, MD, PhD, Winnipeg, Canada

8:30 **Arousals Predispose To Subsequent Upper Airway Collapse: CON**
A.S. Jordan, BSc, PhD, Parkville, Australia

8:50 **The Upper Airway Can Be Modeled As A Starling Resistor: PRO**
A.R. Schwartz, MD, Baltimore, MD

9:05 **The Upper Airway Can Be Modeled As A Starling Resistor: CON**
J.P. Butler, PhD, Boston, MA

9:25 **In OSA, The Airway Closes On Expiration: PRO**
M.S. Badr, MD, Detroit, MI

9:40 **In OSA, The Airway Closes On Expiration: CON**
A. Wellman, MD, Boston, MA

10:00 **Low PCO2 Is Essential For Ventilatory Control Instability: PRO**
J.A. Dempsey, PhD, Madison, WI

10:15 **Low PCO2 Is Essential For Ventilatory Control Instability: CON**
D.P. Francis, MD, London, United Kingdom

10:35 **General Discussion**
A. Wellman, MD, Boston, MA

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B11 MANAGING DIFFICULT INFECTIONS IN CYSTIC FIBROSIS

Assemblies on Pediatrics; Clinical Problems

8:15 am-10:45 am

Target Audience
Pediatric and adult physicians, nurses, respiratory therapists, and fellows who care for individuals with cystic fibrosis; investigators involved in clinical trials and translational research, especially those involved in cystic fibrosis research

Objectives
At the conclusion of this session, the participant will be able to:

- understand how alterations in airway microbiota of patients with CF influence disease manifestations;
- describe the diagnosis and management of difficult to treat microorganisms in CF and how infections with these microbes impacts clinical course;
- develop a generalized approach to to treating CF patients with polymicrobial infections.

In this session speakers will review ongoing clinical studies and recent publications on the management of lung infections in cystic fibrosis. The session will start with an overview of the lung microbiome and how it is altered in cystic fibrosis. This will be followed by five talks on specific types of microbes that are difficult to manage in cystic fibrosis. The final talk will attempt to pull everything together and address how the clinician approaches the patient infected with several of these microorganisms. The speakers will provide the most current information and a practical approach to treating CF lung infections.

Chairing: F.A. Ratjen, MD, Toronto, Canada
J. Chmiel, MD, MPH, Cleveland, OH

8:15 What Role Does The Lung Microbiome Play In CF?
J.J. LiPuma, MD, Ann Arbor, MI

8:35 Overview Of Gram-Negative Bacterial Infections In CF
V.J. Waters, MD, MSc, Toronto, Canada

8:55 What Is The Best Treatment Strategy For MRSA In CF?
E.C. Dasenbrook, MD, MHS, Cleveland, OH

9:15 When Should NTM Infections Be Treated?
T.R. Aksamit, MD, Rochester, MN

9:35 Fungi And Yeast: When Are They Pathogenic In CF?
S.H. Chotirmall, MB, MD, PhD, Dublin, Ireland

9:55 Are Anaerobes Important In CF?
S.C. Ranganathan, MBChB, PhD, Parkville, Australia

10:15 Approach To Treating The Patient Infected With Multiple Microbes
J.S. Elborn, MD, Belfast, United Kingdom

10:35 Panel Discussion

BEHAVIORAL • BASIC
CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B12 CAREER DEVELOPMENT SYMPOSIUM: ACHIEVING SUCCESS IN ACADEMIC MEDICINE DURING UNCERTAIN TIMES

Members In Transition and Training (MITT) Committee

8:15 am-10:45 am

Target Audience
Clinical and research fellows, junior faculty, residents, nursing and allied health professionals, graduate students, and post-doctoral fellows in the early stages of a career in academic pulmonary, allergy, critical care, and/or sleep medicine

Objectives
At the conclusion of this session, the participant will be able to:

- describe how to identify and evaluate potential traditional and non-traditional (industry, foundations, individual donors) sources of research funding;

- list specific actions that negatively and positively affect the review of their grant applications (whether to traditional or non-traditional funding entities);
- identify specific strategies to optimize time management and minimize the effects of obligations that distract from their primary career objectives.

This Symposium will provide perspective and skills for trainees and junior faculty interested in research careers within academic medicine. Specifically, this Symposium will impart concrete skills regarding identifying, applying for, and obtaining conventional (NIH) and unconventional (industry, etc.) funding. The increasingly collaborative nature of science will also be explored, with emphasis on collaborative and consortium funding mechanisms. The future uncertainty of academic medicine will be tempered with a historical perspective of the recent equally uncertain past. Finally, skills important to overall success in academic medicine will be incorporated into the Symposium, with particular emphasis on time management skills.

Chairing: R.A. Johnston, PhD, Houston, TX
J.B. Richards, MA, MD, Boston, MA

8:15 Introduction
J.B. Richards, MA, MD, Boston, MA

8:20 Beginning Your Academic Career In An Unfavorable Economic Climate: What Can I Do To Be Successful?
T.S. Blackwell, MD, Nashville, TN

8:45 Traditional Funding Sources
M.R. Blackburn, PhD, Houston, TX

9:10 Non-Traditional Funding Sources
M.M. Levy, MD, Providence, RI

9:35 Managing Your Time In Academia: When To Say No
M. Wills-Karp, PhD, Baltimore, MD

10:00 Academic Medicine Is A Team Sport: How To Create Effective Scientific Collaborations
M.A. Matthay, MD, San Francisco, CA

10:25 Panel Discussion: Lessons Learned, Future Directions, And Audience Questions
R.A. Johnston, PhD, Houston, TX

8:15 am-10:45 am

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.

11:30 am-1:00 pm

S3 ATS WOMEN'S FORUM

The purpose of the annual Women's Forum is to recognize the achievements and support the advancement of women in pulmonary, critical care, and sleep medicine and research. The forum provides a valuable opportunity to meet and network with other women and leaders of the ATS.

The forum will feature guest speakers who will discuss issues that are relevant to female medical professionals (men are welcome!) followed by a question and answer period. We also hope for vibrant discussion and networking among attendees and the speaker!

In addition, the 2013 Elizabeth A. Rich, MD Award will be presented at the forum to a female ATS member who has made significant achievements in the practice or science of a respiratory-related field of medicine, and has demonstrated leadership in her field and dedicated mentorship of her junior colleagues.

The forum will be hosted by **Anne Dixon, MD**, chair of the ATS Membership Committee.

R **Registration is required to obtain an audience count. Tickets will not be issued; however, Conference badges are required for admission.**

Space is limited. There is no additional fee. A plated lunch will be served.

CLINICAL

WORKSHOP

WS3 LUNG CANCER TUMOR BOARD: HOW DO EXPERTS MANAGE DIFFICULT CASES?

R **Registration Fee: $75.00 (includes box lunch.)**
Attendance is limited. Pre-registration is required.

Assembly on Clinical Problems; Respiratory Cell And Molecular Biology

11:30 am-1:00 pm

Target Audience

Practicing pulmonologists, thoracic surgeons, oncologists, nurse practitioners, oncology nurses and pulmonary fellows

Objectives

At the conclusion of this session, the participant will be able to:

- determine the optimal method of diagnosis and obtaining tissue for molecular testing;
- summarize the new pathological classification of adenocarcinoma of the lung;
- elucidate the appropriate indication for stereotactic body radiotherapy for Stage I lung cancer.

This workshop will discuss the treatment options for patients with lung cancer using a multidisciplinary panel that includes a pathologist, pulmonologist, medical oncologist,thoracic surgeon and a radiation oncologist in a tumor board type of setting. The cases chosen for discussion will have significant potential for disagreement among the specialists and provide the audience with a large number of teaching points. We anticipate an abundance of "clinical pearls".

Chairing: J.R. Jett, MD, Denver, CO

11:30 **Role Of Surgery In Lung Cancer**
P.E. Van Schil, MD, PhD, Antwerp, Belgium

11:50 **Pathology Of Lung Cancer**
Y. Yatabe, MD, Nagoya, Japan

12:10 **Role Of The Medical Oncologist In Treatment Of Advanced Lung Cancer**
J.R. Jett, MD, Denver, CO

12:25 Role Of Bronchoscopy In Obtaining Tissue For Molecular Testing
A.I. Musani, MD, Denver, CO

12:45 Current Status Of SBRT For Early Stage Lung Cancer
L.E. Gaspar, MD, MBA, Aurora, CO

CLINICAL

WORKSHOP

WS4 IMPACT OF ULTRASONOGRAPHY IN THE MANAGEMENT OF CARDIORESPIRATORY FAILURE

R **Registration Fee: $75.00 (includes box lunch.)**
Attendance is limited. Pre-registration is required.

Assemblies on Critical Care; Clinical Problems

11:30 am-1:00 pm

Target Audience
Providers of care to the critically ill, including learners, practitioners, and researchers in point of care ultrasonography

Objectives
At the conclusion of this session, the participant will be able to:

- better diagnose or rule out causes of hypotension using ultrasound, thus leading to the provision of earlier and effective care of patients in shock states;
- identify or rule out cardiac, pulmonary, and abdominal causes of critical illness with ultrasound, thus leading to the provision of earlier and effective care of patients in shock states;
- identify or rule out causes of respiratory failure using ultrasound thus leading to the provision of earlier and effective care of these patients.

Learners will be provided an overview of the major applications of General Critical Care Ultrasonography (GCCUS), a subset of point of care ultrasound. The four major critical care ultrasound exam areas, along with their diagnostic and therapeutic impact will be illustrated through the presentation of patient cases. The outcome in these cases illustrate the impact of information obtained from a clinician performed ultrasound exam.

Chairing: P.D. Kory, MD, New York, NY
S. Koenig, MD, New Hyde Park, NY
K. Lyn-Kew, MD, Denver, CO

11:30 Impact Of Lung Ultrasonography
P.D. Kory, MD, New York, NY

11:55 Goal Directed Echocardiography
K. Lyn-Kew, MD, Denver, CO

12:20 Impact Of A Whole Body Ultrasound Survey
S. Koenig, MD, New Hyde Park, NY

CENTERS FOR DISEASE CONTROL AND PREVENTION

L11 UPDATE FROM CDC'S TB TRIALS CONSORTIUM (TBTC) AND TB EPIDEMIOLOGIC STUDIES CONSORTIUM

12:00 pm-1:00 pm

Target Audience
Practicing physicians, clinical researchers, laboratorians and public health workers

Objectives
At the conclusion of this session, the participant will be able to:

- list the groups of people who should receive high priority for LTBI treatment with once-weekly isoniazid and rifapentine (3 INH/RPT);
- describe the principles of culture conversion, cure, and prevention of relapse as they pertain to the investigation of the role of rifapentine in a new treatment regimen for TB disease;
- learn about the value and use of IGRAs in children applying to immigrate to the US.

This session will provide an update on recent research conducted by CDC's two TB research consortia, the TB Trials Consortium and the TB Epidemiologic Studies Consortium. The session will include a discussion of the optimal dose, toxicity, tolerability and completion of

the rifapentine-based treatment for latent TB infection (LTBI). The session will also include a presentation of an evaluation of QuantiFERON-TB Gold In-Tube and Tuberculin Skin Tests in children immigrating to the United States and a presentation of the findings from the pilot of the new TBESC-II study.

Chairing: D. Garrett, MD, MSc, Atlanta, GA

12:00 Toxicity, Tolerability And Completion Of The New Rifapentine-Based Weekly Treatment For LTBI
T.R. Sterling, MD, Nashville, TN

12:15 Evaluating QuantiFERON-TB Gold In-Tube And Tuberculin Skin Tests In Children Immigrating To The United States
M. Howley, MSc, Atlanta, GA

12:30 Determining The Optimal Dose Of Rifapentine For Treatment Of Tuberculosis: How High Is High?
S. Dorman, MD, Baltimore, MD

12:45 Putting The Pieces Together: Findings From The Tuberculosis Epidemiologic Studies Consortium-II Pilot
S. Chideya, MD, Atlanta, GA

NATIONAL AIR AND SPACE ADMINISTRATION

L12 USING NASA'S SATELLITE REMOTE SENSORS FOR THE STUDY OF THE ENVIRONMENT AND DISEASES

12:00 pm-1:00 pm

Target Audience
Pulmonary health researchers and clinicians who need environmental data to study and understand the geographic, environmental, and meteorological differences in pulmonary disease; those interested in training using remotely sensed data to research health and air quality

Objectives
At the conclusion of this session, the participant will be able to:

- inform clinicians and researchers about ongoing NASA projects related to lung and cardiac disease;
- provide a synopsis of a project using observations of earth's environment and public health applications that are of interest to pulmonary clinicians and researchers;
- provide an overview of the NASA Public Health Program relating to public health applications that are of interest to pulmonary clinicians and researchers;

Satellite earth observations present a unique vantage point of the earth's environment from space which offers a wealth of health applications for researchers. The session shows results of the remote sensing observations of earth and health applications. This session will detail on-going projects within NASA and specifically related to incorporating satellite remote sensing for studying pollen PM2.5 and their relationship to diseases such as asthma, and other environmentally-induced lung and cardiac diseases. There will also be an introduction on the NASA Air Quality Training for researchers that want to learn more about acquring remotely sensed data.

Chairing: S.M. Estes, MS, Huntsville, AL

12:00 NASA's Public Health And Studying Respiratory Diseases
J.A. Haynes, MS, Washington, DC

12:10 Integration Of Airborne Dust Prediction Systems To Track Pollen For Asthma Alerts
J. Luvall, PhD, Huntsville, AL

12:25 The NASA Applied Remote Sensing Training Program (ARSET)
A.I. Prados, PhD, Greenbelt, MD

12:40 The Effects Of PM2.5 Exposures On Emergency Department Visits Based Satellite Remote Sensing Data
Y. Liu, PhD, Atlanta, GA

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT/NIH

L13 OPPORTUNITIES IN CHILDHOOD ASTHMA THAT YOU MAY NOT KNOW

12:00 pm-1:00 pm

Target Audience
Cinicians and investigators interested in origins and management of childhood asthma

Objectives
At the conclusion of this session, the participant will be able to:

- learn about research opportunities into the origins of asthma using the NCS;
- better learn about new therapeutic and management startegies in asthma related to the BPCA and FDA;
- understand and learn about the emerging problem of asthma and need for new strategies in childhood asthma in developing countries.

The Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) actively supports improved understanding of the origins and management of childhood asthma. The National Children's Study and the Best Pharmaceuticals for Children Act (BPCA) activities at NICHD offer unique opportunities to address childhood asthma. Childhood asthma in low resource settings in developing countries offer unique opportunities to advance asthma pathogenesis and care.

Chairing: W.J. Martin, MD, Bethesda, MD
Y. Maddox, PhD, Bethesda, MD

12:00 The National Children's Study And Opportunities For Asthma Research
S. Hirschfeld, MD, Bethesda, MD

12:15 General Discussion

12:20 Asthma And BPCA Activites At NICHD: A Program To Improve Childhood Asthma Management
A. Zajicek, MD, Bethesda, MD

12:35 General Discussion

12:40 Childhood Asthma In Global Health: Opportunities To Understand Asthma Risk And Management
F.D. Martinez, MD, Tucson, AZ

12:55 General Discussion

VETERANS ADMINISTRATION

L14 VA RESEARCH IN THE MANAGEMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

12:00 pm-1:00 pm

Target Audience
Clinicians, interdisciplinary team members, and clinical researchers who care for and are interested in the effective and efficient care of complex patients with COPD

Objectives
At the conclusion of this session, the participant will be able to:

- learn about COPD research funded by VA;
- discuss clinical research areas that will lead to more effective treatment strategies for COPD;
- describe novel treatent stratgies that have been implemented with success.

The Department of Veterans Affairs invests millions of dollars in the care and management of patients with complex medical illness. COPD is one of the top three chronic diseases treated in the VA system, and is responsible for a significant number of hospital admissions and re-admissions. As such, the VA has made a sizable investment in promoting research related to the effective and efficient care of these vulnerable patients. This session will highlight VA research related to this topic.

Chairing: L. Nici, MD, Providence, RI
J.K. Brown, MD, San Francisco, CA

12:00 Improving Quality Of Life And Symptoms In COPD
V. Fan, MD, MPH, Seattle, WA

12:20 Disease Management In COPD
K.L. Rice, MD, Minneapolis, MN

12:40 Comparative Effectiveness Research In COPD
D.H. Au, MD, Seattle, WA

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES/NIH

L15 ENVIRONMENTAL PULMONARY HEALTH RESEARCH PROGRAM: GETTING INTO FUNDAMENTALS

12:00 pm-1:00 pm

Target Audience
Basic researchers, clinician scientists and fellows in environmental and occupational health

Objectives
At the conclusion of this session, the participant will be able to:

- gain fundamental knowledge on environmental influence on pulmonary pathology;
- understand the role of genetic polymorphisms in modulating response to environmental factors;
- understand translation aspects of laboratory research towards preventive and intervention goals.

The overarching goals of the NIEHS research program in pulmonary health are to support research on gaining understanding on how environmental factors influence respiratory health. The research supported over the past three decades range from understanding influence of diverse environmental factors such as gaseous air pollutants, particulate matter, asbestos, silica, environmental tobacco smoke, and nanomaterials. This session will provide a glimpse on NIEHS supported research on molecular understanding of lung injury and repair process on exposure to selective environmental agents and how that knowledge can be translated into potential therapeutic interventions as well as contribute to environmental regulation.

Chairing: S.S. Nadadur, PhD, Research Triangle Park, NC
L.A. Ortiz, MD, Pittsburgh, PA

12:00 Introduction To NIEHS Environmental Pulmonary Health Program
S.S. Nadadur, PhD, Research Triangle Park, NC

12:09 Mesenchymal Stem Cell Secretome: A New Paradigm In The Treatment Of Environmental Lung Injury
L.A. Ortiz, MD, Pittsburgh, PA

12:25 Targeting FRA-1/AP1 Signaling In Toxicant Induced Lung Injury, Repair And Pathogenesis
S. Pothireddy, PhD, Chicago, IL

12:41 Mechanism Of How A Genetic Polymorphism Predisposes Mice And Humans To Chronic Mucous Hypersecretion
Y. Tesfaigzi, PhD, Albuquerque, NM

DIVISION OF LUNG DISEASES/NHLBI/NIH

L16 RESULTS FROM THE NHLBI IPF NETWORK

12:00 pm-1:00 pm

Target Audience
Clinicians who care for IPF patients, clinical researchers

Objectives
At the conclusion of this session, the participant will be able to:

- learn about clinical trials in IPF;
- gain knowledge about predictors of outcome in IPF;
- learn about CT analysis of the lung in IPF.

The NHLBI is supporting a network of 26 centers that conduct clinical trials in pulmonary fibrosis. This session will present results derived from data collected in the clinical trials conducted in this network. The results to be presented in this session include the role of an adjudication committee in IPF clinical trials, CT assessment of pulmonary hypertension as a predictor of IPF outcomes, the use of CTassisted analysis in the

IPF clincal trials, and FVC and six minute walk test as a predictor of clinical outcomes in IPF clinical trials.

Chairing: M.I. Schwarz, MD, Aurora, CO

12:00 The Evidence Of Pulmonary Hypertension As A Predictor Of Treatment Responsiveness In IPF
D.A. Lynch, MB, MBBS, Denver, CO

12:15 IPF And Oxidant Stress: The Cys/CySS Redox Potential In Aging And IPF
J. Roman, MD, Louisville, KY

12:30 Computer-Aided HRCT Analysis In The IPFnet PANTHER Study
K.R. Flaherty, MD, MS, Ann Arbor, MI

12:45 Anti-Reflux Therapy In Patients With IPF
G. Raghu, MD, Seattle, WA

DIVISION OF LUNG DISEASES/NHLBI/NIH

L17 GENETICS OF CHILDHOOD ASTHMA: WHERE ARE WE? WHERE ARE WE GOING?

12:00 pm-1:00 pm

Target Audience
Those with interests in the clinical management of childhood asthma, clinical research in asthma, and genetics research in asthma

Objectives
At the conclusion of this session, the participant will be able to:

- describe key findings of genetics association studies in childhood asthma and their implications for clinical practice;
- describe key findings of pharmacogenetics analysis of clinical management protocols and their implications for personalized medicine;
- list ideas for future genetics analysis that can be conducted by outside investigators and how a wide range of researchers can access CARE and CAMP data.

Speakers will discuss lessons and insights learned from the examination of genetics data in the Childhood Asthma Management Program, a 15 year study of over 1000 children with asthma, and multiple clinical management trials from the Childhood Asthma Research and Education (CARE) Network. Each speaker will discuss the type of genetics studies conducted, the results of these studies, and the most promising next steps for genetics research and its potential application to clinical practice. Speakers will address the issue of making CAMP and CARE network data publically available and will encourage investigators to access the data for further studies.

Chairing: J.P. Kiley, PhD, Bethesda, MD

12:00 Genetic Association Studies In CAMP
S.T. Weiss, MD, Boston, MA

12:15 Genetics Studies In CARE
Speaker To Be Announced

12:30 Pharmacogenetics Studies In CAMP
K. Tantisira, MD, MPH, Boston, MA

12:45 Availability Of CAMP And CARE Genetics Data For Public Use
B.A. Raby, MD, MPH, Boston, MA

DIVISION OF LUNG DISEASES/NHLBI/NIH

L18 UPDATE ON NHLBI ACUTE RESPIRATORY DISTRESS SYNDROME NETWORK (ARDSNET)

12:00 pm-1:00 pm

Target Audience
Physicians, researchers, nurses, respiratory therapists interested in critical care

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the design, methods, progress, and results of multi-center clincial trials in ALI/ARDS;
- learn about challenges of a clinical trial network for critically ill patients;

• apply new strategies for treatment of ALI.

The NHLBI ARDSnet is composed of 12 clinical centers and a clinical coordinating center and has as its purpose to conduct clinical trials in ARDS. Results of ARDSnet clincial trials and ongoing studies will be presented.

Chairing: G.R. Bernard, MD, Nashville, TN

12:00 Introduction
G.R. Bernard, MD, Nashville, TN

12:05 Update On The ARDSnet Statins For Acute Lung Injury From Sepsis Trials (SAILS)
J.D. Truwit, MD, Charlottesville, VA

12:15 Long Term Outcomes In ARDSnet Studies
R.O. Hopkins, PhD, Murray, UT

12:35 Lessons Learned From ARDSnet 2005-2012
B.T. Thompson, MD, Boston, MA

MEET THE PROFESSOR SEMINARS

Registration Fee: $70.00 (includes box lunch.)
Attendance is limited. Pre-registration is required.

12:00 pm-1:00 pm

MP501 IMPLICATIONS OF BARIATRIC SURGERY TO THE LUNG
M.S. Kavuru, MD, Philadelphia, PA

MP502 EVOLVING APPROACHES TO DIAGNOSING IPF: GENETIC SCREENING, TRANSBRONCHIAL CYROBIOPSY, AND MULTIDISCIPLINARY REVIEW
M.P. Steele, MD, Nashville, TN

MP503 NON-CF BRONCHIECTASIS: MY MOST CHALLENGING CASES
G. Tino, MD, Philadelphia, PA

MP504 DEVELOPMENT OF A CLINICAL STAFFING MODEL IN AN ACADEMIC LONG-TERM ACUTE CARE HOSPITAL
M.A. Grippi, MD, Philadelphia, PA

MP505 ICU MANAGEMENT OF PATIENTS WITH SEVERE ACUTE ASTHMA
J.I. Peters, MD, San Antonio, TX

MP506 RISK FACTORS FOR POLLEN ALLERGY
D.A. Charpin, MD, MPH, Marseille, France

MP507 PULMONARY DISEASE AND PRIMARY IMMUNODEFICIENCY
A. Dosanjh, MD, San Diego, CA

MP508 ENHANCING ASTHMA SELF-MANAGEMENT: DEVELOPING A GAME ENVIRONMENT FOR CHILDREN
J.P. Berg, PhD, RN, Irvine, CA

MP509 CRMS AND OTHER CYSTIC FIBROSIS DIAGNOSTIC CHALLENGES
C.L. Ren, MD, Rochester, NY

MP510 MANAGEMENT OF RIGHT HEART FAILURE IN THE ICU
M. Gomberg-Maitland, MD, Chicago, IL
R. Agarwal, MD, Pittsburgh, PA

MP511 SYMPTOM MANAGEMENT IN ADVANCED LUNG DISEASE: DYSPNEA, DECONDITIONING AND DEPRESSION
M.M. Milic, MD, San Francisco, CA
D.M. Donesky, PhD, RN, San Francisco, CA

MP512 GENETICALLY MANIPULATED ANIMAL MODELS IN LUNG RESEARCH
W. Shi, MD, PhD, Los Angeles, CA

MP513 WHAT THE FORCED OSCILLATION TECHNIQUE CAN TELL YOU ABOUT LUNG FUNCTION
J.H.T. Bates, PhD, DSc, Burlington, VT

MP514 HOME SLEEP TESTING: WHAT WE CAN LEARN FROM THE MASSACHUSETTS EXPERIENCE, CASE STUDIES AND PRIMARY DATA PRESENTED
C.M. D'Ambrosio, MD, MS, Boston, MA

1:00 pm-2:00 pm

VISIT THE EXHIBIT HALL

Take this opportunity between sessions to visit the Exhibit Hall to gain practical knowledge to advance care and research. Exhibitors will be on hand to provide information on pharmaceutical products, medical equipment, publications and research services.

2:00 pm-4:00 pm

RECOGNITION AWARDS FOR SCIENTIFIC ACCOMPLISHMENTS

The Recognition Award for Scientific Accomplishments is given to individuals for outstanding scientific contributions in basic or clinical research to the understanding, prevention and treatment of lung disease. Those considered for the award are recognized for either scientific contributions throughout their careers or for major contributions at a particular point in their careers.

Chairing: J.W. Christman, MD, Chicago, IL
N.S. Hill, MD, Boston, MA

Awardees: Timothy S. Blackwell, MD, Nashville, TN
Mark T. Gladwin, MD, Pittsburgh, PA
Naftali Kaminski, MD, Pittsburgh, PA
Paul W. Noble, MD, Los Angeles, CA

CLINICAL

CLINICAL CORE CURRICULUM

CC3 PULMONARY CLINICAL CORE CURRICULUM

Clinical Core Curriculum Working Group

2:00 pm-4:30 pm

Target Audience
Internists and subspecialists in pulmonary critical care, and sleep medicine who work in a clinical setting and are currently engaged in maintenance of certification

Objectives
At the conclusion of this session, the participant will be able to:

- remain current with the growth of information relevant to their medical practice in pulmonary, critical care, and sleep medicine;
- evaluate their knowledge and skills in key areas of pulmonary, critical care, and sleep medicine, as well as receive feedback on their understanding as a result of a pre-test/post-test comparison;
- support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements.

The ATS Clinical Core Curriculum symposia focus on a 3-year content cycle of key medical content in the areas of pulmonary, critical care and sleep medicine. The topics are also aligned with corresponding Part II maintenance of certification modules. This symposium is intended to assist clinicians with staying current with the growth of information relevant to their medical practice, as well as provide an opportunity to evaluate individual knowledge and skills.

Chairing: T.T. Le, MD, MHS, Elizabethtown, KY

Chronic Obstructive Pulmonary Disease

2:00 Pathology/Physiology And Pharmacologic Management
B.J. Make, MD, Denver, CO

3:00 Non-Pharmacologic Management
A.L. Ries, MD, MPH, La Jolla, CA

Obstructive Airways Disease, Other

3:30 Bronchiectasis
G. Tino, MD, Philadelphia, PA

Congenital/Neuromuscular/Skeletal

3:50 Cystic Fibrosis
J.M. Dunitz, MD, Minneapolis, MN

Rare Lung Diseases

4:10 Rare Lung Diseases
C.B. Strange, MD, Charleston, SC

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B82 LATEST ADVANCES IN SARCOIDOSIS

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation

2:00 pm-4:30 pm

Target Audience
General pulmonary physicians, cardiologists, physicians with an interest in sarcoidosis and/or manage sarcoidosis patients

Objectives
At the conclusion of this session, the participant will be able to:

- learn about new findings and tools to better diagnose, assess and manage pulmonary sarcoidosis and how to apply these tools in the care and management of their patients;
- understand the role of conventional immunosuppressive therapy in sarcoidosis and the role of the new biological agents in the management of sarcoidosis;
- screen for and assess for cardiac sarcoidosis, utilize the tools necessary in the evaluation for cardiac sarcoidosis and the appropriate time to refer to specialized centers.

They symposium will address several topics related to sarcoidosis including latest discoveries in the genetics of sarcoidosis and its impact on our knowledge of sarcoidosis pathogenesis, the role of EBUS in the diagnosis of sarcoidosis, the tools available to clinicians to assess pulmonary sarcoidosis disease severity, the available pharmacotherapies for sarcoidosis including the novel biological agents and finally, the approach to management of cardiac sarcoidosis.

Chairing: N.Y. Hamzeh, MD, Denver, CO
D.A. Culver, DO, Cleveland, OH

2:00 A Patient's Perspective
Speaker To Be Announced

2:05 What Can We Learn About Sarcoidosis Through Genetic Studies?
C.G. Montgomery, PhD, Oklahoma City, OK

2:30 Is EBUS TBNA The Gold Standard For Diagnosis Of Sarcoidosis?
R. Trisolini, MD, Bologna, Italy

2:55 How To Evaluate And Follow Pulmonary Sarcoidosis?
A.U. Wells, MD, London, United Kingdom

3:20 Principals Of Conventional Immunosuppressive Therapy In Sarcoidosis
R.P. Baughman, MD, Cincinnati, OH

3:45 Anti-TNF And Biologic Therapies In Sarcoidosis
D.A. Culver, DO, Cleveland, OH

4:10 Cardiac Sarcoidosis
N.Y. Hamzeh, MD, Denver, CO

4:30 Conclusion

There will be a 5-minute discussion after each talk.

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B83 PEDIATRIC CLINICAL CHEST ROUNDS

Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Nursing; Sleep and Respiratory Neurobiology

2:00 pm-4:30 pm

Target Audience
Pediatric pulmonologists, intensivists, neonatologists, nurse practitioners, nurses, respiratory therapists, others who provide care to children with lung diseases

Objectives
At the conclusion of this session, the participant will be able to:

- diagnose a variety of complex respiratory disorders;
- have new strategies to manage the care of infants and children with complex or confusing respiratory disorders;
- apply appropriate diagnostic tests in complex cases.

There are a plethora of extremely interesting, complex, confusing and novel pediatric clinical disorders that confound and interest clinicians every year. This session will present a number of diverse, complex, highly informative clinical cases. Each clinical presentation, usually given by a trainee or junior faculty member, will be followed by a discussion by an expert in the area. Attendees will have the opportunity to question both presenters and discussants in an interactive format. These clinical cases will provide an opportunity for both new and master clinicians to test their diagnostic skills and interact with colleagues.

Chairing: M.S. Woo, MD, Los Angeles, CA
J.S. Debley, MD, MPH, Seattle, WA
P.J. Robinson, MD, PhD, Melbourne, Australia

2:00 Pediatric Clinical Cases
C.M. Kercsmar, MD, Cincinnati, OH

BASIC • CLINICAL

CRITICAL CARE TRACK

B84 DISCUSSION ON THE EDGE: REPORTS OF RECENT CRITICAL CARE RESEARCH PUBLISHED IN THE *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* AND THE *NEW ENGLAND JOURNAL OF MEDICINE*

2:00 pm-4:30 pm

This session will provide a forum for attendees to interact with the authors and editors about papers published in the *Journal of the American Medical Association* and the *New England Journal of Medicine.* Papers presented will be recent publications, selected by the editors, to be of significant importance to the field of critical care medicine. Attendees will have the opportunity to hear presentations directly from the author and address questions to both the authors and editors. The discussion is intended to provide a unique insight into these papers, the selection process, and how the research applies directly to the field of critical care medicine.

Speakers And Talks to Be Announced

BASIC • TRANSLATIONAL

SCIENCE CORE

B85 SCIENTIFIC BREAKTHROUGHS OF THE YEAR: MECHANISMS OF TISSUE REPAIR

Assemblies on Allergy, Immunology and Inflammation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Pulmonary, critical care, and sleep physicians, nurses, mid-level providers, fellows and other in-training members with an interest in recent scientific advances related to tissue repair following injury

Objectives
At the conclusion of this session, the participant will be able to:

- understand the latest scientific breakthroughs in lung tissue repair;
- enhance understanding of various mechanisms of lung repair;
- improve knowledge in the fields of fibrosis, stem cells, and emphysema.

This Scientific Breakthroughs Session will cover cutting edge and emerging science in the field of tissue injury and repair relating to the lung and other organs. Presentations from experts in the field will be complemented by abstract submissions related to the topic being discussed.

Chairing: M.R.J. Kolb, MD, PhD, Hamilton, Canada
E. Herzog, MD, PhD, New Haven, CT
C.J. Gottardi, PhD, Chicago, IL

2:00 **Mechanisms Of Tissue Repair In The Liver : What Can We Learn About The Lung?**
D.A. Brenner, MD, San Diego, CA

2:35 **Abstract Presentation**

2:50 **Stem Cells As A Potential Therapeutic Option In Cardiac Fibrosis: Applicability To Lung?**
R. Bolli, MD, Louisville, KY

3:25 **Abstract Presentation**

3:40 **Matrix Metalloproteinases And Emphysema: More Than Degradation Enzymes**
W.C. Parks, PhD, Seattle, WA

4:15 **Abstract Presentation**

There will be a 5-minute discussion after each talk.

CLINICAL

SCIENTIFIC SYMPOSIUM

B86 CONTROVERSIES IN PULMONARY REHABILITATION: A PRO-CON DEBATE

Assemblies on Pulmonary Rehabilitation; Clinical Problems; Nursing

2:00 pm-4:30 pm

Target Audience
Clinicians of all disciplines with an interest in chronic disease management, providers of pulmonary rehabilitation services and clinical trainees

Objectives
At the conclusion of this session, the participant will be able to:

- understand the areas of controversy in the field;
- apply the acquired knowledge in order to modify and optimize their own programs;
- appreciate the importance of behavior change to improve physical activity.

The session will explore some of the controversial issues in pulmonary rehabilitation through the vehicle of the pro-con debate. These issues are relevant to the forthcoming ERS/ATS statement. The specific issues will be debated by an international faculty of experts who will be able to present these serious issues in a format that encourages participation and learning. There will be four controversial subjects debated by a total of 8 speakers.

Chairing: M.D.L. Morgan, MD, Leicester, United Kingdom
C.L. Rochester, MD, New Haven, CT

2:00 **Who Needs Guidelines? Pro**
B.R. Celli, MD, Boston, MA

2:20 **Who Needs Guidelines? Con**
R. Casaburi, MD, PhD, Torrance, CA

2:40 **Is Maintainance Rehabilitation Really Useful? Pro**
E.N. Schachter, MD, New York, NY

3:00 **Is Maintenance Rehabilitation Really Useful? Con**
J.A. Alison, MSc, PhD, Sydney, Australia

3:20 **Should Rehabilitation Be Focussed On Activity Promotion Rather Than Exercise Capacity? Pro**
T. Troosters, PhD, PT, Leuven, Belgium

3:40 **Should Rehabilitation Be Focussed On Activity Promotion Rather Than Exercise Capacity? Con**
F. Maltais, MD, Quebec, Canada

4:00 **Is Multi-Disciplinary Care Really Necessary? Pro**
A.E. Holland, PhD, Melbourne, Australia

4:15 **Is Multi-Disciplinary Care Really Necessary? Con**
C.M. Garvey, FNP, MPA, MSN, Daly City, CA

There will be a 5-minute discussion after each talk.

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B87 THE AFFORDABLE CARE ACT: IMPLICATIONS FOR CLINICAL PRACTICE AND RESEARCH

Assemblies on Behavioral Science and Health Services Research; Clinical Problems; Critical Care

2:00 pm-4:30 pm

Target Audience
Adult clinicians, clinical and translational researchers, nurses, health system administrators, behavioral scientists, and trainees

Objectives
At the conclusion of this session, the participant will be able to:

- describe the major provisions of the affordable care act and how it is expected to improve patient outcomes through increased coverage, accountability, and coordination;
- describe potential gaps in coverage, access and affordability after full implementation of the ACA;
- discuss novel research opportunities provided by the affordable care act for investigators engaging in patient centered research.

This session will provide a state of the art discussion of the major provisions of the Affordable Care Act (ACA), how the ACA is expected to improve the outcomes of patients with pulmonary disease and critical illness, and how it will impact both clinicians and scientists who care for these patients.

Chairing: C.R. Cooke, MD, MSc, Ann Arbor, MI
I.S. Douglas, MD, Denver, CO
R.S. Wiener, MD, MPH, Boston, MA

2:00 **A Patient's Perspective On The Affordable Care Act**
Speaker To Be Announced

2:10 **What Does The Affordable Care Act Actually Do?**
I.S. Douglas, MD, Denver, CO

2:30 **Will Covering More People Remedy Disparities In Access And Outcomes Of Care?**
C.R. Cooke, MD, MSc, Ann Arbor, MI

2:50 **Is The Affordable Care Act Actually The Health Services And Outcomes Research Employment Act?**
M.K. Gould, MD, MS, Pasadena, CA

3:10 **How Will The ACA Impact The Daily Lives Of Clinicians In Pulmonary, Critical Care, And Sleep Medicine? Lessons From Abroad**
R. Fowler, MD, MSc, Toronto, Canada

3:30 **PRO: The Affordable Care Act Will Improve Care At A Reasonable Cost For Pulmonary And Critical Care Patients**
S.D. Halpern, MD, PhD, MBE, Philadelphia, PA

3:45 **CON: The Affordable Care Act Will Improve Care At A Reasonable Cost For Pulmonary And Critical Care Patients**
J.M. Kahn, MD, MSc, Pittsburgh, PA

4:00 **General Discussion**

4:10 **Towards Implementing The Affordable Care Act: The Role Of ATS**
N.S. Moore, MA, Washington, DC

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B88 ADVANCES IN TUBERCULOSIS VACCINE DEVELOPMENT: THE ROLE OF PULMONARY IMMUNE RESPONSES

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Clinical Problems

2:00 pm-4:30 pm

Target Audience
individuals with clinical or research interest in tuberculosis and tuberculosis control; individuals with interest in pulmonary host defenses and vaccine development

Objectives
At the conclusion of this session, the participant will be able to:

- become familiar with current practices of TB vaccination using intradermal BCG, their limitations, and the implications for global control of TB;
- learn the rationale behind ongoing approaches to development of novel TB vaccines and which of these appear to be the most promising;
- become familiar with the role of pulmonary immune responses in protection against TB, the potential impact of route of vaccine administration in stimulating these responses, and new technologies that may facilitate development of respiratory vaccines against TB.

This session will provide an update on TB vaccine development with particular emphasis on the importance of TB-specific pulmonary immunity. Presentations will address challenges to the introduction of new TB vaccines and the status of vaccines currently in development. Historical and ongoing studies of mucosal BCG vaccination will be reviewed. Animal studies indicating the capacity of airway luminal cells to protect against TB and the use of respiratory vaccination to optimize these responses will be presented. Assessments of local immunity to Mtb within the human lung that may identify surrogate markers for TB vaccine efficacy will be discussed as well.

Chairing: J. Rengarajan, PhD, Atlanta, GA
R.F. Silver, MD, Cleveland, OH

2:00 **Prospects For New Tuberculosis Vaccines In Our Time**
J. Rengarajan, PhD, Atlanta, GA

2:20 **Respiratory Vaccination Against M. Tuberculosis: Insights From Animal Models**
Z. Xing, MD, PhD, Hamilton, Canada

2:40 **Mucosal Administration Of BCG In Humans: History And Current Trials**
D.F. Hoft, MD, PhD, St. Louis, MO

3:00 **Assessment Of Local Immunity To M. Tuberculosis Within The Human Lung**
R.F. Silver, MD, Cleveland, OH

3:20 **TB Vaccination Via Nanoparticle Aerosols**
M.K. Hondalus, DVM, PhD, Athens, GA

3:40 **Challenges To TB Vaccine Approval**
C.L. Karp, MD, Seattle, WA

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B89 WHAT IS NEW IN SLEEP APNEA AND GLUCOSE METABOLISM AND ENERGY BALANCE?

Assembly on Sleep and Respiratory Neurobiology

2:00 pm-4:30 pm

Target Audience
Pulmonologists, respiratory therapists, clinical researchers, primary care practitioners, other health professionals

Objectives
At the conclusion of this session, the participant will be able to:

- recognize the role of sleep apnea in altered glucose metabolism and energy balance;
- understand the mechanisms by which sleep apnea may affect glucose metabolism and energy balance;
- learn about the most up-to-date evidence regarding the impact of treatment of sleep apnea on glucose control.

This session will include a multidisciplinary group of international leading experts from diabetes, endocrinology, pulmonary and sleep medicine fields, who will review the most recent clinical and translational evidence for the link between sleep apnea and altered glucose metabolism and energy balance. Novel data from animal and human models of sleep apnea and recent findings from randomized clinical trials on the effects of treatment of sleep apnea on glucose metabolism as well as evidence for changes in body weight and energy expenditure will be presented. The underlying mechanisms linking sleep apnea to insulin resistance and glucose intolerance will be discussed.

Chairing: E. Tasali, MD, Chicago, IL
R. Bergman, PhD, Los Angeles, CA

2:00 **Natural History Of Type 2 Diabetes**
R. Bergman, PhD, Los Angeles, CA

2:25 **Intermittent Hypoxia, Sleep Fragmentation And Insulin Resistance: Evidence From Animal And Human Models**
C.P. O'Donnell, PhD, Pittsburgh, PA

2:50 **Sleep Apnea And Type 2 Diabetes: How Strong Is The Link?**
P.A. Levy, MD, PhD, Grenoble, France

3:15 **Impact Of CPAP Treatment Of Sleep Apnea On Glucose Control: Evidence From Randomized Clinical Trials**
E. Tasali, MD, Chicago, IL

3:40 **Insufficient Sleep And Energy Balance**
P. Penev, MD, PhD, Princeton, NJ

4:05 **Changes In Weight And Energy Expenditure In Sleep Apnea**
N.M. Punjabi, MD, Baltimore, MD

There will be a 5-minute discussion after each talk.

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B90 MAKING CARE BETTER: IMPLEMENTING THE NEW CHRONIC OBSTRUCTIVE PULMONARY DISEASE GUIDELINES IN YOUR CLINICAL PRACTICE

Documents Development and Implementation, Education, Quality Improvement Committees; Assemblies on Behavioral Science and Health Services Research; Clinical Problems; Nursing

2:00 pm-4:30 pm

Target Audience

Physicians, nurses, respiratory therapists and others who care for individuals with COPD; researchers, administrators and trainees with an interest in evidence-based medicine, clinical practice guidelines, implementation science and quality improvement

Objectives

At the conclusion of this session, the participant will be able to:

- apply recommendations from recently published guidelines for the management of chronic, stable COPD;
- learn about effective strategies for implementing guidelines and improving patient care in your practice;
- gain familiarity with performance-based continuing medical education and learn how to complete the ABIM performance improvement module for COPD.

This session will introduce the evidence-based clinical practice guideline recently updated by ATS and partner organizations for management of patients with chronic, stable COPD. Speakers will critically review the supporting evidence for specific recommendations, and discuss how "trustworthy" guidelines can provide the foundation for improving care and facilitating performance-based continuing medical education. Speakers will explore links between high quality guidelines, performance measurement and continuing

medical education, and describe in detail the ABIM Performance Improvement Module for COPD. Practical advice for implementation, quality improvement and maintenance of certification will be provided. Speakers include guideline developers and chairs of relevant ATS committees.

Chairing: M.K. Gould, MD, MS, Pasadena, CA
J.M. Kahn, MD, MSc, Pittsburgh, PA
C.C. Thomson, MD, MPH, Cambridge, MA

2:00 What Is A Trustworthy Clinical Practice Guideline And Do The ATS COPD Guidelines Pass The Test?
M.K. Gould, MD, MS, Pasadena, CA

2:15 COPD Guidelines: Recommendations And Rationale For The Use Of Spirometry And Bronchodilators
G.J. Criner, MD, Philadelphia, PA

2:40 COPD Guidelines: Recommendations And Rationale For The Use Of Pulmonary Rehabilitation And Supplemental Oxygen
N.A. Hanania, MD, MS, Houston, TX

3:05 What's Missing From The COPD Guidelines And Why? Vaccination, Smoking Cessation, Comorbidities And End Of Life Care Planning
D.H. Au, MD, Seattle, WA

3:30 How Do I Implement The COPD Guidelines In My Practice Setting To Improve Patient Care?
J.A. Krishnan, MD, PhD, Chicago, IL

3:50 How Is ATS Using The COPD Guidelines To Improve Continuing Medical Education And Facilitate Maintenance Of Certification?
C.C. Thomson, MD, MPH, Cambridge, MA

4:05 What Is The COPD Performance Improvement Module And How Do I Complete It As Part Of ABIM Requirements For Maintenance Of Certification?
J. Mandel, MD, La Jolla, CA

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B91 CARDIOPULMONARY INTERACTIONS AND PULMONARY VASCULAR CHANGES IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE: HISTORY, MOLECULAR BASIS, IMAGING, AND POTENTIAL THERAPIES

Assemblies on Pulmonary Circulation; Clinical Problems; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Pulmonologists; COPD and pulmonary hypertension experts; cardiologists, physiologists, radiologists, nurse practitioners

Objectives
At the conclusion of this session, the participant will be able to:

- understand the importance of pulmonary vascular-ventricular interactions in pulmonary vascular disease associated with COPD;
- apply new knowledge about the impact of subclinical emphysema and pulmonary vascular changes on LV filling to the diagnosis of subclinical emphysema vs. "heart failure with preserved ejection fraction.";
- understand molecular pathways as well as potential therapeutic targets of the pulmonary endothelium in COPD.

Pulmonary hypertension and cor pulmonale have long been known to occur and portend a poor prognosis in severe chronic obstructive pulmonary disease (COPD) and emphysema. Recent work, however, suggests that pulmonary vascular changes occur early in the disease, with implications for differential diagnosis and emphysema pathogenesis. This session will review the historic work on cor pulmonale, update mechanisms linking the pulmonary vasculature to emphysema pathogenesis, describe the epidemiologic and physiologic interplay changes in pulmonary and cardiac structure and function early in disease, and discuss application of potential 'vascular' treatment options in COPD.

Chairing: R.G. Barr, MD, DrPH, New York, NY
N.F. Voelkel, MD, Richmond, VA

2:00 **Historical Overview Of Cor Pulmonale In Severe COPD**
W. MacNee, MBChB, MD, Edinburgh, United Kingdom

2:25 **Molecular Phenotype Of The Pulmonary Vasculature In COPD**
R.M. Tuder, MD, Denver, CO

2:45 **Pulmonary Vascular Changes In Mild To Moderate COPD And Emphysema: Insights From Cellular And Imaging Studies**
R.G. Barr, MD, DrPH, New York, NY

3:05 **Right Ventricular Changes In COPD And Emphysema**
S.M. Kawut, MD, MS, Philadephia, PA

3:25 **Can We Expect Any Benefit From Medications For Pulmonary Arterial Hypertension In COPD?**
A. Vonk-Noordegraaf, MD, Amsterdam, Netherlands

3:45 **Dual Energy CT To Assess Pulmonary Perfusion Heterogeneity In Early GOLD 0 Smokers**
E.A. Hoffman, PhD, Iowa City, IA

4:05 **How The Sick Lung Circulation Can Affect The Heart. A Systems Approach To The Cardiopulmonary Endothelium**
N.F. Voelkel, MD, Richmond, VA

2:00 pm-4:30 pm

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.

5:00 pm-7:00 pm

ASSEMBLY MEMBERSHIP MEETINGS

The thirteen Assemblies are the primary groups of the American Thoracic Society. Each Assembly holds an annual Membership Meeting at the International Conference. All Assembly members and other interested individuals are invited to attend.

The Assembly Membership Meetings provide an update on the Assembly's activities via the Assembly's Leadership and provide Assembly members the chance to have input on future directions, information on how to get involved and networking opportunities. Voting results for the Assembly's future leaders will also be announced.

The Assembly Membership Meetings will be held on Monday, May 20, 5:00 pm-7:00 pm, with the exception of the Assemblies on Behavioral Science and Health Services Research and Pediatrics (see below.)

ALLERGY, IMMUNOLOGY AND INFLAMMATION
Chairing: J.L. Curtis, MD, Ann Arbor, MI

BEHAVIORAL SCIENCE AND HEALTH SERVICES RESEARCH
Chairing: J.A. Krishnan, MD, PhD, Chicago, IL
This Assembly will meet on Sunday, May 19, 6:30 pm-8:30 pm

CLINICAL PROBLEMS
Chairing: C. Strange, MD, Charleston, SC

CRITICAL CARE
Chairing: G. Rubenfeld, MD, Toronto, Canada

ENVIRONMENTAL AND OCCUPATIONAL HEALTH
Chairing: P.K. Henneberger, MPH, ScD, Morgantown, WV

MICROBIOLOGY, TUBERCULOSIS AND PULMONARY INFECTIONS
Chairing: D.M. Lewinsohn, MD, PhD, Portland, OR

NURSING
Chairing: L.F. Reinke, PhD, Edmonds, WA

PEDIATRICS
Chairing: H.B. Panitch, MD, Philadelphia, PA
This Assembly will meet on Sunday, May 19, 6:30 pm-8:30 pm

PULMONARY CIRCULATION
Chairing: P.M. Hassoun, MD, Baltimore, MD

PULMONARY REHABILITATION
Chairing: R.L. ZuWallack, MD, Hartford, CT

RESPIRATORY CELL AND MOLECULAR BIOLOGY
Chairing: J. Roman, MD, Louisville, KY

RESPIRATORY STRUCTURE AND FUNCTION
Chairing: R.H. Brown, MD, Baltimore, MD

SLEEP AND RESPIRATORY NEUROBIOLOGY
Chairing: J.A. Rowley, MD, Detroit, MI

7:00 pm-10:00 pm

ASSEMBLY DINNERS AND RECEPTIONS

Assembly members and non-members, students and fellows are invited to join us for an evening of good food, great company, camaraderie and a very entertaining program. This is a wonderful opportunity to introduce young members and trainees to Assembly leaders, to connect with old friends and to set up new interactions and collaborations.

Pre-registration and an additional fee are required. Seating is limited. Please register for these dinners through online general registration by clicking the Register Now button above.

ATS Member - $60.00
Non Member - $70.00
Fellow - $40.00

The following Assemblies will hold dinners or receptions on Monday May 20, 2013 from 7-10 PM immediately following the Assembly Membership Meetings.

Assembly Dinners

Assembly on Allergy, Immunology and Inflammation

Assembly on Clinical Problems

Assembly on Critical Care

Assembly on Microbiology, Tuberculosis and Pulmonary Infections

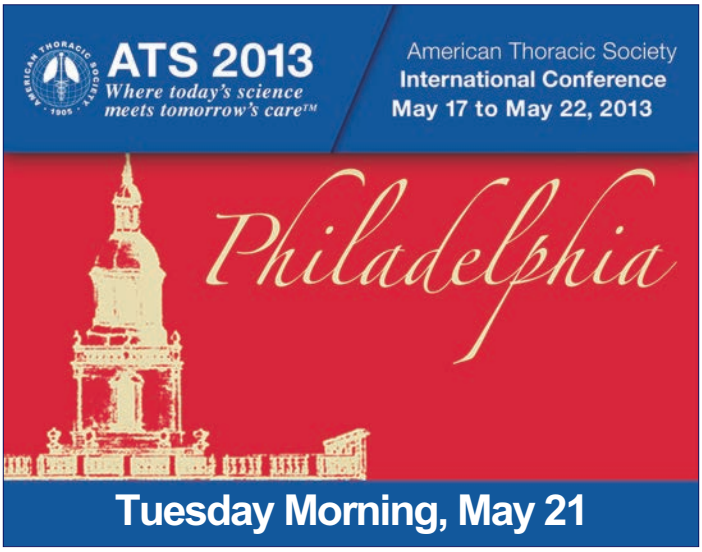
Assembly on Pediatrics

Assembly on Respiratory Cell and Molecular Biology

Assembly Receptions

Assembly on Respiratory Structure and Function

Assembly on Sleep and Respiratory Neurobiology



CLINICAL

PEDIATRIC CLINICAL CORE CURRICULUM

PCC3 SLEEP AND BRONCHOPULMONARY DYSPLASIA

Pediatric Core Curriculum Working Group

6:45 am-7:45 am

Target Audience
Pediatric pulmonary and critical care physicians, young faculty members, fellow physicians in allergy, pulmonary and ICU

Objectives
At the conclusion of this session, the participant will be able to:

- describe the pathophysiology of asthma and the clinical assessment and care of children with asthma;
- identify and manage infants and children with childhood interstitial lung disease;
- describe the pathophysiology and management of bronchopulmonary dysplasia and the pathophysiology, identification and management of pulmonary hypertension in infants and children.

The pediatric clinical core curriculum sessions will be comprised of three one-hour sessions on subsequent ATS 2013 conference days. Sessions will cover core curriculum topics pertinent to the practice and expertise of pediatric pulmonary medicine. Each topic will be accompanied by five questions for inclusion in pre/post questionnaires. The learner will be eligible for MOC points on successful completion of said knowledge assessment.

Chairing: M.A. Nevin, MD, Chicago, IL

6:45 **Impact Of Sleep On Common Lung Diseases (CF, BPD, Asthma)**
S.L.D. Ward, MD, Los Angeles, CA

7:15 **BPD And Pulmonary Hypertension**
S.H. Abman, MD, Aurora, CO

THEMATIC SEMINAR SERIES

TSS1 INTEGRATED INTERSTITIAL LUNG DISEASE CARE

R **Registration Fee: $140.00 for the full series (includes continental breakfast.)**
Attendance is limited. Pre-registration is required.

This is part 3 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The program for the full series is included with the Sunday, May 19, 12:00 pm program.

Tuesday, May 21, 7:00 am-8:00 am

Advances In Symptom Management In ILD
K.O. Lindell, PhD, RN, Pittsburgh, PA

THEMATIC SEMINAR SERIES

TSS2 MANAGING DIFFICULT PATIENTS WITH CHRONIC COUGH: A PRO-CON DEBATE

Registration Fee: $140.00 for the full series (includes continental breakfast.)
Attendance is limited. Pre-registration is required.

This is part 2 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The program for the full series is included with the Monday, May 20, 7:00 am program.

Tuesday, May 21, 7:00 am-8:00 am

Therapy For Gastroesophageal Reflux Reduces Cough Severity: PRO
P. Dicpinigaitis, MD, Bronx, NY

Therapy For Gastroesophageal Reflux Reduces Cough Severity: CON
K.F. Chung, MD, PhD, London, United Kingdom

SUNRISE SEMINARS

R **Registration Fee: $65.00 (includes continental breakfast.)**
Attendance is limited. Pre-registration is required.

7:00 am-8:00 am

SS201 ROLE OF THE UPPER AIRWAY IN THE GENERATION OF INFLAMMATION IN ASTHMA
H. Neighbour, BSc, BM, BS, PhD, Hamilton, Canada

SS202 DIAGNOSIS AND MANAGEMENT OF DIFFUSE ALVEOLAR HEMORRHAGE
R. Cartin-Ceba, MD, Rochester, MN

SS203 PULMONARY VASCULAR DISEASE IN COPD: RISKS, IMAGING, AND MANAGEMENT STRATEGIES
J.M. Wells, MD, Birmingham, AL

SS204 DIAGNOSIS AND MANAGEMENT OF MALIGNANT PLEURAL EFFUSIONS
M.A. Jantz, MD, Gainesville, FL

SS205 ESSENTIALS OF LUNG TRANSPLANT
A.L. Gray, MD, Durham, NC

SS206 AN EVIDENCE-BASED APPROACH TO IPF
M. Wilgus, MD, Houston, TX

SS207 CRITICAL CARE RECOVERY CENTER: AN INNOVATIVE COLLABORATIVE CARE MODEL FOR ICU SURVIVORS
B.A. Khan, MD, MS, Indianapolis, IN

SS208 NEW OCCUPATIONAL CAUSES OF DIFFUSE PARENCHYMAL LUNG DISEASES: HOW TO IDENTIFY A SENTINEL CASE
M. Gulati, MD, MPH, New Haven, CT

SS209 NEMATODES, FLATWORMS AND FLUKES OH MY! A REVIEW OF PARASITIC LUNG DISEASES
A.M. Luks, MD, Seattle, WA

SS210 NON-INVASIVE BI-LEVEL VENTILATION: THE PRACTICAL SIDE
D.E. Hart, MN, Auckland, New Zealand
M.A. Carno, PhD, MBA, RN, Rochester, NY

SS211 MRSA IN CYSTIC FIBROSIS: IMPACT AND TREATMENT OPTIONS
E.C. Dasenbrook, MD, MHS, Cleveland, OH

SS212 DIAGNOSIS AND MANAGEMENT OF PULMONARY EMBOLISM IN PREGNANCY
J.M. Mazer, MD, Providence, RI

SS213 PROTEIN MISFOLDING AND ER STRESS IN CHRONIC LUNG DISEASE
K. Ask, PhD, Hamilton, Canada

SS214 CELL AND MATRIX-DERIVED MECHANOTRANSDUCTION IN LUNG FIBROSIS
Y. Zhou, MD, PhD, Birmingham, AL

SS215 ASTHMA CONTROL IN OBESE ADULTS: UNDERSTANDING THE PHYSIOLOGY TO GUIDE TREATMENT
C.S. Farah, BSc, MBBS, PhD, Sydney, Australia

SS216 INPATIENT MANAGEMENT OF SLEEP APNEA
S. Bertisch, MD, MPH, Boston, MA

CLINICAL

YEAR IN REVIEW

C1 CLINICAL YEAR IN REVIEW 3

8:15 am-10:15 am

Target Audience
Providers of lung health, those providing for both common and rare diseases and those with a single disease focus who wish to learn about the latest advances in disparate areas of pulmonary and critical care medicine

Objectives
At the conclusion of this session, the participant will be able to:

- identify new findings in pulmonary and critical care that are directly relevant to patient care;
- understand how new findings in pulmonary and critical care medicine augment current guidelines and modify approaches to common and rare pulmonary diseases;
- identify and consider how quality improvement strategies can be applied in diverse clinical environments in pulmonary and critical care medicine.

The 2013 Clinical Year in Review will review advances over the last year in critical areas of pulmonary and critical care medicine including prevalent pulmonary and critical illnesses. Novel topics proposed this year include health disparities in pulmonary and critical care medicine and systems-based approaches to the organization and delivery of critical care services.

Chairing: E.R. Sutherland, MD, MPH, Denver, CO
H.R. Collard, MD, San Francisco, CA
R.D. Stapleton, MD, MSc, Burlington, VT

8:15 **Critical Care Medicine**
T.W. Rice, MD, MSc, Nashville, TN

8:45 **Acute Respiratory Distress Syndrome (ARDS)**
C.S. Calfee, MD, MAS, San Francisco, CA

9:15 **Mechanical Ventilation**
E. Fan, MD, Toronto, Canada

9:45 **ICU Organization And Systems**
G. Rubenfeld, MD, MSc, Toronto, Canada

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C2 CONTROVERSIES IN CONNECTIVE TISSUE DISORDERS-INTERSTITIAL LUNG DISEASE: A PRO-CON DEBATE

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation

8:15 am-10:45 am

Target Audience
Providers and researchers of lung health

Objectives
At the conclusion of this session, the participant will be able to:

- have a better understanding of the role that autoantibodies play in the evaluation of ILD;
- understand the role of surgical lung biopsy in CTD-ILD;
- learn and understand the role of immunosuppression in CTD-UIP.

There are numerous controversies surrounding the evaluation, classification, and management of CTD-ILD. The proposed symposium serves to address several of the most frequently encountered dilemmas that are of central importance to CTD-ILD: 1) The role of serologic testing in evaluating / classfying CTD-ILD 2) The role of biopsy in CTD-ILD 3) The role of immunosuppression in the CTD-UIP patient 4) The proposed symposium list of speakers are all international experts in the field of CTD-ILD.

Chairing: A. Fischer, MD, Denver, CO
V. Cottin, MD, PhD, Lyon, France

8:15 **A Patient's Perspective**
Speaker To Be Announced

8:25 **Pro: Circulating Autoantibodies Are A Significant Finding In ILD**
V. Cottin, MD, PhD, Lyon, France

8:45 **Con: Circulating Autoantibodies Are A Significant Finding In ILD**
A. Fischer, MD, Denver, CO

9:05 **Pro: Patients With CTD-ILD Should Undergo Surgical Lung Biopsy**
R.M. Du Bois, MD, London, United Kingdom

9:25 **Con: Patients With CTD-ILD Should Undergo Surgical Lung Biopsy**
J.J. Swigris, DO, Denver, CO

9:45 **Pro: Patients With CTD And UIP Pattern Lung Disease Should Be Treated With Immunosuppression**
A.U. Wells, MD, London, United Kingdom

10:05 **Con: Patients With CTD And UIP Pattern Lung Disease Should Be Treated With Immunosuppression**
H.R. Collard, MD, San Francisco, CA

10:25 **Panel Discussion**

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C3 CASE BASED LEARNING IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE MANAGEMENT

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections; Nursing; Pulmonary Rehabilitation

8:15 am-10:45 am

Target Audience
Healthcare professionals and trainees in pulmonary medicine that treat patients with COPD

Objectives
At the conclusion of this session, the participant will be able to:

- recognize and better assess challenging clinical situations in COPD;
- have new strategies to manage these challenging clinical situations;
- integrate current treatment options as well as learn about emerging treatment options.

A substantial proportion of COPD patients can be challenging management problems, in which management options are not clear or limited. These challenges include recurrent exacerbations, persistent smoking, disabling dyspnea, treatment complications, cachexia, bronchiectasis and solitary pulmonary nodules. Each of these scenarios will be discussed by an expert in that aspect of COPD. Current evidence and guideline based management and emerging modalities of management will be discussed.

Chairing: B.J. Make, MD, Denver, CO
D.E. Niewoehner, MD, Minneapolis, MN
S. Sethi, MD, Buffalo, NY

8:15 **The Recalcitrant Smoker With Severe COPD**
S.I. Rennard, MD, Omaha, NE

8:36 **Disabling Dyspnea On Maximal Therapy**
F.C. Sciurba, MD, Pittsburgh, PA

8:57 **CT Determined Bronchiectasis In COPD**
M. Miravitlles, MD, Barcelona, Spain

9:18 **Solitary Pulmonary Nodule In Severe COPD**
R. Kalhan, MD, MS, Chicago, IL

9:39 **How To Deal With The Frequent Exacerbator?**
S. Sethi, MD, Buffalo, NY

10:01 **Pneumonia In COPD Patient On Inhaled Corticosteroids**
F.J. Martinez, MD, MS, Ann Arbor, MI

10:23 **Osteoporosis And Cachexia In COPD**
D. Shale, MD, Cardiff, United Kingdom

BEHAVIORAL • CLINICAL

CRITICAL CARE TRACK

C4 SIX QUESTIONS WE MUST ASK TO UNDERSTAND LONG-TERM OUTCOMES AFTER CRITICAL ILLNESS

Assemblies on Critical Care; Behavioral Science and Health Services Research

8:15 am-10:45 am

Target Audience
Clinicians caring for patients in the intensive care unit as well

as those caring for patients after critical illness; investigators studying short and long-term effects of critical illness

Objectives
At the conclusion of this session, the participant will be able to:

- learn and understand new findings about the long-term adverse outcomes affecting many patients who survive critical illness;
- interpret and incorporate the literature on long-term outcomes after critical illness;
- apply new knowledge to direct and inform communication with family members of critically ill patients.

A growing body of research done during the past 10-15 years has shown that a large percentage of patients who survive critical illness experience adverse long-term outcomes, including cognitive impairment, functional disability, and psychological disorders. Despite the completion of many studies, this field of research remains young and relatively undeveloped. Numerous questions remain unanswered, and complex challenges are only now being addressed. Yet, researchers and clinicians alike are increasingly being presented with the results of new studies, and key questions must be asked and answered so that the long-term outcomes of critically ill patients can be understood.

Chairing: T.D. Girard, MD, MSc, Nashville, TN
C.E. Cox, MD, MPH, Durham, NC
T.J. Iwashyna, MD, PhD, Ann Arbor, MI

8:15 Introduction
T.D. Girard, MD, MSc, Nashville, TN

8:30 A Patient's Perspective
Speaker To Be Announced

8:45 What Was The Patient Like Before Their Critical Illness?
T.J. Iwashyna, MD, PhD, Ann Arbor, MI

9:05 What Does The Patient Value?
C.E. Cox, MD, MPH, Durham, NC

9:25 What Do The Results Of These Research Tests Mean In the Real World?
J.C. Jackson, PsyD, Nashville, TN

9:45 How Do We Effectively Communicate Prognosis About Long-Term Outcomes To Patients And Family Members?
Speaker To Be Announced

10:05 Are These Problems Unique To ICU Patients?
G. Rubenfeld, MD, MSc, Toronto, Canada

10:25 What If Improving One Outcome Makes Another One Worse?
M.E. Mikkelsen, MD, MSCE, Philadelphia, PA

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C5 LATE BREAKING RESULTS OF CARDIOVASCULAR RANDOMIZED CONTROLLED TRIALS IN OBSTRUCTIVE SLEEP APNEA

Assembly on Sleep and Respiratory Neurobiology

8:15 am-10:45 am

Target Audience
Professionals providing care to patients with sleep apnea and related disorders; anyone with clinical, research or administrative responsibilities in respiratory or sleep medicine

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings about the effects of treatment of obstructive sleep apnea on cardiovascular risk;
- learn more about the ethical, methodological and logistical challenges of undertaking cardiovascular outcomes trials in OSA patient populations;
- better advise patients on the current evidence regarding the effects of OSA treatment on CV risk.

Attendees at this symposium will learn about the recent findings from several large-scale randomized controlled trials that have been designed to assess the effects of obstructive sleep apnea (OSA) treatment on markers of cardiovascular disease (CVD) risk and on CVD outcomes. They will also develop an appreciation of the broader international effort currently underway in this area and the general and specific design and

logistical challenges of large-scale cardiovascular trials in OSA.

Chairing: R.D. McEvoy, MD, Adelaide, Australia
S.S. Redline, MD, MPH, Boston, MA

8:15 **A Patient's Perspective**
Speaker To Be Announced

8:20 **Is It time For Large Scale RCTs In OSA Focused On CV Outcomes?**
S.S. Redline, MD, MPH, Boston, MA

8:40 **HIPARCO: An RCT Of CPAP Therapy In OSA Patients With Resistant Hypertension**
M.A. Martinez-Garcia, MD, Valencia, Spain

9:05 **HeartBEAT: A Phase 2 RCT Of CPAP In High Cardiovascular Risk Patients With OSA**
D.J. Gottlieb, MD, MPH, Boston, MA

9:30 **SAVE: An International RCT Of CPAP In High Cardiovascular Risk Patients With OSA**
E. Heeley, PhD, Sydney, Australia

9:55 **Cardiovascular Outcomes Data From The Oxford And Zurich RCTs Of OSA And CPAP Therapy**
J.R. Stradling, MD, Oxford, United Kingdom

10:20 **A Cardiologist's Perspective On The Design And Conduct Of CV Outcomes Trials In OSA**
E.F. Lewis, MD, MPH, Boston, MA

There will be a 5-minute discussion after each talk.

CLINICAL

KENNETH MOSER MEMORIAL SYMPOSIUM

C6 CONFLICT AND CONUNDRUMS IN THE MANAGEMENT OF ACUTE PULMONARY EMBOLISM

Assemblies on Pulmonary Circulation; Clinical Problems; Critical Care

8:15 am-10:45 am

Target Audience
Pulmonologists, critical care specialists, thoracic surgeons, general internists, nurses and nurse practitioners, respiratory therapists

Objectives
At the conclusion of this session, the participant will be able to:

- appropriately administer thrombolytics in acute PE and understand the controversy around their use in normotensive patients;
- discuss the impact of acute PE on RV function and apply a physiologic and systematic approach to treat the patient with acute RV failure due to PE;
- appropriately administer novel anticoagulants such as the oral Xa inhibitors for the treatment of PE and appropriately risk stratify patients with acute PE top optimize therapy. Discuss the role of IVC filters in the management of PE.

Pulmonary embolism remains a major cause of morbidity and mortality throughout the world. While a number of recent studies have clarified and improved our approach to the diagnosis and management of PE, there remain many important controversies and unanswered questions as well as novel treatment strategies that merit review and discussion. This session will review recent advances and highlight some of these controversies while presenting the available data. One of the most controversial areas, (thrombolytics for sub-massive PE) will be presented as a pro-con debate to highlight the controversy and encourage discussion.

Chairing: T.M. Bull, MD, Aurora, CO
R.N. Channick, MD, Boston, MA

8:15 **PE: "The Big One"**
R.N. Channick, MD, Boston, MA

8:35 **Thrombolytics For Sub-Massive PE: Pro**
S.Z. Goldhaber, MD, Boston, MA

9:00 **Thrombolytics For Sub-Massive PE: Con**
D. Jimenez-Castro, MD, Madrid, Spain

9:25 **IVC Filters And PE: Should We Be Using Them?**
T.M. Bull, MD, Aurora, CO

9:45 **Anticoagulation In PE: What You Need To Know**
D.J. Kuter, MD, Boston, MA

10:10 **Risk Stratification Of PE: Practical Use Of Biomarkers And Scoring Systems**
V.F. Tapson, MD, Durham, NC

CLINICAL

SCIENTIFIC SYMPOSIUM

C7 PROGRESS IN PEDIATRIC TUBERCULOSIS: A GLOBAL PERSPECTIVE

Assemblies on Pediatrics; Behavioral Science and Health Services Research; Clinical Problems; Microbiology, Tuberculosis and Pulmonary Infections; Nursing; International Health Committee

8:15 am-10:45 am

Target Audience
Pulmonologists, infectious diseases specialists, nurses and nurse practitioners, physician assistants, respiratory therapists, microbiologists, and other healthcare providers who participate in the care of children with tuberculosis, including international ATS members in developed and developing countries

Objectives
At the conclusion of this session, the participant will be able to:

- understand the factors that contribute to the persisting underestimation of the global epidemic of TB (including drug-resistant and HIV-related) in children;
- improve the diagnosis of childhood TB by reviewing recent advances, their clinical applicability, and the challenges in their implementation;
- improve treatment, prevention, and control of TB in children by reviewing new guidelines and strategies, including those related to drug-resistant TB and to HIV co-infection.

Tuberculosis continues to be a major cause of illness and death in children worldwide, with drug-resistance and HIV co-infection posing additional challenges. There have been recent advances in TB diagnostics and specimen collection methods, treatment, prevention, infection control, and in the development of candidate biomarkers that may directly improve the management of patients, but may also serve as surrogate markers to expedite the development of novel diagnostics and medications. This session will review these developments in pediatric TB from an international viewpoint, including the new W.H.O. roadmap for bridging the implementation gap between knowledge and practice.

Chairing: C.M. Perez-Velez, MD, Medellin, Colombia
C.L. Lancioni , MD, Portland, OR
M.B. Kane, MSc, Dublin, Ireland

8:15 **Improving The Care Of Children With TB: Bridging The Implementation Gap Between Knowledge And Practice**
J.R. Starke, MD, Houston, TX

8:33 **Immune-Based Testing For TB Infection And Disease In Children: Strategies For Low- And High-Incidence Countries**
S.C. Ranganathan, MBChB, PhD, Parkville, Australia

8:52 **Bacteriological Confirmation Of Pulmonary TB In Children: Advances In Specimen Collection And Testing**
H.J. Zar, MD, PhD, Cape Town, South Africa

9:17 **New Recommendations For The Treatment Of Pan-Susceptible And Drug-Resistant Intrathoracic TB In Children**
H.S. Schaaf, MBChB, MD, Cape Town, South Africa

9:42 **TB/HIV-Co-Infection And TB Prevention Strategies In Children**
M.F. Cotton, MBChB, PhD, Cape Town, South Africa

10:07 **Advances In TB Nursing And Infection Control In Children**
C.M. Murphy, MSN, NPC, Boston, MA

10:25 **Biomarkers For Tuberculosis Activity, Cure, And Relapse In Children**
D.A. Lewinsohn, MD, Portland, OR

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C8 AUTOPHAGY: FRIEND OR FOE IN LUNG DISEASE?

Assemblies on Allergy, Immunology and Inflammation; Critical Care; Microbiology, Tuberculosis and Pulmonary Infections; Pediatrics; Pulmonary Circulation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Translational, basic, and clinical scientists engaged in research and/or practice focusing on acute lung diseases such as sepsis and ARDS, and chronic lung diseases such as pulmonary hypertension and chronic obstructive pulmonary disease

Objectives
At the conclusion of this session, the participant will be able to:

- understand the regulation of autophagy;
- better understand the current functional role of autophagy in lung disease;
- examine whether autophagy targets can serve as either diagnostic and/or therapeutic targets in lung diseease.

Autophagy, a regulated pathway for the turnover of cytoplasmic organelles and protein, represents an essential cellular homeostatic mechanism. During autophagy, damaged proteins or organelles are sequestered within double-membrane vesicles, or autophagosomes. Maturing autophagosomes fuse with lysosomes where the contents are degraded. This process regenerates metabolic precursors that are recycled for macromolecular synthesis and energy production. Thus, autophagy provides a mechanism for prolonging survival under cellular stress. Very little is currently known on the function of autophagy in lung diseases. This symposium will review the current state of the art update on autophagy and implications in human lung diseases.

Chairing: A.M.K. Choi, MD, Boston, MA
M.F. Beers, MD, Philadelphia, PA

8:15 **Autophagy In Inflammation And Immunity**
N.T. Eissa, MD, Houston, TX

8:40 **Autophagy And Circadian Clock Disruption In Sepsis**
J.A. Haspel, MD, PhD, Boston, MA

9:05 **Autophagy: Critical Determinant Of SPC Regulation In Lung Fibrosis**
M.F. Beers, MD, Philadelphia, PA

9:30 **Targeting Autophagy-Dependent Metabolic Dependencies In The Therapy Of LAM**
E. Henske, MD, Boston, MA

9:55 **Chaperone Mediated Autophagy**
F. Macian-Juan, MD, PhD, New York, NY

10:20 **Mitophagy And Ciliophagy: Selective Autophagy In COPD**
A.M.K. Choi, MD, Boston, MA

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

C9 COMPLEX SYMPTOMS AND SYMPTOM CLUSTERS: FROM PATIENT ASSESSMENT TO MANAGEMENT

Assembly on Nursing

8:15 am-10:45 am

Target Audience
Clinicians and researchers, nurses, physicians, physical therapists, pharmacists, respiratory therapists and biostatisticians

Objectives
At the conclusion of this session, the participant will be able to:

- identify issues pertinent to the identification and classification of symptom clusters;
- understand and identify methods for the assessment and management of the patient with complex respiratory symptoms;
- develop and apply interventions for complex symptoms and symptom clusters.

This scientific symposium will discuss the pharmacological and non-pharmacological management of complex symptoms associated with chronic pulmonary disease. Topics will include the management of refractory symptoms including breathlessness, cough, and respiratory 'symptom clusters'. Methodological challenges associated with research in this area will also be addressed.

Chairing: J. Yorke, PhD, RN, Manchester, United Kingdom
M.M. Milic, MD, San Francisco, CA

8:15 **A Patient's Perspective**
Speaker To Be Announced

8:20 **Can Complex Symptom Clusters (Profiles) Help Us Understand Patient Presentations?**
P.M. Meek, RN, PhD, Denver, CO

8:50 **Statistical Challenges For Identifying And Classifying Symptom Clusters**
S. Schmiege, PhD, Aurora, CO

9:20 **Breathlessness In Context: Managing Complexity**
S. Booth, MD, Cambridge, United Kingdom

9:50 **Cough In Context: Managing Complexity**
J. Smith, MBChB, MD, PhD, Manchester, United Kingdom

10:20 **Respiratory Distress Cluster: From Exploration To Developing An Intervention**
J. Yorke, PhD, RN, Manchester, United Kingdom

There will be a 5-minute discussion after each talk.

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C10 THE NIH LUNG REPAIR AND REGENERATION CONSORTIUM (LRRC): AN UPDATE

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Scientists, clinicians, fellows, and all others interested in the current state of the NIH effort to address lung repair and regeneration

Objectives
At the conclusion of this session, the participant will be able to:

- gain knowledge regarding NIH efforts to investigate lung repair and regeneration;
- understand the role of the LRRC in promoting lung repair and regeneration research;
- describe resources being made available by the LRRC to the lung research community as a whole.

This session will provide an update on the NIH Lung Repair and Regeneration Consortium initiative. The consortium was instituted in early 2012 and has, as one of its goals, to further our knowledge on mechanisms of lung repair and regeneration. Speakers will provide updated information on current projects being addressed by the LRRC, as well as assembled resources that are available to the research community as a whole. Representatives from the 6 LRRC centers and the NIH will be available to provide information to investigators, trainees, and others with an interest in the topic.

Chairing: E.S. White, MD, Ann Arbor, MI
C.J. Blaisdell, MD, Bethesda, MD

8:15 **Overview**
S.M. Palmer, MD, Durham, NC

8:36 **Epigenetic Mechanisms In Lung Formation And Regeneration**
E.E. Morrisey, PhD, Newtown Square, PA

8:57 **The Role Of Lung ECM In Driving Cellular Phenotype**
E.S. White, MD, Ann Arbor, MI

9:18 **Patterning The Foregut Endoderm To The Lung Lineage**
A. Zorn, PhD, Cincinnati, OH

9:39 **Structure Function Challenges In The Therapeutic Induction Of Lung Growth**
C.C.W. Hsia, MD, Dallas, TX

10:00 Alveolar Progenitor Cell Function Assessed In Vivo
H.A. Chapman, MD, San Francisco, CA

10:21 An Integrated Approach To Lung Epithelial Repair And Regeneration
S.H. Randell, PhD, Chapel Hill, NC

There will be a 5-minute discussion after each talk.

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

C11 IS THERE ROOM FOR CONSCIENTIOUS OBJECTIONS IN CRITICAL CARE MEDICINE?

Ethics and Conflict of Interest Committee; Assemblies on Critical Care; Nursing; Pediatrics

8:15 am-10:45 am

Target Audience
Critical care practitioners, trainees, administrators in critical care

Objectives
At the conclusion of this session, the participant will be able to:

- recognize conscience-based objections (CBOs) in the ICU;
- evaluate the risks and benefits to patients and clinicians of accommodating CBOs in the ICU;
- manage conscience-based objections in the ICU.

ICU clinicians are sometimes faced with situations in which they have a moral objection to providing or disclosing information about a medical service. For example ICU clinicians may have moral objections to disclosing information about withdrawal of nutrition and hydration, providing palliative sedation to unconsciousness, participating in organ donation, or providing advanced life support in patients with a poor prognosis. There is controversy about how to manage these conscience-based objections (CBOs). This session will explore reasons for and against accommodating CBOs and summarize the new ATS recommendations for managing CBOs in the ICU.

Chairing: M. Lewis-Newby, MD, MPH, Seattle, WA
D.B. White, MD, Pittsburgh, PA

8:15 Welcome And Symposium Overview
M. Lewis-Newby, MD, MPH, Seattle, WA

8:25 Reasons For And Against Accommodating Conscience-Based Objections In The ICU
M. Wicclair, PhD, Pittsburgh, PA

8:50 How The Law Applies To Conscience-Based Objections In The ICU
T. Pope, JD, PhD, St. Paul, MN

9:10 Are Clinicians At Risk Of Moral Harm In The Provision Of Critical Care Medicine?
C. Rushton, PhD, RN, Baltimore, MD

9:35 Special Case: When ICU Clinicians Morally Object To "Futile" Care
D.B. White, MD, Pittsburgh, PA

10:00 ATS Recommendations For Managing Conscience-Based Objections In The Intensive Care Unit
M. Lewis-Newby, MD, MPH, Seattle, WA

10:20 Panel Discussion: Summarizing Reasons For And Against Accommodating CBOs

There will be a 5-minute discussion after each talk.

8:15 am-10:45 am

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.

11:30 am-1:00 pm

ATS PLENARY SESSION

This Plenary Session features the ATS President's Lecture, which was established to provide a unique perspective on medicine and science from the vantage point of distinguished scientists, physicians, and academicians. As their messages would not usually be heard in the scientific sessions of the International Conference, this special forum has been provided for the benefit of all Conference participants.

Information on the current state of the Society and plans for the future of the Society will also be reported.

CLINICAL • TRANSLATIONAL

WORKSHOP

WS5 DIAGNOSIS AND MANAGEMENT OF PNEUMONIA IN THE IMMUNOCOMPROMISED HOST

R **Registration Fee: $75.00 (includes box lunch.)**
Attendance is limited. Pre-registration is required.

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Clinical Problems; Critical Care; Nursing

11:30 am-1:00 pm

Target Audience
Healthcare professionals involved in patient care in the outpatient, hospital and/or critical care setting; clinical and laboratory investigators interested in lung immunity and lung infections

Objectives
At the conclusion of this session, the participant will be able to:

- understand the unique cellular and molecular mechanisms of immune impairment associated with different immunocompromised states;
- identify the pulmonary infections associated with each type of immune impairment, and generatea comprehensive differential diagnosis for acute pneumonia in these patient populations;
- apply this knowledge to implement diagnostic strategies and improve management of immunocompromised patients with pneumonia.

This workshop will examine current knowledge of the diagnostic strategies and clinical management of lung infections in specific populations of immunocompromised individuals, including solid organ transplant or HIV-infected individuals, those receiving chemotherapy, and those on TNF blockers. Each talk will incorporate cases to highlight clinical presentation and discuss differential diagnosis. Each talk will also address the unique mechanisms of immune impairment, new and important diagnostic methods and initial empiric therapies in these immunocompromised populations.

Chairing: K.A. Crothers, MD, Seattle, WA
A. Morris, MD, MS, Pittsburgh, PA

11:30 Pneumonia In The Cancer Patient On Chemotherapy
S.E. Evans, MD, Houston, TX

11:52 Pulmonary Infections In The Solid Organ Transplant Recipient
R.M. Kotloff, MD, Philadelphia, PA

12:14 Pneumonia In The HIV-Infected Patient
S.K. Cribbs, MD, Atlanta, GA

12:36 Pulmonary Infections In Patients On TNF Blockers
J. Keane, MD, Dublin, Ireland

CLINICAL

WORKSHOP

WS6 EXTUBATION READINESS PARAMETERS IN PEDIATRIC PATIENTS

R **Registration Fee: $75.00 (includes box lunch.)**
Attendance is limited. Pre-registration is required.

Assemblies on Pediatrics; Critical Care

11:30 am-1:00 pm

Target Audience
Pediatric critical care specialists, critical care nurses, respiratory therapists, residents

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the pros and cons of extubation readiness parameters and their values in different patient populations;
- assess the utility of weaning mechanical ventilation versus measuring extubation parameters;
- interpret ventilator waveforms and use extubation protocols in preparation for extubation.

During the workshop, extubation readiness parameters used in pediatric critically ill patients will be described including the “Air Leak” test, measurement of tracheal secretions, Rapid Shallow Breath Index (RSBI), CROP score (index including compliance, rates, oxygenation, pressure), airway occlusion pressure at 0.1 sec (P0.1 sec) and sedation scores to assess patient's readiness for extubation. The attendees and participants will learn how to implement extubation readiness parameters that are specific to different patient population and the value of weaning mechanical ventilation versus measuring extubation readiness parameters. They will also learn the utility of ventilator waveforms and extubation protocols.

Chairing: M.J. Mhanna, MD, MPH, Cleveland, OH

11:30 Extubation Readiness Parameters
M.J. Mhanna, MD, MPH, Cleveland, OH
I.M. Anderson, MD, Cleveland, OH

11:50 Extubation Parameters Specific To Different Populations
A.G. Randolph, MD, MSc, Boston, MA

12:10 To Wean Or Not To Wean
P.G. Smith, DO, Missoula, MT

12:30 Ventilator Waveforms
I.M. Cheifetz, ABP, MD, Durham, NC

12:50 Extubation Protocols
T.R. Myers, MBA, RRT-NPS, Irving, TX

MEET THE PROFESSOR SEMINARS

R **Registration Fee: $70.00 (includes box lunch.)**
Attendance is limited. Pre-registration is required.

12:00 pm-1:00 pm

MP601 INNATE IMMUNE RESPONSE TO FUNGI IN THE AIRWAYS: RELEVANCE TO ALLERGIC BRONCHOPULMONARY ASPERGILLOSIS
K. Asano, MD, Kanagawa, Japan

MP602 EVALUATION OF POST-DEPLOYMENT DYSPNEA
M.J. Morris, MD, Fort Sam Houston, TX

MP603 ACUTE EXACERBATION OF IDIOPATHIC PULMONARY FIBROSIS: CLINICAL STRATEGY BASED ON ITS PATHOGENESIS
M. Ebina, MD, PhD, Sendai, Japan

MP604 BRINGING MOLECULAR CHARACTERIZATION OF LUNG CANCER TO THE BRONCHOSCOPIST
B.T. Hehn, MD, Philadelphia, PA

MP605 PREPARING A K AWARD: AN EXPERT ROUNDTABLE SESSION
C.W. Seymour, MD, MSc, Pittsburgh, PA
J.D. Christie, MD, MS, Philadelphia, PA
C.S. Calfee, MD, MAS, San Francisco, CA
J.R. Curtis, MD, MPH, Seattle, WA

MP606 CURRENT STATUS OF ASBESTOS RELATED DISEASES
A.L. Frank, MD, PhD, Philadelphia, PA

MP607 TUBERCULOSIS AND THE TNF-ALPHA INHIBITORS
L.N. Friedman, MD, Milford, CT

MP608 OXYGEN IN TERMINAL ILLNESS: WHO NEEDS IT?
M.L. Campbell, PhD, RN, Detroit, MI

MP609 MANAGING SLEEP DISORDERED BREATHING IN CHILDREN WITH DOWN SYNDROME
R. Arens, MD, Bronx, NY

MP610 PULMONARY THROMBOEMBOLISM: USING THE GUIDELINES
R.N. Channick, MD, Boston, MA

MP611 BIOMARKERS FOR IPF FROM BENCH TO BEDSIDE
A. Prasse, MD, Freiburg, Germany
M.R.J. Kolb, MD, PhD, Hamilton, Canada

MP612 STEROID RESISTANCE IN SEVERE ASTHMA: ROLE OF AIRWAY STRUCTURAL CELLS
O. Tliba, DVM, PhD, Philadelphia, PA

MP613 CASE-BASED APPROACH TO CIRCADIAN RHYTHM DISORDERS FOR THE PULMONOLOGIST
J.A. Rowley, MD, Detroit, MI

THEMATIC SEMINAR SERIES

TSS2 MANAGING DIFFICULT PATIENTS WITH CHRONIC COUGH: A PRO-CON DEBATE

R **Registration Fee: $140.00 for the full series (includes a box lunch.)**
Attendance is limited. Pre-registration is required.

This is part 3 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The program for the full series is included with the Monday, May 20, 7:00 am program.

Tuesday, May 21, 12:00 pm-1:00 pm

Therapy For Upper Airway Cough Reduces Cough Severity: PRO
S.L. Spector, MD, Los Angeles, CA

Therapy For Upper Airway Cough Reduces Cough Severity: CON
A. Morice, BA, Cottingham, UK

1:00 pm-2:00 pm

VISIT THE EXHIBIT HALL

Take this opportunity between sessions to visit the Exhibit Hall to gain practical knowledge to advance care and research. Exhibitors will be on hand to provide information on pharmaceutical products, medical equipment, publications and research services.

CLINICAL

CLINICAL CORE CURRICULUM

CC4 SLEEP MEDICINE CLINICAL CORE CURRICULUM

Clinical Core Curriculum Working Group

2:00 pm-4:30 pm

Target Audience
Internists and subspecialists in pulmonary critical care, and sleep medicine who work in a clinical setting and are currently engaged in maintenance of certification.

Objectives
At the conclusion of this session, the participant will be able to:

- remain current with the growth of information relevant to their medical practice in pulmonary, critical care, and sleep medicine;
- evaluate their knowledge and skills in key areas of pulmonary, critical care, and sleep medicine, as well as receive feedback on their understanding as a result of a pre-test/post-test comparison;
- support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements.

The ATS Clinical Core Curriculum symposia focus on a 3-year content cycle of key medical content in the areas of pulmonary, critical care and sleep medicine. The topics are also aligned with corresponding Part II maintenance of certification modules. This symposium is intended to assist clinicians with staying current with the growth of information relevant to their medical practice, as well as provide an opportunity to evaluate individual knowledge and skills.

Chairing: G.W. Pien MD, MS, Philadelphia, PA

Hypersomnolence Unrelated To SRBD

2:00 **Narcolepsy With And Without Cataplexy, Other Hypersomnias And MSLT**
M.J. Thorpy, MD, Bronx, NY

Parasomnias

3:00 **REM Behavior Disorder And Other Parasomnias**
C.H. Schenk, MD, Minneapolis, MN

Sleep In Other Disorders

3:30 **Medical Disorders**
T.L. Lee-Chiong, MD, Highland Ranch, CO

4:00 **Neurological/Psychological Disorders**
A.V. Shelgikar, MD, Ann Arbor, MI

CLINICAL

YEAR IN REVIEW

C81 PEDIATRIC YEAR IN REVIEW

Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Nursing

2:00 pm-4:30 pm

Target Audience
Pediatric pulmonologists, pediatric intensivists, neonatologists, nurses, respiratory therapists, other providers of healthcare to children with lung disease, clinical and translational researchers

Objectives
At the conclusion of this session, the participant will be able to:

- understand and apply data from recent articles in core pediatric cardiopulmonary topic areas;
- apply recent advances in core pediatric cardiopulmonary topic areas to the care of the patient;
- describe new treatment strategies or scientific breakthroughs that will impact the management of children with cardiopulmonary disease and lead to further investigation.

Important advances in the diagnosis and treatment of respiratory disorders in children occur every year. The magnitude of new discoveries makes it difficult for the clinician and researcher to stay current. However, the clinician and healthcare providers who deal with children must be informed of the most recent advances and evidence-based care practices. Pediatric Year in Review will present a scholarly discussion of several of the most important and influential papers in several clinical topic areas published within the past 2 years. Experts in their respective fields will discuss the selected papers and allow time for discussion.

Chairing: C.M. Kercsmar, MD, MS, Cincinnati, OH
J. Chmiel, MD, MPH, Cleveland, OH

2:00 **Treatment Of Cystic Fibrosis In The 21st Century**
F.A. Ratjen, MD, Toronto, Canada

2:30 **Update On Childhood Interstitial Lung Disease**
L.R. Young, MD, Nashville, TN

3:00 **Asthma In Infants And Young Children**
H. Bisgaard, MD, DMSci, Copenhagen, Denmark

3:30 **Respiratory Disease In The Critically Ill Child**
I.M. Cheifetz, ABP, MD, Durham, NC

4:00 **Update On Pulmonary Vascular Disease**
S.H. Abman, MD, Aurora, CO

There will be a 5-minute discussion after each talk.

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C82 LUNG CANCER SCREENING: MOVING FORWARD, AND LOOKING FORWARD

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology

2:00 pm-4:30 pm

Target Audience
Pulmonologists, fellows, and allied health professionals interested in lung cancer screening

Objectives
At the conclusion of this session, the participant will be able to:

- describe the currently accepted indications for screening;
- identify the factors that can improve cost effectiveness of screening;
- learn new biomarkers that may have an impact on screening algorithms.

This session will briefly summarize NLST findings and the structure of a screening program. A second talk will discuss cost effectiveness and how identifying risk will improve cost effectiveness, but the focus will then shift to how we refine screening by identifying those patients (and nodules) that represent the highest risk with biomarkers and clinical models.

Chairing: D.A. Arenberg, MD, Ann Arbor, MI

2:00 Practical Application Of What We've Learned About Screening
D.A. Arenberg, MD, Ann Arbor, MI

2:15 Cost Effectiveness Of Lung Cancer
G. Silvestri, MD, Charleston, SC

2:35 Modeling Lung Cancer Risk From PLCO Data
Speaker To Be Announced

2:55 Exhaled Breath Analysis To Detect Lung Cancer
P.J. Mazzone, MD, Cleveland, OH

3:15 Proteomic Search For Biomarkers Of Lung Cancer
P.P. Massion, MD, Nashville, TN

3:35 Airway Epithelial Transcriptional Profiling To Detect Lung Cancer Risk
A. Spira, MD, MSc, Boston, MA

3:55 Understanding And Explaining The Risks And Benefits Of Screening
P.B. Bach, MD, New York, NY

4:15 General Discussion

BASIC • CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C83 DISCUSSION ON THE EDGE: REPORTS OF RECENT PULMONARY RESEARCH PUBLISHED IN THE *NEW ENGLAND JOURNAL OF MEDICINE* AND THE *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*

2:00 pm-4:30 pm

This session will provide a forum for attendees to interact with the authors and editors about papers published in the *New England Journal of Medicine* and the *Journal of the American Medical Association*. Papers presented will be recent publications, selected by the editors, to be of significant importance to the field of pulmonary medicine. Attendees will have the opportunity to hear presentations directly from the author and address questions to both the authors and editors. The discussion is intended to provide a unique insight into these papers, the selection process, and how the research applies directly to the field of pulmonary medicine.

CLINICAL

CRITICAL CARE TRACK

C84 PARADIGM SHIFT: PREVENTION AND EARLY TREATMENT OF ACUTE LUNG INJURY

Assemblies on Critical Care; Clinical Problems

2:00 pm-4:30 pm

Target Audience
Clinicians interested in an update on the cutting edge of efforts to prevent and improve outcomes from acute lung injury; clinical researchers interested in an update on ongoing clinical trials and design of future trials targeting prevention or early treatment of ALI; clinicians or staff with administrative responsibilities interested in utilizing informatics and designing systems to improve patient centered care

Objectives
At the conclusion of this session, the participant will be able to:

- identify patients at risk for progression to ALI and to learn strategies for optimization of modifiable risks to reduce the incidence of ALI;
- utilize informatics and system-based approaches to employ evidenced-based practice in a patient centered manner;
- gain a better understanding of ongoing and future clinical trials targeting the prevention and early treatment of acute lung injury.

Evidence-based treatment options for acute lung injury (ALI) remain limited. Greater clinical benefit may derive from prevention and earlier treatment of ALI. This paradigm shift is reflected in the restructuring of the landmark ARDS Network to the Network for Prevention and Early Treatment of Acute Lung Injury (PETAL Network). This session will discuss strategies for early identification of high risk patients and utilization of

informatics and system-based approaches to reliably deliver evidence-based, patient centered practices to prevent ALI. Lastly, the session will introduce the PETAL Network and discuss current and future clinical trials for the prevention and early treatment of ALI.

Chairing: J.E. Levitt, MD, MS, Stanford, CA
O. Gajic, MD, Rochester, MN
B.T. Thompson, MD, Boston, MA

2:00 **Strategies For Prevention And Early Identification And Treatment Of Acute Lung Injury**
J.E. Levitt, MD, MS, Stanford, CA

2:20 **Predicting And Preventing Postoperative Lung Injury**
D.J. Kor, MD, Rochester, MN

2:40 **Biomarkers For Identification And Risk-Stratification Of Patients For Clinical Trials Targeting Prevention And Early Treatment Of Acute Lung Injury**
C.S. Calfee, MD, MAS, San Francisco, CA

3:00 **Implications Of Variation In Critical Care Delivery In The Development Of ALI And Other Critical Illness**
M.N. Gong, MD, MS, Bronx, NY

3:20 **The Future Is Now: Informatics Solutions For Error Prevention, Syndrome Surveillance, Modeling And Research In Critical Care**
B. Pickering, MD, MSc, Rochester, MN

3:40 **How To Operationalize A Clinical Trial In Lung Injury Prevention: Updates From The Lung Injury Prevention Study With Aspirin (LIPS-A) And Budesonide And Beta Agonists (LIPS-B)**
E. Festic, MD, Jacksonville, FL
D.S. Talmor, MD, Boston, MA

4:10 **Paradigm Shift: Transitioning From The ARDS Network To The Network For Prevention And Early Treatment Of Acute Lung Injury (PETAL Network)**
B.T. Thompson, MD, Boston, MA

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENCE CORE

C85 FORCING THE ISSUE: THE LUNG RESPONSE TO INJURY

Assemblies on Allergy, Immunology and Inflammation; Critical Care; Pulmonary Circulation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Scientists, physician-scientists, fellows, providers of lung health interested in lung injury and repair; clinicians who treat patients with the consequences of lung injury and dysfunctional repair including pulmonary edema, pulmonary fibrosis and asthma

Objectives
At the conclusion of this session, the participant will be able to:

- understand mechanisms of gene expression and cell phenotype responses to matrix biophysical properties;
- learn and understand how the cell responses to matrix induce lung pathobiology and disease;
- better understand how the matrix controls activation of TGF-beta.

At the end of the symposium attendees will have a broad based understanding of the principles of biophysical and biologically-based lung cell injury that lead to lung pathologies including asthma, pulmonary edema, acute lung injury, and pulmonary fibrosis. Novel translational work that attempts to abrogate disease through blocking mechanosensitive channels will also be presented.

Chairing: M.A. Olman, MD, MA, Cleveland, OH
Y. Zhou, MD, PhD, Brimingham, AL
C. Feghali-Bostwick, PhD, Pittsburgh, PA

2:00 **Introduction To Session**
M.A. Olman, MD, MA, Cleveland, OH

2:05 **Biophysical Mechanisms Of Airway Hyperresponsiveness**
J.J. Fredberg, PhD, Boston, MA

2:35 **Nuclear Responses To Tissue Compliance And Scar Rigidity**
D. Discher, PhD, Philadelphia, PA

3:05 **Dysfunction Of Epithelial Cells In Lung Injury And Repair**
T.S. Blackwell, MD, Nashville, TN

3:35 **Novel Molecular Mechanisms And Interventions In High Vascular Pressure Pulmonary Edema**
M.I. Townsley, PhD, Mobile, AL

4:00 **Cytoskeletal Protective Responses To Acute Lung Injury**
S.M. Dudek, MD, Chicago, IL

CLINICAL

SCIENTIFIC SYMPOSIUM

C86 AT THE EDGE OF THE EVIDENCE: WHAT SHOULD I DO NOW?

Assembly on Critical Care

2:00 pm-4:30 pm

Target Audience
Medical students, residents, fellows in critical care, faculty in critical care, nurses and respiratory therapists

Objectives
At the conclusion of this session, the participant will be able to:

- manage patients with refractory ARDS and status asthmaticus;
- target empiric antifungals to patients with persistent fevers in the ICU;
- teach a rational approach to facing evidentiary uncertainty to critical care doctors in training.

Two key goals of the ATS are to advance our understanding of the scientific underpinnings of clinical practice and to improve our professional approach to clinical care. This session builds on the very successful format of Session A4 “What do you do now?” from ATS 2012, but has entirely new topics. In this session, speakers will briefly review the best evidence behind treating a common problem in the ICU and then frankly discuss their salvage approach for treating patients who are failing despite high quality evidence-based practice.

Chairing: T.J. Iwashyna, MD, PhD, Ann Arbor, MI
H. Wunsch, MD, MSc, New York, NY
K.A. Hibbert, MD, Boston, MA

2:00 **Status Asthmaticus**
M.N. Gong, MD, MS, Bronx, NY

2:20 **Persistent Fevers: Stop The Antibiotics Or Add Empiric Antifungals**
J.E. Chastre, MD, Paris, France

2:40 **Persistent Seizures**
S. Mayer, MD, New York, NY

3:00 **Formulating And Communicating A Prognosis**
P.E. Spronk, MD, PhD, Apeldoorn, Netherlands

3:20 **How Long To Continue ACLS**
C.R. Cooke, MD, MSc, Ann Arbor, MI

3:40 **Large Spontaneous Tidal Volumes In ARDS**
B.T. Thompson, MD, Boston, MA

4:00 **Teaching Uncertainty To Trainees**
S.S. Carson, MD, Chapel Hill, NC

There will be a 5-minute discussion after each talk.

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C87 SEX, STEROIDS, AND LUNG: GOOD, BAD, UGLY?

Assemblies on Respiratory Structure and Function; Allergy, Immunology and Inflammation; Environmental and Occupational Health; Pediatrics; Pulmonary Circulation; Respiratory Cell and Molecular Biology

2:00 pm-4:30 pm

Target Audience
Basic and translational researchers interested in sex differences in lung health and disease; researchers interested in sex steroid signaling and function in the pulmonary system; clinicians (especially internists, pulmonologists/intensivists, anesthesiologists and endocrinologists) interested in personalized medicine for assessment and treatment of pulmonary diseases

Objectives
At the conclusion of this session, the participant will be able to:

- recognize and understand the physiological bases for sex differences in lung structure and function;
- understand and recognize the importance of sex steroid signaling in the lung and their importance in lung diseases such as asthma and COPD;
- learn to apply new knowledge in development of a sex/gender specific, personalized medicine approach to lung diseases.

We will highlight mechanisms by which sex steroids influence lung structure/function across the lifespan, and in lung diseases. Bench research presented within a clinical framework allows researchers and clinicians to appreciate the importance of this topic. Talks will focus on sex steroid effects in fetal lung (Tremblay), sex differences in premature infant and pre-pubertal lung diseases (Martin), genetics and physiology of sex differences in adult asthma and COPD (van den Berge), and cellular mechanisms modulated by sex steroids (Prakash, Catravas). The overall goal is to stimulate ideas for exploring sex steroid signaling as biomarkers and novel therapeutic avenues.

Chairing: Y.S. Prakash, MD, PhD, Rochester, MN
E. Townsend, PhD, New York, NY

2:00 **Lung Diseases: Why We Should Be Thinking About Sex**
E. Townsend, PhD, New York, NY

2:05 **Consequences Of Sex Steroids In Lung Development And Maturation**
Y. Tremblay, PhD, Quebec, Canada

2:35 **Insights Into Sex, Neonatal Lung And Pediatric Airway Disease**
R.J. Martin, MD, Cleveland, OH

3:05 **The How And Why Of Sex Differences In Asthma And COPD**
M. van den Berge, MD, PhD, Groningen, Netherlands

3:35 **Sex Steroid Signaling In The Airway**
Y.S. Prakash, MD, PhD, Rochester, MN

4:00 **Estrogen Signaling As A Novel Therapeutic Target For Asthma And COPD**
J.D. Catravas, PhD, Augusta, GA

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C88 ARTERIAL STIFFENING IN PULMONARY HYPERTENSION AND OTHER LUNG DISEASES: CAUSES AND CONSEQUENCES

Assemblies on Pulmonary Circulation; Pulmonary Rehabilitation; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Healthcare providers, physiologists and investigators with interests in arterial stiffening, the pulmonary circulation and the utility of exercise/stress testing for evaluation of the pulmonary circulation; investigators focused on cellular and molecular mechanisms on arterial stiffening

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings about arterial consequences of lung diseases;
- understand the concept of arterial stiffness and be able to apply in vivo and/or in vitro techniques for measuring arterial stiffness;
- understand the clinical importance of pulse wave reflections in the pulmonary and systemic circulations, how to measure them, and the cellular and molecular mechanisms underlying them.

Arterial stiffening is a consequence of many lung diseases including pulmonary hypertension (PH). Structurally, it is characterized by wall thickening and accumulation of extracellular matrix components; functionally, it can be measured as impaired dilation in response to an increase in pressure. Important consequences of arterial stiffening are altered blood flow dynamics, such as increased pulse wave reflections, and impaired ventricular ejection. Proximal arterial stiffening is an excellent predictor of mortality in PH. This session will review the current state of knowledge of the causes and consequences of arterial stiffening in PH and other lung diseases.

Chairing: N.C. Chesler, PhD, Madison, WI
K. Hunter, PhD, Aurora, CO

2:00 **Pulse Waves In The Circulation: The Clinical Importance Of Arterial Stiffening**
G.F. Mitchell, MD, Norwood, MA

2:25 **Cellular And Molecular Mechanisms Of Pulmonary Arterial Stiffening**
K.R. Stenmark, MD, Aurora, CO

2:50 **Arterial Stiffness At The Cellular Scale**
D.J. Tschumperlin, PhD, Boston, MA
L.E. Fredenburgh, MD, Boston, MA

3:15 **In Vitro And In Vivo Techniques For Measuring Arterial Stiffness**
N.C. Chesler, PhD, Madison, WI

3:40 **Impact Of Pulmonary Arterial Stiffening On The Right Ventricle**
A. Vonk-Noordegraaf, MD, PhD, Amsterdam, Netherlands

4:05 **Effects Of Lung Disease On Systemic Arterial Stiffness**
W. MacNee, MD, PhD, Edinburgh, United Kingdom

BEHAVIORAL • BASIC
CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C89 THE RESEARCH FUNDING CRISIS: FINDING FUNDING DURING TOUGH TIMES

ATS Public Advisory Roundtable (PAR)

2:00 pm-4:30 pm

Target Audience
Clinical and basic investigators, nurse investigators, and fellows considering research careers will benefit from this course

Objectives
At the conclusion of this session, the participant will be able to:

- assess various types of funding and funding sources;
- apply and achieve research funding with more and better options;
- provide guidance for attendees.

Researchers are more challenged today to obtain and hold onto funding than at any other time in recent memory; due to past governmental spending and new focused attention on deficit reduction and lingering effects of financial crisis. Ramifications include dropout of accomplished investigators from the field and dissuasion of younger investigators from entering it; negative long-term effect on the state of research in the U.S. will impede progress in the discovery of new treatments and cures. This symposium aims to examine the funding crisis from key perspectives and offer strategies for investigators strapped for funds to seek less traditional sources.

Chairing: N.S. Hill, MD, Boston, MA
T.R. Barnes, Memphis, TN

2:00 **PAR Awards**
T.R. Barnes, Memphis, TN

2:10 **Career Support From The NIH**
J.P. Kiley, PhD, Bethesda, MD

2:30 **Other Departments At NHLBI And Non-NIH Governmental Sources Of Research Funds**
M.R. Shah, MD, Bethesda, MD

2:50 **Public Interest Organizations As Sources Of Research Funding**
T.R. Barnes, Memphis, TN

3:10 **Funding Opportunities Through Philanthropic Foundations**
Speaker To Be Announced

3:30 **Industry Support Of Academic Research**
W. Lange, BPharm, MS, Indianapolis, IN

3:50 **The Funding Crisis: Why And What The ATS Is Doing About It?**
N.S. Hill, MD, Boston, MA

4:10 **Panel Discussion**
N.S. Hill, MD, Boston, MA

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C90 OBESITY, ADIPOKINES, AND LUNG DISEASES

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience

Pulmonary and critical care physicians and fellows, members in training, nurses, and others who have an interest in the role of the obesity epidemic in the development and modulation of lung diseases

Objectives

At the conclusion of this session, the participant will be able to:

- understand the effects of obesity on development of lung disease;
- appreciate the role of mediators of obesity on the development of lung inflammation and infection.

The session will provide up to date information on the role of obesity and adipokines on the development and modulation of lung diseases. Topics will cover the scientific basis for obesity-induced lung diseases as well as an understanding of how mediators of obesity influence human physiology. Both scientific and clinical ramifications of obesity will be discussed.

Chairing: G.M. Mutlu, MD, Chicago, IL
G.S. Skloot, MD, New York, NY
A. El-Solh, MD, MPH, Buffalo, NY

2:00 **Diet And The Lung In Obesity**
L.G. Wood, PhD, Newcastle, Australia

2:25 **Interactions Between COPD And Obesity**
F. Franssen, MD, PhD, Horn, Netherlands

2:50 **Obesity And Asthma**
A.E. Dixon, MD, Burlington, VT

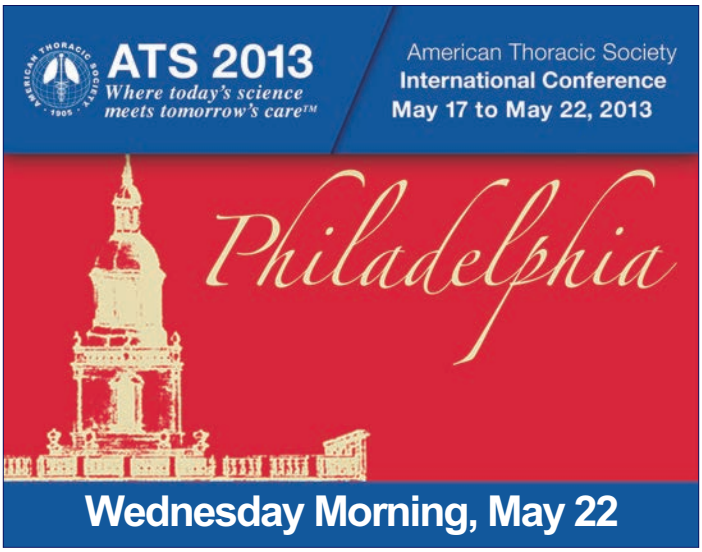
3:15 **Adipokines And Obstructive Airway Disease**
A. Sood, MD, MPH, Albuquerque, NM

3:40 **Obesity, Diabetes And Acute Lung Injury**
G.M. Mutlu, MD, Chicago, IL

4:05 **Pulmonary Infections In Obesity**
P. Mancuso, PhD, Ann Arbor, MI

2:00 pm-4:30 pm

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.



SUNRISE SEMINARS

Registration Fee: $65.00 (includes continental breakfast.)
Attendance is limited. Pre-registration is required.

7:00 am-8:00 am

SS301 TEMPERATURE MODULATION IN THE ICU: CAN IT PREVENT MORE INJURY?
N.G. Shah, MD, Baltimore, MD

SS302 MAKING CENTS OF THE COST EFFECTIVENESS LITERATURE
J.K. Gerald, MD, PhD, Tucson, AZ

SS303 A CASE-BASED APPROACH TO RADIOGRAPHIC PATTERNS IN ILD
D.E. Antin-Ozerkis, MD, New Haven, CT

SS304 MANAGING THE PATIENT WITH CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION
K.M. Wille, MD, MSPH, Birmingham, AL

SS305 BRONCHIAL THERMOPLASTY FOR SEVERE ASTHMA
A. Sam, MD, Tucson, AZ

SS306 THE UNEXPLAINED CHRONIC COUGH EXPLAINED
K. Saukkonen, MD, Boston, MA

SS307 HOW TO ESTABLISH A MEDICAL PLEUROSCOPY PROGRAM
F. Maldonado, MD, Rochester, MN

SS308 THE TIME IS NOW: BRONCHOSCOPIC LUNG VOLUME REDUCTION
L.B. Yarmus, DO, Baltimore, MD

SS309 LUNG CANCER SCREENING
D. Upadhyay, MD, Stanford, CA

SS310 IMPLEMENTATION OF A NIGHTTIME INTENSIVIST MODEL: PRACTICAL TIPS FROM ONE INSTITUTION'S EXPERIENCE
M.P. Kerlin, MD, Philadelphia, PA

SS311 GEOGRAPHIC AND SOCIALLY PATTERNED DETERMINANTS OF OBSTRUCTIVE LUNG DISEASE
G.S. Lovasi, MD, New York, NY

SS312 TB IMMUNODIAGNOSTICS
P. Escalante, MD, MSc, Rochester, MN

SS313 AGE AND RISK OF ACUTE RESPIRATORY DISTRESS SYNDROME: KIDS AREN'T LITTLE ADULTS
L.S. Smith, MD, Seattle, WA

SS314 MANAGING THE RIGHT VENTRICLE IN CRITICAL ILLNESS
C.E. Ventetuolo, MD, MS, Providence, RI

SS315 MICRORNAS AND LUNG DISEASE
N. Ambalavanan, MD, Birmingham, AL
R. Keijzer, MD, PhD, MSc, Winnipeg, Canada

SS316 PATHOPHYSIOLOGY AND MONITORING OF RESPIRATORY MUSCLE DYSFUNCTION IN THE ICU
H.W.H. van Hees, PhD, Nijmegen, Netherlands
J. Doorduin, MSc, Nijmegen, Netherlands

SS317 SLEEP DISORDERED BREATHING AND DIABETES: WHAT'S THE REAL EVIDENCE?
R.N. Aurora, MD, Baltimore, MD

CLINICAL

CLINICAL CORE CURRICULUM

CC5 CRITICAL CARE CLINICAL CORE CURRICULUM

Clinical Core Curriculum Working Group

7:00 am-8:30 am

Target Audience
Internists and subspecialists in pulmonary critical care, and sleep medicine who work in a clinical setting and are currently engaged in maintenance of certification

Objectives
At the conclusion of this session, the participant will be able to:

- remain current with the growth of information relevant to their medical practice in pulmonary, critical care, and sleep medicine;
- evaluate their knowledge and skills in key areas of pulmonary, critical care, and sleep medicine, as well as receive feedback on their understanding as a result of a pre-test/post-test comparison;
- support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements.

The ATS Clinical Core Curriculum symposia focus on a 3-year content cycle of key medical content in the areas of pulmonary, critical care and sleep medicine. The topics are also aligned with corresponding Part II maintenance of certification modules. This symposium is intended to assist clinicians with staying current with the growth of information relevant to their medical practice, as well as provide an opportunity to evaluate individual knowledge and skills.

Chairing: B.K. Gehlbach, MD, Iowa City, IA

Renal/Endocrine/Metabolism

7:00 **Acute Kidney Injury**
J. Koyner, MD, Chicago, IL

7:30 **Endocrine Emergencies**
R.C. Hyzy, MD, Ann Arbor, MI

8:00 **Nutrition**
B.K. Gehlbach, MD, Iowa City, IA

CLINICAL

YEAR IN REVIEW

D1 CLINICAL YEAR IN REVIEW 4

8:45 am-10:45 am

Target Audience
Providers of lung health, those providing for both common and rare diseases and those with a single disease focus who wish to learn about the latest advances in disparate areas of pulmonary and critical care medicine

Objectives
At the conclusion of this session, the participant will be able to:

- identify new findings in pulmonary and critical care that are directly relevant to patient care;
- understand how new findings in pulmonary and critical care medicine augment current guidelines and modify approaches to common and rare pulmonary diseases;
- identify and consider how quality improvement strategies can be applied in diverse clinical environments in pulmonary and critical care medicine.

The 2013 Clinical Year in Review will review advances over the last year in critical areas of pulmonary and critical care medicine including prevalent pulmonary and critical illnesses. Novel topics proposed this year include health disparities in pulmonary and critical care medicine and systems-based approaches to the organization and delivery of critical care services.

Chairing: E.R. Sutherland, MD, MPH, Denver, CO
H.R. Collard, MD, San Francisco, CA
R.D. Stapleton, MD, MSc, Burlington, VT

8:45 **Sleep Medicine**
B.A. Phillips, MD, MPH, Lexington, KY

9:15 **TB/NTM**
D.E. Griffith, MD, Tyler, TX

9:45 **COPD**
M.T. Dransfield, MD, Birmingham, AL

10:15 **Pulmonary Vascular Disease**
S.M. Kawut, MD, MS, Philadelphia, PA

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D2 ADDING INSULT TO INJURY: COMPLICATIONS OF IDIOPATHIC PULMONARY FIBROSIS

Assembly on Clinical Problems

8:15 am-10:45 am

Target Audience
Pulmonologists, postgraduate fellows and trainees, advanced practice nurses

Objectives
At the conclusion of this session, the participant will be able to:

- better recognize and diagnose common complications of IPF;
- learn and better treat patients with common complications of IPF;
- better counsel patients on the importance of common complications of IPF.

IPF has a well known grim prognosis. We know from recent studies that most patients with IPF with die from the disease or its complications. Salient questions include: What most common complication therefore does the practitioner need to be aware of? What are their common presentations? How should they be diagnosed and treated? What effect do these complications have on the patient's prognosis? This session will focus on some of the common complications of IPF, using data supporting their frequency, etiology, diagnosis, treatment and prognosis.

Chairing: M. Kreider, MD, Philadelphia, PA
G. Tino, MD, Philadelphia, PA
K.K. Brown, MD, Denver, CO

8:15 **Complications Of IPF: Beyond The Fibrosis**
G. Tino, MD, Philadelphia, PA

8:35 **The Dilemma Of Pulmonary Hypertension In IPF**
M.J.C. Humbert, MD, PhD, Clamart, France

9:00 **Coronary Artery Disease In IPF**
S.D. Nathan, MD, Falls Church, VA

9:20 **Beware Of The Nodule: Lung Cancer In IPF**
M. Kreider, MD, Philadelphia, PA

9:45 **When Clot And Scar Meet: Venous Thromboembolic Disease In IPF**
A.L. Olson, MD, Denver, CO

10:05 **Acute Exacerbations In IPF**
H.R. Collard, MD, San Francisco, CA

10:30 **General Discussion**

BASIC • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D3 ALPHA-1 ANTITRYPSIN DEFICIENCY: THE NEXT 50 YEARS

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Providers of lung health; those serving individuals with COPD, researchers with interest in emphysema pathogenesis and epidemiologists

Objectives
At the conclusion of this session, the participant will be able to:

- improve targeted testing for Alpha-1 Antitrypsin Deficiency;
- improve the messages given to PiMZ carriers of AATD;
- learn new findings about emphysema.

Alpha-1 Antitrypsin Deficiency (AATD) was first described by Laurell and Erickson in 1963. This year is the 50th anniversary of the original publication and will be celebrated with an update of the 2003 ATS guidelines. The symposium will be positioned to review the past while looking to the future for single gene disorders that cause respiratory disease, particularly COPD. The symposium is designed as an interdisciplinary and transatlantic program ending with a vision of AATD 50 years into the future. A welcome

will be provided by Mr. John Walsh, CEO of the Alpha-1 Foundation and COPD Foundation.

Chairing: C.B. Strange, MD, Charleston, SC
G.M. Turino, MD, New York, NY

8:15 **Introduction: A Patient's Perspective**
J.W. Walsh, BS, Miami, FL

8:25 **Alpha-1 Antitrypsin Deficiency: The First 50 Years And 50 Years Into The Future**
R.A. Sandhaus, MD, PhD, Denver, CO

8:45 **Emphysema Pathogenesis: Lessons For The Future Learned From AATD**
S.I. Rennard, MD, Omaha, NE

9:05 **How Much Is The PIMZ Carrier At Risk?**
N.G. McElvaney, MB, MBBS, Dublin, Ireland

9:20 **AATD And The Microbiome**
C.B. Strange, MD, Charleston, SC

9:35 **Detection Of Alpha-1 Antitrypsin Deficiency**
M.A. Campos, MD, Miami, FL

9:50 **Treatment Of AATD**
K.R. Chapman, MD, MSc, Toronto, Canada

10:15 **Guidelines For AATD**
J.K. Stoller, MD, MS, Cleveland, OH

10:35 **Panel Discussion**

BEHAVIORAL • CLINICAL

CRITICAL CARE TRACK

D4 PSYCHOLOGICAL DISTRESS IN ICU HEALTHCARE PROVIDERS AND THE FAMILIES OF OUR PATIENTS

Assemblies on Critical Care; Behavioral Science and Health Services Research; Clinical Problems; Nursing

8:15 am-10:45 am

Target Audience
All healthcare professionals who care for critically ill patients and interact with their families

Objectives
At the conclusion of this session, the participant will be able to:

- identify risk factors for the development of psychological disorders in healthcare professionals who work in the ICU;
- improve the quality of life and decrease the burden of psychological distress in the family members of critically ill patients;
- improve the ICU structure and function and diminish the stress in healthcare professionals.

The ICU is a stressful environment due to high patient mortality and morbidity, daily confrontations with ethical dilemmas, and a tension-charged atmosphere. Healthcare professionals are repeatedly exposed to these ICU work related stresses. In addition, changes in residency work hours, weekend call schedules, and 24-hour intensivist coverage have shifted the workload and increased the amount of stress onto other healthcare professionals. Having a family member hospitalized in the ICU also causes overwhelming stress and distress. In this symposium, risk factors and potential treatments for psychological distress in ICU healthcare professionals and the family members of these patients will be discussed.

Chairing: M. Moss, MD, Aurora, CO
M.S. Herridge, MD, MPH, Toronto, Canada

8:15 **Introduction**
M. Moss, MD, Aurora, CO

8:25 **Perceptions Of Appropriateness Of Care And Moral Distress In The ICU**
J. Nelson, JD, MD, New York, NY

8:50 **Meeting The Needs Of The Family Members Of Critically Ill Patients And Survivors**
M.S. Herridge, MD, MPH, Toronto, Canada

9:20 **Uncovering The Epidemic Of Psychological Disorders In ICU Nurses**
M. Moss, MD, Aurora, CO

9:50 **The Effect Of 24 Hour ICU Coverage And Weekend Call On Physician Burnout**
J.M. Kahn, MD, MSc, Pittsburgh, PA

10:20 **How To Improve The Work Environment And Diminish Stress**
J.R. Curtis, MD, MPH, Seattle, WA

CLINICAL

SCIENTIFIC SYMPOSIUM

D5 RATIONALE AND MODELS FOR MULTIDISCIPLINARY CARE OF CHILDREN WITH COMPLEX CHRONIC DISORDERS

Assemblies on Pediatrics; Nursing

8:15 am-10:45 am

Target Audience
Pediatric pulmonologists, gastroenterologists, surgeons, fellows, nurses, respiratory therapists, and healthcare practitioners providing care coordination to children with chronic multisystem disease

Objectives
At the conclusion of this session, the participant will be able to:

- apply successful strategies to develop multidisciplinary pediatric programs. Success could be measured in terms of new programs developed;
- measure relevant outcomes to pediatric populations with complex chronic diseases;
- apply accepted standards of care for pediatric neuromuscular patients.

This symposium will aid pediatric pulmonologists and care coordinators to develop multidisciplinary programs for children with complex chronic conditions affecting lung health. An integrated team approach to coordinated evaluation and management of children with complex airway disease, chronic respiratory failure, neuromuscular disease and respiratory sequela of gastrointestinal and chest wall disorders will be presented. This will focus on the rationale and quality imperative for such programs, strategies to work within and across institutions for program development, and issues around access and sharing of information. Special attention will be paid to the successes and challenges in identification and measurement of outcomes.

Chairing: R.R. Deterding, MD, Aurora, CO
R.P. Boesch, DO, MS, Cincinnati, OH

8:15 A Patient's Perspective
Speaker To Be Announced

8:20 The Imperative For A Team Based Approach To Care Of Children With Complex Chronic Disease
R.R. Deterding, MD, Aurora, CO

8:40 In A Comprehensive Airway Program, What's A Pulmonologist Good For?
R.P. Boesch, DO, MS, Cincinnati, OH

9:05 Beyond Reflux: A Team Approach To Explicate The Esophageal Impact On Respiratory Disease
R.L. Rosen, MD, MPH, Boston, MA

9:30 One Construct Does Not Fit All: A Collaborative Medical And Surgical Approach To Early Onset Scoliosis And Chest Wall Dysfunction
G.J. Redding, MD, Seattle, WA

9:55 Value Of A Coordinated Care Approach To Develop Meaningful Outcomes In Children Needing Long Term Ventilation
T.G. Keens, MD, Los Angeles, CA

10:20 Preserving Longevity And Quality Of Life In Children With Neuromuscular Disorders
O.H. Mayer, MD, Philadelphia, PA

BASIC • CLINICAL

SCIENTIFIC SYMPOSIUM

D6 LINKS BETWEEN ENVIRONMENTAL AND OCCUPATIONAL PARTICLES IN NEOPLASIA

Assemblies on Environmental and Occupational Health; Allergy, Immunology and Inflammation; Thoracic Oncology

8:15 am-10:45 am

Target Audience
Professionals providing pulmonary related healthcare and public health officials, researchers, and thoracic oncologists.

Objectives
At the conclusion of this session, the participant will be able to:

- learn new information on what is currently known in environmental and occupational exposures and any links to neoplasia in the agents discussed;

- improve understanding of the mechanisms eliciting the effects observed in response to mixtures of pollutants and single compounds;
- understand the human epidemiologic evidence and mechanistic data that support efforts to reduce exposure to diesel exhaust and fine particles.

This symposium will first review recent epidemiological studies in miners, the trucking industry, and other studies that supported the June 2012 IARC review concluding that diesel engine exhaust is a human carcinogen. The epidemiologic evidence linking fine particulate air pollution to lung cancer will also be reviewed. In addition, the problems and approaches to reconstructing human exposures will be discussed. Mechanistic evidence that support these epidemiologic studies will then be presented, discussing in vivo models focusing on diesel exhaust, particles, and metal toxicology.

Chairing: A.K. Bauer, PhD, Aurora, CO
E. Garshick, MD, West Roxbury, MA

8:15 **Overview Of Symposium**
E. Garshick, MD, West Roxbury, MA

8:20 **Chronic Exposure To Fine Particles And Lung Cancer**
F. Laden, MS, ScD, Boston, MA

8:35 **Diesel Exhaust And Lung Cancer In Miners**
D.T. Silverman, ScD, Bethesda, MD

8:55 **Diesel Exhaust And Lung Cancer Risk In The U.S. Trucking And Railroad Industries**
E. Garshick, MD, West Roxbury, MA

9:15 **Approaches To Historical Diesel Exhaust Exposure Reconstruction**
R. Vermeulen, PhD, Utrecht, Netherlands

9:30 **Animal Exposure Studies To Emissions From Older And Newer Diesel Engines**
J.D. McDonald, PhD, Albuquerque, NM

9:50 **Nanoparticle Induced Inflammation And Neoplastic Effects Of The Respiratory System**
G. Oberdorster, DVM, PhD, Rochester, NY

10:10 **Metal Induced Lung Inflammation And Tumor Promotion**
A.K. Bauer, PhD, Aurora, CO

10:25 **Constituents Of Diesel Exhaust And Mechanisms Of Carcinogenicity**
T.M. Penning, PhD, Philadelphia, PA

There will be a 5-minute discussion after each talk.

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D7 GENOMIC INSIGHTS IN OBSTRUCTIVE AIRWAYS DISEASES

Assemblies on Allergy, Immunology and Inflammation; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Physician scientists and clinicians, nurses and other healthcare providers

Objectives
At the conclusion of this session, the participant will be able to:

- demonstrate that genetic and genomic targets predict asthma progression and severity differ from those that cause asthma susceptibility;
- discuss the transition of molecular and pathogenetic mechanisms to predictive bio-markers development in severe asthma;
- show the importance of asthma phenotypic heterogeneity and genomics in personalized therapeutics.

This symposium will present current and future genomic and molecular basis of severe asthma insights into the pathogenesis of asthma severity and heterogeneity. These “omic” approaches are the basis of predictive biomarkers and personalized therapeutics.

Chairing: E.R. Bleecker, MD, Winston-Salem, NC
P.G. Woodruff, MD, MPH, San Francisco, CA

8:15 **Role Of Common And Rare Variants In Asthma Susceptibility**
K.C. Barnes, PhD, Baltimore, MD

8:35 **Asthma Severity Genetics: Role Of Novel Loci In Disease And Progression**
D.A. Meyers, PhD, Winston-Salem, NC

8:55 **Role Of Common And Rare Variants In COPD**
E.K. Silverman, MD, PhD, Boston, MA

9:15 **Expression Profiling And Micro RNA In Asthma And COPD**
N. Kaminski, MD, Pittsburgh, PA

9:35 **Epigenetics And The Environment In Obstructive Airways Diseases**
D.A. Schwartz, MD, Denver, CO

9:55 **Genetic Basis Of Phenotype Heterogeneity And Personalized Medicine**
E.R. Bleecker, MD, Winston-Salem, NC

10:15 **Using Genomics To Personalize Therapeutics**
A. Spira, MD, Boston, MA

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D8 THE MULTIFUNCTIONAL BASAL CELL: MORE THAN A PROGENITOR

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections; Pediatrics; Respiratory Structure and Function; Sleep and Respiratory Neurobiology

8:15 am-10:45 am

Target Audience
Representatives of the clinical and research community including practitioners, principal investigators, fellows, residents, and graduate students

Objectives
At the conclusion of this session, the participant will be able to:

- enumerate known roles for the respiratory basal cell in airway homeostasis and disease;
- define the respiratory basal cell according to its similarities and differences with basal cells in other tissues;
- understand the current state of knowledge with respect to respiratory basal cell subsets and their roles as epithelial progenitor cells.

Basal cells are the airway middle men. They interact with epithelial, mesenchymal, and inflammatory cells, as well as the extracellular matrix. As such, basal cells are well positioned to modulate airway structure, respond to environmental challenge, and contribute to airway remodeling in human lung disease. This symposium will open and close with state of the art presentations that focus on roles for basal cells in chronic lung disease and lung cancer. These presentations will bracket pathological analysis of basal cells in humans and mechanistic presentations that focus on identification of basal cell subsets and the molecular signals that regulate basal cell behavior.

Chairing: S.D. Reynolds, PhD, Denver, CO
D.J. Weiss, MD, PhD, Burlington, VT
R. Shaykhiev, MD, PhD, New York, NY

8:15 **The Barrier And The Basal Cell: Intersections With The Innate Immune System**
D.E. Davies, PhD, Southampton, United Kingdom

8:35 **Myoepithelial Cells: A Specialized Submucosal Gland Basal Cell**
T.J. Lynch, MS, Iowa City, IA

8:55 **Basal Cell Behavior: A Modified Seed And Soil Paradigm**
S.D. Reynolds, PhD, Denver, CO

9:15 **Beta-Catenin Signaling And The Basal Cell: Is Idiopathic Pulmonary Fibrosis An Airway Disease?**
M. Chilosi, MD, PhD, Verona, Italy

9:35 **The Respiratory Basal Cell: Not Your Basic Basal Cell**
R.G. Crystal, MD, New York, NY

9:50 **p63-Expressing Upper And Distal Airway Stem Cells Are Distinct And Play Differential Roles In Regeneration And Cancer**
W. Xian, PhD, Farmington, CT

10:10 **Regulation Of Skin Progenitor Cells By Chromatin Modifiers**
S.E. Millar, PhD, Philadelphia, PA

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D9 THE SPECIAL CASE OF OLDER ADULTS IN PULMONARY MEDICINE AND CRITICAL CARE

Assembly on Nursing

8:15 am-10:45 am

Target Audience
This content is applicable to all practice settings, clinicians, researchers, administrators, and policymakers will all benefit from this session

Objectives
At the conclusion of this session, the participant will be able to:

- use new knowledge about the diagnosis and management of pulmonary disease in older adults to improve patient outcomes;
- describe novel research in mechanisms and interventions relevant to older adults with pulmonary problems and understand opportunities for related research;
- describe challenges unique to older adults with pulmonary disease.

The session content will provide the learner with concrete tools to address needs of older adults who have pulmonary problems or are critically ill. The proposed panel of multidisciplinary speakers will address key topics embracing clinical, behavioral, and basic science perspectives that are relevant to both clinicians and researchers. Content will be specifically focused on older adults with pulmonary disease, including during critical illness, in the following areas: COPD, delirium, infections, sleep medicine, pharmacology and end of life communication.

Chairing: J.A. Tate, PhD, RN, Pittsburgh, PA
L.A. Mackin, ANP, PhD, San Francisco, CA

8:15 A Patient's Perspective
Speaker To Be Announced

8:20 Cognitive Impairment: Scope Of The Problem, Assessment Strategies And Care Implications In Older Adults With Pulmonary Disease
L.A. Mackin, ANP, PhD, San Francisco, CA

8:40 Sepsis And Acute Respiratory Distress Syndrome In The Critically Ill Older Adult
J.M. Siner, MD, New Haven, CT

9:05 Delirium And The Hazards Of Medication Use In Older ICU Patients
M.A. Pisani, MD, New Haven, CT

9:30 COPD In Older Adults
G. Sharma, MD, MPH, Galveston, TX

9:55 Sleep In Older Adults
C.M. Garvey, MSN, Daly City, CA

10:20 Achieving Effective Communication At The End Of Life
R.D. Stapleton, MD, MSc, Burlington, VT

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D10 DIFFERENT TARGETS IN LUNG INJURY AND REPAIR: THE NEW GENERATION OF INVESTIGATORS

Assemblies on Respiratory Structure and Function; Respiratory Cell and Molecular Biology

8:15 am-10:45 am

Target Audience
Providers of care to patients with critical care illness with or at risk for acute lung injury or chronic fibrotic lung disease; researchers in the areas of lung injury and repair

Objectives
At the conclusion of this session, the participant will be able to:

- understand the importance of different cell populations and different targets in lung injury and repair;
- learn about current modeling strategies to evaluate mechanisms of lung injury and fibrosis;

- apply knowledge gained to design studies analyzing specific cell populations in lung injury and repair.

Response to lung injury and the subsequent repair and resolution is dependent on the coordinated effect of multiple cell populations. This session will review a range of different cell populations and pathways, each of which play an important role in the pathogenesis of lung injury and subsequent remodeling. These talks will identify key targets for consideration in the development of new therapies in acute lung injury and pulmonary fibrosis as seen through the research of some of the American Thoracic Society's most promising academic junior professionals.

Chairing: W.E. Lawson, MD, Nashville, TN
D.C. Files, MD, Winston-Salem, NC
A.M. Tager, MD, Boston, MA

8:15 Introduction
W.E. Lawson, MD, Nashville, TN

8:20 The Role Of Tissue Factor And The Coagulation Pathway In Acute Lung Injury
J.A. Bastarache, MD, Nashville, TN

8:40 Vascular Leak Promotes The Fibrotic Response To Lung Injury
B.S. Shea, MD, Boston, MA

9:00 Acute Lung Injury And Skeletal Muscle Wasting: A Target Outside The Lung
D.C. Files, MD, Winston-Salem, NC

9:20 Regulatory T Cells In The Fibroproliferative Response To Lung Injury
B.T. Garibaldi, MD, Baltimore, MD

9:40 Epigenetic Regulation Of Fibroblast Phenotypes In Pulmonary Fibrosis
S.K. Huang, MD, Ann Arbor, MI

10:00 Mesenchymal Stem Cell Microvesicles As A Therapeutic Strategy In Acute Lung Injury
J.W. Lee, MD, San Francisco, CA

10:20 The Role Of The β-Catenin Pathway In Lung Epithelial Repair
R.L. Zemans, MD, Denver, CO

10:40 General Discussion

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D11 NEW INSIGHTS INTO VENTILATOR ASSOCIATED COMPLICATIONS: WHAT IS HAPPENING WITH THE INFECTIONS?

Assemblies on Clinical Problems; Critical Care; Microbiology, Tuberculosis and Pulmonary Infections

8:15 am-10:45 am

Target Audience
Pulmonary and critical care physicians, fellows, respiratory therapists and nursing staff with ICU experience

Objectives
At the conclusion of this session, the participant will be able to:

- describe current pathogens responsible for these infections;
- describe the most up to date data treatment strategies for prevention of these complications;
- discuss treatment alternatives for these infections.

Ventilator associated complications, mainly infections are frequently acquired in the Intensive Care Unit (ICU). These conditions are associated with significant morbidity and mortality, despite advances in antibiotic therapy and organ function supportive therapy. Factors commonly related to this increased poor outcome include inappropriateness of the empiric antibiotic treatment, the existence of bacteraemia, the virulence of the microorganisms and the severity of the underlying critical illness. Recent development of aerosolized antibiotic therapy provides an alternative for both treatment and prevention.

Chairing: J. Fagon, MD, PhD, Paris, France
M.L. Metersky, MD, Farmington, CT

8:15 Update Information On Bacterial Resistance
M.L. Metersky, MD, Farmington, CT

8:40 Epidemiology Of Ventilator Associated Infections
G.W. Waterer, MBBS, PhD, Perth, Australia

9:05 **Prevention Measures**
A. Torres, MD, Barcelona, Spain

9:30 **How Do We Treat MRSA Infections In The ICU?**
M.S. Niederman, MD, Mineola, NY

9:55 **Controversial Results Of Recent Pneumonia Trials With Tigecycline And Doripenem**
R.G. Wunderink, MD, Chicago, IL

10:20 **Are Nebulized Antibiotics New Alternatives For Treatment And Or Prevention?**
A. Anzueto, MD, San Antonio, TX

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

D12 SMOKE: MANY SOURCES AND A GLOBAL THREAT TO LUNG HEALTH

International Health Committee; Assemblies on Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Environmental and Occupational Health; Tobacco Action and Control Committee; Environmental Health Policy Committee

8:15 am-10:45 am

Target Audience
Individuals interested in the role of smoke in the pathogenesis of lung diseases, whether tobacco or non-tobacco related

Objectives
At the conclusion of this session, the participant will be able to:

- identify the main risk factors for non communicable lung disease worldwide;
- understand and identify the contribution of smoke from tobacco and non-tobacco sources to lung disease;
- identify possible solutions for the problem of smoke related lung disease.

This session will review the role of smoke on the pathogenesis of lung disease. The discussion will include smoke from tobacco and non-tobacco related causes. The first two talks will address the global impact of tobacco abuse and of household air pollution; the next three talks will address specific clinical consequences of smoke; and the last talk will discuss solutions with emphasis on the Global Alliance for Clean Cookstoves (GACC) and the Framework Convention for Tobacco Control (FCTC).

Chairing: A. Munzer, MD, Takoma Park, MD
W.J. Martin, MD, Bethesda, MD

8:15 **Global Epidemiology Of Tobacco Abuse**
J. Britton, MD, Nottingham, United Kingdom

8:40 **Global Impact Of Household Air Pollution**
K. Smith, MPH, PhD, Berkeley, CA

9:05 **Smoke And The Childhood Origin Of Adult Diseases**
G. Devereux, MD, PhD, Aberdeen, United Kingdom

9:30 **Smoke And COPD In Adults**
J.R. Balmes, MD, San Francisco, CA

9:55 **Solutions: What Would Be Needed To Make Clean Stoves A Success In Africa?**
S.B. Gordon, MD, Liverpool, United Kingdom

10:20 **Solutions: Framework Convention On Tobacco Control**
A. Munzer, MD, Takoma Park, MD

There will be a 5-minute discussion after each talk.

8:15 am-10:45 am

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.

CLINICAL

WORKSHOP

WS7 CASE BASED APPROACH TO DIAGNOSING AND TREATING PATIENTS WITH NON-TUBERCULOUS MYCOBACTERIAL LUNG INFECTIONS

Registration Fee: $75.00 (includes box lunch.)
Attendance is limited. Pre-registration is required.

Assemblies on Clinical Problems; Microbiology, Tuberculosis and Pulmonary Infections

11:30 am-1:00 pm

Target Audience
Providers of lung health and infectious disease practitioners

Objectives
At the conclusion of this session, the participant will be able to:

- better recognize and diagnose NTM lung infection;
- have better strategies to treat NTM lung infections;
- potentially improve the lives of patients living with NTM lung infections.

With four illustrative cases, this workshop will address the common questions that clinicians face when diagnosing and treating NTM lung infections and bronchiectasis.

Chairing: A.E. O'Donnell, MD, Washington, DC
K.N. Olivier, MD, MPH, Bethesda, MD
T. Marras, MD, MSc, Toronto, Canada

11:30 NTM Case 1: Does This Patient Require Treatment With NTM Antibiotics?
G. Tino, MD, Philadelphia, PA

11:50 NTM Case 2: How Do I Treat My Patient With MAC Infection?
T.R. Aksamit, MD, Rochester, MN

12:10 NTM Case 3: How Do I Treat My Patient With M. Abscessus/Chelonae Infection?
C.L. Daley, MD, Denver, CO

12:30 NTM Case 4: How Do I Treat My NTM Patient Co-Infected With Other Organisms?
A.E. O'Donnell, MD, Washington, DC

12:45 New Treatment Options For NTM/Summary
K.N. Olivier, MD, MPH, Bethesda, MD

CLINICAL

WORKSHOP

WS8 ORAL APPLIANCE THERAPY FOR OBSTRUCTIVE SLEEP APNEA. HOW TO SELECT THE RIGHT PATIENT: EFFICACY, PREDICTORS AND TYPES OF APPLIANCES

Registration Fee: $75.00 (includes box lunch.)
Attendance is limited. Pre-registration is required.

Assemblies on Sleep and Respiratory Neurobiology; Clinical Problems

11:30 am-1:00 pm

Target Audience
Physicians, researchers and health providers who interact with patients with obstructive sleep apnea

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings of RCTs in oral appliance therapy;
- apply better patient selection for oral appliance therapy;

- more appropriately refer patients to dentists who use state of the art appliance designs.

CPAP therapy is considered as first line therapy for Obstructive Sleep Apnea (OSA), however patient acceptance and adherence can range from 20-80%. Oral appliance (OA) therapy is an alternative therapy with increasing data demonstrating effectiveness of therapy for mild to moderate OSA. This workshop will educate clinicians caring for patients with OSA about approaches to patient selection, decisions dentists make in device selection, approaches to lab titration of OA devices, and effectiveness in therapy. This will be done through review of 1) latest outcomes data for OA, 2) approaches to patient selection, and 3) approaches to device selection.

Chairing: F.R. Almeida, DDS, MSc, PhD, Vancouver, Canada

11:30 Review Of Oral Appliance Outcomes From RCT, When To Prescribe An Oral Appliance
K. Ferguson, MD, London, Canada

11:55 Patient Selection: What Are The Predictors Of Treatment Success
P.A. Cistulli, MD, PhD, Sydney, Australia

12:20 Evaluation Of Types Of Appliance: A Physician's Perspective
F.R. Almeida, DDS, MSc, PhD, Vancouver, Canada

CENTERS FOR DISEASE CONTROL AND PREVENTION

L21 COMMUNITY-ACQUIRED PNEUMONIA IN ADULTS: RESULTS FROM THE CDC-EPIC STUDY

12:00 pm-1:00 pm

Target Audience
Practicing clinicians, both in pulmonary and critical care as well as emergency medicine, hospitalists, general internists; clinician researchers

Objectives
At the conclusion of this session, the participant will be able to:

- integrate new information regarding etiology into diagnostic testing and antimicrobial treatment of CAP;
- understand and integrate radiologic characteristics in clinical management of pneumonia;
- identify criteria important for the decision to admit to the ICU for severe CAP.

The etiology and incidence of Community Acquired Pneumonia (CAP) in adults may be changing in response to enhanced immunization, expanded molecular diagnostic techniques, and discovery of new pathogens. Results from adult patients enrolled in the recently completed CDC-Epidemiology of Pneumonia in the Community (CDC-EPIC) study address these and other clinical aspects of CAP.

Chairing: G.W. Waterer, MBBS, PhD, Perth, Australia

12:00 Etiology Of CAP In Adults
S. Jain, MD, Atlanta, GA

12:20 Clinico-Radiologic Correlates In CAP
R.G. Wunderink, MD, Chicago, IL

12:35 ICU Admission Decision: Comparison Of Severity Criteria
W.H. Self, MD, MPH, Nashville, TN

U.S. FOOD AND DRUG ADMINISTRATION

L22 PULMONARY UPDATE FROM THE U.S. FOOD AND DRUG ADMINISTRATION

12:00 pm-1:00 pm

Target Audience
Clinicians in practice, researchers, industry representatives, international regulators

Objectives
At the conclusion of this session, the participant will be able to:

- recognize pulmonary issues of scientific importance at FDA;

- have new strategies for clinical trial design for long term trials in COPD;
- appreciate new safety findings from ongoing safety surveillance of approved products for pulmonary indications.

The most recent regulatory FDA actions including discussion of current safety and efficacy issues of products for pulmonary indications will be discussed. Updated safety information from ongoing safety surveillance of products approved for pulmonary indications will be presented and the challenges for conducting long term trials in COPD will be discussed.

Chairing: L.I. Gilbert-McClain, MD, Silver Spring, MD

12:00 Introduction And Session Overview
L.I. Gilbert-McClain, MD, Silver Spring, MD

12:05 Update On Current Pulmonary Issues At FDA
B.A. Chowdhury, MD, PhD, Silver Spring, MD

12:20 Update On Pulmonary Safety
S.M. Seymour, MD, Silver Spring, MD

12:35 Challenges In COPD Drug Development
T.M. Michele, MD, Silver Spring, MD

12:50 Questions And Answers
L.I. Gilbert-McClain, MD, Silver Spring, MD

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES/NIH

L23 INNER CITY AND ASTHMA: AN INSIGHT TO THE DISEASE

12:00 pm-1:00 pm

Target Audience
Clinicians, researchers, healthcare administrators, public health specialists, asthma educators

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the advances made by the inner city asthma consortium in our understanding of asthma;
- understand which treatment strategies have been demonstrated to be successful and unsuccessful;
- identify and understand the risk factors such as the environment which play a role in asthma.

The Inner City Asthma Consortium has over 20 years experience studying the development and treatment of asthma among inner city children and adolescents.This session will review the major findings produced by this effort specifically focusing on both the successful and unsuccessful treatment strategies which have been evaluated and the determinants which play a role in the development of wheezing and asthma.

Chairing: P.J. Gergen, MD, MPH, Bethesda, MD

12:00 Why Study Asthma In The Inner City?
W.W. Busse, MD, Madison, WI

12:20 Does Asthma Treatment In The Inner City Need To Be Different?
S.J. Szefler, MD, Denver, CO

12:40 What Causes Asthma In The Inner City?
J. Gern, MD, Madison, WI

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH/CDC

L24 OCCUPATIONAL RESPIRATORY HAZARDS IN HEALTHCARE

12:00 pm-1:00 pm

Target Audience
Anyone who delivers healthcare, especially pulmonary outpatient and inpatient care; researchers and clinicians in occupational and environmental health

Objectives
At the conclusion of this session, the participant will be able to:

- understand the value of monitoring occupational airborne exposures;
- learn and understand the extent of airborne exposures and other hazards in healthcare;

- understand the exposure of healthcare workers to gases from cleaning and disinfecting chemicals.

Healthcare providers work in an ever changing environment that can include a variety of harmful exposures. This session will provide an overview of recent findings and current research regarding occupational hazards in healthcare settings that pose a risk to the respiratory health of caregivers and patients.

Chairing: P.K. Henneberger, ScD, Morgantown, WV
D.N. Weissman, MD, Morgantown, WV

12:00 Overview Of Occupational Safety And Health Issues In The Healthcare And Social Assistance Sector
D.N. Weissman, MD, Morgantown, WV

12:10 Health And Safety Practices Survey Of Healthcare Workers
J. Boiano, MS, Cincinnati, OH

12:35 Exposures To Cleaning And Disinfecting Chemicals In Hospitals
M.A. Virji, PhD, Morgantown, WV

DIVISION OF LUNG DISEASES/NHLBI/NIH

L25 UPDATE ON THE PHASE II TRIALS IN THE NHLBI DLD SPECIALIZED CENTERS OF CLINICALLY ORIENTED RESEARCH (SCCOR) PROGRAM

12:00 pm-1:00 pm

Target Audience
Pulmonary neonatologists, NICU specialists, COPD patients and physicians treating them

Objectives
At the conclusion of this session, the participant will be able to:

- understand the use of inhaled NO in premature infants;
- learn and understand the use of cyclosporin A in COPD patients with advanced disease;
- understand the use of angiotensin receptor blocker losartan in COPD.

This session will report on three phase II trials conducted as part of the NHLBI lung data on a trial that is testing the angiotensin II receptor anatagonist drug, losartan, on the progression of COPD.

Chairing: G.G. Weinmann, MD, Bethesda, MD

12:00 Non-Invasive Inhaled Nitric Oxide In Premature Newborns
J. Kinsella, MD, Denver, CO

12:20 A Randomized, Double-Blinded, Placebo-Controlled Protocol Of Oral Cyclosporine In Patients With Advanced Stage COPD
M. Donahoe, MD, Pittsburgh, PA

12:40 Efficacy Of Losartan On Progression Of COPD
R.A. Wise, MD, Baltimore, MD

DIVISION OF LUNG DISEASES/NHLBI/NIH

L26 AN UPDATE ON THE COPDGENE STUDY: PROGRESS AND FUTURE PLANS

12:00 pm-1:00 pm

Target Audience
Providers of lung health, COPD patients, clinical pulmonary researchers

Objectives
At the conclusion of this session, the participant will be able to:

- learn about COPD Sub-Phenotypes;
- understand and learn about genetics of COPD;
- understand imaging of COPD.

COPD, the third leading cause of death in the U.S., is a heterologous syndrome leading to marked differences in lung structure, lung physiology, and other clinical features. The COPDGene study has created the largest cohort of well-characterized current and former smokers for respiratory disease research. Its primary goals are: 1) to identify new genetic loci that influence the development of COPD and related phenotypes and 2) to reclassify COPD into subtypes that can ultimately be used to develop effective therapies. This session

describes the progress and future plans of the COPDGene study.

Chairing: J. Crapo, MD, Denver, CO
E.K. Silverman, MD, PhD, Boston, MA

12:00 COPDGene: Study Design And Population Characteristics
J. Crapo, MD, Denver, CO

12:12 COPDGene: Imaging
D.A. Lynch, MB, MBBS, Denver, CO

12:24 COPDGene: Clinical Epidemiology
M.K. Han, MD, MS, Ann Arbor, MI

12:36 COPDGene: Genetics
E.K. Silverman, MD, PhD, Boston, MA

12:48 COPDGene: Subtyping
M.H. Cho, MD, MPH, Boston, MA

CLINICAL

CLINICAL CORE CURRICULUM

CC6 CRITICAL CARE CLINICAL CORE CURRICULUM

Clinical Core Curriculum Working Group

2:00 pm-4:30 pm

Target Audience
Internists and subspecialists in pulmonary critical care, and sleep medicine who work in a clinical setting and are currently engaged in maintenance of certification

Objectives
At the conclusion of this session, the participant will be able to:

- remain current with the growth of information relevant to their medical practice in pulmonary, critical care, and sleep medicine;
- evaluate their knowledge and skills in key areas of pulmonary, critical care, and sleep medicine, as well as receive feedback on their understanding as a result of a pre-test/post-test comparison;
- support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements.

The ATS Clinical Core Curriculum symposia focus on a 3-year content cycle of key medical content in the areas of pulmonary, critical care and sleep medicine. The topics are also aligned with corresponding Part II maintenance of certification modules. This symposium is intended to assist clinicians with staying current with the growth of information relevant to their medical practice, as well as provide an opportunity to evaluate individual knowledge and skills.

Chairing: J.T. Poston, MD, Chicago, IL

Surgical/Trauma/Transplantation

2:00 **Postoperative Management**
D.L. Bowton, MD,Winston-Salem, NC

2:30 **Pregnancy**
M.E. Strek, MD, Chicago, IL

Hematologic/Oncologic Disorders

3:00 **Coagulopathies And Bleeding Disorders**
K.W. Thomas, MD, Iowa City, IA

3:30 **Hematology Critical Care**
A.J. Goodwin, MD, Charleston, SC

Gastrointestinal Disorders

4:00 **Liver Diseases**
J.B. Hall, MD, Chicago, IL

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D82 MALIGNANT PLEURAL EFFUSION: BEYOND THE ERA OF PLEURODESIS

Assembly on Clinical Problems

2:00 pm-4:30 pm

Target Audience
Clinicians and allied health professionals with clinical and research responsibilities in cancer care; especially chest physicians; thoracic surgeons; oncologists; respiratory nurses; internists; thoracic pathologists and junior staff in those disciplines

Objectives
At the conclusion of this session, the participant will be able to:

- learn and understand the latest classification of visceral pleural invasion in Lung Cancer TNM staging, and the pathophysiology of maligant effusion formation;
- understand the latest data contesting the efficacy and safety on thoracoscopic pleurodesis. To discuss the data showing the advantages of alternative fluid management strategies;
- discuss the need to recognize and the ways to manage malignant effusions in special scenarios such as mesothelioma or mutation positive lung cancers.

The symposium will cover the exciting and important advances in Malignant Pleural Effusion (MPE) management, from the new TNM staging to the increasing clinical trial evidence questioning the superiority of thoracoscopic pleurodesis over alternative treatments, such as indwelling pleural catheters. The special considerations for important subgroup of patients with mesothelioma and those with EGFR mutation positive lung cancer will be discussed. Leading experts in thoracic cancers and pleural diseases will discuss topics that have direct clinical impact and stimulate the attendees to critically examine the role of pleurodesis in malignant effusions.

Chairing: M.H. Baumann, MD, Jackson, MS
C. Tobin, BA, Perth, Australia

2:00 **Pleural Metastases In The New TNM Staging: Definitions And Implications**
G. Silvestri, MD, Charleston, SC

2:20 **Limitations Of Pleurodesis**
D.J. Feller-Kopman, MD, Baltimore, MD

2:40 **Understanding Pathophysiology Of Malignant Effusion: Potential New Therapies**
I. Kalomenidis, MD, PhD, Athens, Greece

3:00 **Indwelling Pleural Catheter: Indications And Complications**
N.M. Rahman, MSc, PhD, Oxford, United Kingdom

3:20 **Thorascopic Pleurodesis: An Ongoing Evidence-Free Practice?**
N.A. Maskell, MD, Bristol, United Kingdom

3:40 **Malignant Effusion From Mesothelioma: Special Considerations**
Y.C.G. Lee, PhD, Perth, Australia

4:00 **Malignant Effusion In EGFR+ve Lung Cancer: Special Considerations**
J.R. Jett, MD, Denver, CO

There will be a 5-minute discussion after each talk.

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D83 THE EVOLVING ROLE OF GASTROESOPHAGEAL REFLUX DISEASE AND ASPIRATION IN PARENCHYMAL LUNG DISEASE

Assembly on Clinical Problems

2:00 pm-4:30 pm

Target Audience
Clinicians, researchers, healthcare providers

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings about the role of GER and aspiration in parenchymal lung disease;
- diagnose GER and aspiration in patients with parenchymal lung disease;
- gain new strategies to manage the care of GER and aspiration in patients with parenchymal lung disease.

The role of gastroesophageal reflux (GER) and aspiration in parenchymal lung disease is controversial. This session will discuss when and why gastroesophageal reflux can cause pathology, with a focus on parenchymal lung diseases. This session will also provide a practical approach for clinicians on how to diagnose and treat GER in patients with parenchymal lung disease.

Chairing: K.C. Meyer, MD, MS, Madison, WI
J.S. Lee, MD, San Francisco, CA

2:00 **When Is Gastroesophageal Reflux Pathologic?**
N. Johnston, PhD, Milwaukee, WI

2:25 **Deglutition Abnormalities: What Are The Best Approaches To Diagnosis And Management?**
T. McCulloch, MD, Madison, WI

2:45 **Recurrent Aspiration And Parenchymal Lung Disease: An Emerging Entity?**
J.H. Ryu, MD, Rochester, MN

3:05 **Esophageal Dysfunction And ILD: Who Is At Risk?**
I. Noth, MD, Chicago, IL

3:25 **What Is The Role Of GER In Idiopathic Pulmonary Fibrosis?**
J.S. Lee, MD, San Francisco, CA

3:45 **GER And Lung Allograft Function: What Have We Learned?**
K.C. Meyer, MD, MS, Madison, WI

4:05 **A Rational Approach To The Diagnosis And Treatment Of GER**
M. Patti, MD, Chicago, IL

There will be a 5-minute discussion after each talk.

CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

D84 OBESITY IN CRITICAL ILLNESS: MANAGEMENT, OUTCOMES, AND NOVEL PATHOPHYSIOLOGIC CONCEPTS

Assembly on Critical Care

2:00 pm-4:30 pm

Target Audience
Critical care providers and researchers with an interest in the epidemiology of and management challenges associated with obesity in the ICU, and those seeking to understand pathophysiologic mechanisms associated with obesity and adipose tissue that may affect patient outcomes

Objectives
At the conclusion of this session, the participant will be able to:

- develop a framework for understanding the substantial and often conflicting epidemiologic data

regarding obesity in critical illness, including organ dysfunction, survival, resource utilization, and long-term outcomes;

- establish a fundamental knowledge of potential molecular roles of adipose tissue in the acute and chronic response to critical illness and how these may explain epidemiologic findings;
- learn to apply available evidence and physiologic concepts to the management of obese ICU patients, with a focus on nutrition and mechanical ventilation.

Obesity is epidemic in the United States and an increasing problem worldwide. There are multiple challenges associated with care of the obese patient in the ICU. In addition, recent translational research has begun to shed light on adipose tissue as an active participant in the inflammatory and metabolic processes seen in critical illness. This session will review sometimes conflicting epidemiologic data on obesity in critical illness, highlight cellular and molecular mechanisms by which adipose tissue may exert both harmful and protective effects, and address clinically relevant physiology and management considerations in the obese ICU patient.

Chairing: M.G.S. Shashaty, MD, MSCE, Philadelphia, PA
J.P. Kress, MD, Chicago, IL
R.D. Stapleton, MD, MSc, Burlington, VT

2:00 **The Obesity Paradox: More Organ Injury, Less Death?**
M.G.S. Shashaty, MD, MSCE, Philadelphia, PA

2:21 **Role Of Cellular And Molecular Adipose Changes In Chronic Critical Illness**
G. Van den Berghe, MD, PhD, Leuven, Belgium

2:42 **Obesity Related Alterations In The Immune Response To Critical Illness: Lessons From The Bench**
B.T. Suratt, MD, Burlington, VT

3:03 **Obesity Studies And The Challenge Of Translational Research: Perspective Of A Clinical Investigator**
D.J. Lederer, MD, New York, NY

3:24 **Understanding Respiratory Physiology And Ventilator Mechanics In The Obese Patient**
J.P. Kress, MD, Chicago, IL

3:45 **Nutrition For The Obese Critically Ill Patient**
R.D. Stapleton, MD, MSc, Burlington, VT

4:06 **How Big Is The Obesity Problem? Studying Cost, Resource Utilization, And Long-Term Outcomes**
Speaker To Be Announced

There will be a 5-minute discussion after each talk.

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D85 DEVELOPMENTAL ORIGINS OF ASTHMA AND ALLERGIES: ENVIRONMENT, MODIFIERS, AND MEDIATORS

Assemblies on Environmental and Occupational Health; Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Pediatrics

2:00 pm-4:30 pm

Target Audience
Adult and pediatric respiratory physicians, basic and clinical researchers

Objectives
At the conclusion of this session, the participant will be able to:

- be more aware that fetal and early life exposures determine risk for later development of asthma and allergies;
- learn new findings about potentially modifiable exposures in early life that increase the risk for asthma and allergies;
- have new strategies and recommendations for prevention of allergies and asthma.

The Developmental Origins of Health and Disease paradigm posits that prenatal and early life exposures program mechanisms that play a role in determining the risk of the individual for future diseases, including asthma and allergies. This session will discuss how

exposures such as prenatal and early life vitamin D status, pre- and perinatal stress, early exposure to viruses and indoor/outdoor air pollutants may increase the risk for asthma and allergies. This session will then discuss emerging evidence about the role of the intestinal microbiome, and finally, discuss potential genetic and epigenetic mechanisms that may mediate the effects of these exposures.

Chairing: A.A. Litonjua, MD, MPH, Boston, MA
J.C. Celedon, MD, PhD, Pittsburgh, PA

2:00 **Prenatal And Early Life Stress And Negative Life Events**
R.J. Wright, MD, MPH, New York, NY

2:20 **Prenatal Probiotics And The Intestinal Microbiome**
M. Cabana, MD, San Francisco, CA

2:40 **Viral Illnesses In Early Life**
J.E. Gern, MD, Madison, WI

3:00 **Vitamin D Status As A Modifier Of Early Life Exposures**
A.A. Litonjua, MD, MPH, Boston, MA

3:20 **Maternal Exposure To Air Pollution In Pregnancy**
I. Annesi-Maesano, DSc, MD, PhD, Paris, France

3:40 **Indoor Exposures And ETS**
G.B. Diette, MD, Baltimore, MD

4:00 **Environmental Epigenetics And Epigenomics**
J.C. Celedon, MD, PhD, Pittsburgh, PA

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D86 IMMUNE DYSREGULATION IN PULMONARY FIBROSIS

Assemblies on Allergy, Immunology and Inflammation; Respiratory Cell and Molecular Biology

2:00 pm-4:30 pm

Target Audience
Adult and pediatric pulmonary physicians, scientists, nurses and healthcare professionals interested in understanding the role that the immune system plays in the etiology and pathogenesis of pulmonary fibrosis in patients and models of lung fibrosis

Objectives
At the conclusion of this session, the participant will be able to:

- understand the complex literature on the innate and adaptive immune response in lung fibrosis;
- evaluate the role of the immune response in stable and rapidly progressing fibrotic lung disease;
- provide a scientific basis for re-evaluating use of immune suppressants in clinical practice.

Idiopathic pulmonary fibrosis (IPF) is a fibrotic lung disease that presents after the fifth decade of life. While an argument has been proposed for an autoimmune etiology for IPF, most patients do not respond to corticosteroid therapy leading others to down play the potential role for immune responses in IPF. The literature that immune modulation occurs in IPF and the augmented adverse outcomes found in the combination immunosuppression has reinvigorated the argument for a role for immunity in pulmonary fibrosis. In this symposium speakers will present findings that address the question of immune modulation in the pathogenesis of IPF.

Chairing: A.I. Sperling, PhD, Chicago, IL
S.R. Duncan, MD, Pittsburgh, PA

2:00 **Is IPF An Autoimmune Disease?**
S.R. Duncan, MD, Pittsburgh, PA

2:30 **Is Autoantibody Production A Positive Indicator Of Survival In IPF?**
A. Fischer, MD, Denver, CO

2:55 **Role Of CD4+ T Lymphocytes In Development Of Fibrogenic Macrophages And Fibrocytes**
E. Herzog, MD, PhD, New Haven, CT

3:20 **Th17 Responses In Pulmonary Fibrosis**
T. Wynn, PhD, Bethesda, MD

3:55 **Inhibitory Immune Co-Receptors In IPF Patients And Mouse Models**
A.I. Sperling, PhD, Chicago, IL

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D87 PULMONARY HYPERTENSION WITH LEFT HEART DISEASE: VENTRICLES, VESSELS, AND HEMODYNAMICS

Assemblies on Pulmonary Circulation; Clinical Problems; Critical Care; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Clinicians and clinician scientists interested in the research and treatment of pulmonary vascular disease in conjunction with left heart disease

Objectives
At the conclusion of this session, the participant will be able to:

- recognize, diagnose, and manage pulmonary hypertension with left heart disease, and integrate emerging treatment options in patient discussions;
- learn new findings about the underlying pathophysiology and biology leading to the complex pathologic relationship of the dysfunctional cardiac and pulmonary vasculature in PH-LHD;
- integrate cutting edge clinical and pathobiological research of PH-LHD to address fundamental clinical and scientific questions which remain.

Pulmonary hypertension (PH) with left heart disease (LHD) is common and carries an unacceptably poor prognosis. The use of therapies developed specifically for either LHD or PH remains limited, and in some cases may be harmful. This symposium will (1) raise awareness about the wide prevalence and poor prognosis of PH-LHD, (2) illuminate the challenges in its diagnosis, evaluation, and limitations in treatment, and (3) provide new insight into the underlying pathophysiology, including ventricular dysfunction, endothelial remodeling, and pulmonary arterial and venous reactivity and remodeling, to promote their integration into fundamental clinical and scientific questions leading to novel therapies.

Chairing: J.M. Hunt, MD, Aurora, CO
V. de Jesus Perez, MD, Palo Alto, CA
W.M. Kuebler, MD, PhD, Toronto, Canada

2:00 **A Patient's Perspective**
Speaker To Be Announced

2:05 **Pulmonary Hypertension With Left Heart Disease: A Common Disease Without Simple Solutions**
M.M. Redfield, MD, Rochester, MN

2:30 **The Challenges And Pitfalls Of Evaluating Patients With Pulmonary Hypertension And Left Heart Disease**
V. de Jesus Perez, MD, Palo Alto, CA

2:55 **Impact Of Left Heart Disease On Pulmonary Hemodynamics During Rest And Exercise**
M.J. Semigran, MD, Boston, MA

3:20 **Endothelial And Vascular Remodeling In Left Heart Disease And Pulmonary Hypertension: Friend Or Foe?**
W.M. Kuebler, MD, PhD, Toronto, Canada

3:40 **Contribution Of Pulmonary Arteries And Veins To Regulation Of Pulmonary Circulation**
J.U. Raj, MD, Chicago, IL

4:05 **Treatment Of Pulmonary Hypertension With Left Heart Disease: Past Failures And Current Breakthroughs**
M. Guazzi, MD, Milan, Italy

There will be a 5-minute discussion after each talk.

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D88 BIOMARKER DISCOVERY FOR TUBERCULOSIS: MOVING FROM THE BENCH TO CLINICAL APPLICATIONS

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Allergy, Immunology and Inflammation

2:00 pm-4:30 pm

Target Audience
Practitioners of TB and HIV care and individuals engaged in clinical and translational research, as well as in drug development

Objectives
At the conclusion of this session, the participant will be able to:

- become familiar with current practices of diagnosing and monitoring TB while on treatment and in cases of relapse using solid and liquid mycobacterial cultures, their limitations, and the implications for global control of TB;
- learn the rationale behind ongoing approaches to development of novel TB biomarkers and which of these appear to be the most promising;
- become familiar with the role of pulmonary immune responses in protection against TB, the various assays that can longitudinally measure these immune responses, and their potential use in measuring progression to TB, response to TB therapy, and in relapse.

This symposium will provide a state of the science overview of biomarkers for tuberculosis (TB). The symposium will start with updates on TB biomarker discovery from studies of the pathogen and host. Subsequent talks will review clinical applications of TB biomarkers, including biomarkers in early and advanced stages of validation for diagnosing TB, predicting which people will progress to active TB, and monitoring response to anti-TB therapy. The symposium will end with lessons learned from modeling studies about the impact of novel TB biomarkers in various clinical settings.

Chairing: J.J. Saukkonen, MD, Boston, MA
A. Cattamanchi, MD, San Francisco, CA
P. Mancuso, PhD, Ann Arbor, MI

2:00 **Biomarker Identification Through MTB Genome Scanning**
G.K. Schoolnik, MD, Stanford, CA

2:20 **Deriving New Biomarkers From TB Diagnostics**
K.U.J. Dheda, MD, PhD, Cape Town, South Africa

2:40 **Defining Immunologic Biomarkers From The Host Response To TB**
D.M. Lewinsohn, MD, PhD, Portland, OR

3:00 **Use Of Biomarkers To Identify People At High Risk For Developing TB**
W.H. Boom, MD, Cleveland, OH

3:20 **From Bench To Bedside: Promising Biomarkers Of Treatment Response**
P. Nahid, MD, MPH, San Francisco, CA

3:40 **Impact Of TB Biomarkers: Lessons From Modeling Studies**
D. Dowdy, MD, PhD, Baltimore, MD

4:00 **Panel Discussion**

4:15 **Questions And Answers**
J. Saukkonen, MD, Boston, MA

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D89 HOT TOPICS IN LUNG TRANSPLANTATION

2:00 pm-4:30 pm

Target Audience
Clinicians and healthcare workers interested in lung transplantation

Objectives
At the conclusion of this session, the participant will be able to:

- gain an understanding of pre-transplant field including allocation system and efforts at increasing the donor pool;
- examine and discuss the current knowledge regarding major complications of an allograft-antibody mediated rejection, chronic allograft rejection and infectious complications;
- analyze the research opportunities offered by the field of lung transplantation.

This session highlights arenas of significant clinical and investigative interest in the field of lung transplantation. Lung allocation system has streamlined organ allocation and its discussion along with the novel methods of graft-conditioning will address the pre-transplant field. Topics will also cover infectious complication and bronchiolitis obliterans syndrome, the major causes of mortality post-lung transplantation. How the field of lung transplantation offers a unique opportunity to study fibrosis will be highlighted.

Chairing: J.A. Belperio, MD, Los Angeles, CA
V.N. Lama, MD, MS, Ann Arbor, MI

2:00 **Lung Transplantation: Broadening The Clinical And Investigative Horizon**
J.A. Belperio, MD, Los Angeles, CA

2:20 **Understanding And Dissecting The Lung Allocation Scoring System**
C.A. Merlo, MD, MPH, Baltimore, MD

2:50 **Increasing The Donor Pool: An Update On Lung Ex Vivo Perfusion**
S. Keshavjee, MD, MSc, Toronto, Canada

3:10 **An Overview Of Infections Post Lung Transplantation**
S. Weigt, MD, Los Angeles, CA

3:40 **The Elephant In The Room: Bronchiolitis Obliterans Syndrome**
P. Corris, MBChB, Newcastle, United Kingdom

4:10 **Targeting The Mesenchymal Cell: Why Lung Transplantation Offers The Most Fertile Ground To Investigate Anti-Fibrotic Therapies**
V.N. Lama, MD, MS, Ann Arbor, MI

CLINICAL

SCIENTIFIC SYMPOSIUM

D90 WHAT IS THE OPTIMAL PROCEDURE FOR THE WORK UP OF PULMONARY NODULES AND MASSES?

2:00 pm-4:30 pm

Target Audience
Physicians, allied health professionals and thoracic surgeons

Objectives
At the conclusion of this session, the participant will be able to:

- understand the need for an evidence-based diagnostic algorithm for pulmonary masses;
- describe different guided bronchoscopic procedures;
- understand when to deploy alternative biopsy methods.

Pulmonary nodules, either detected by targeted diagnostic imaging, work up for suspicion of other diagnosis, or through screening efforts remain a vexing problem for the physician and patient when trying to settle on a diagnostic algorithm. This session will review the magnitude of the problem, the role of watchful waiting and examine the knowledge base for the choice of different endoscopic procedures as compared with transthoracic needle biopsies and surgery as an alternative.

Chairing: A. Ernst, MD, Boston, MA
A.W. Sung, MD, New York, NY

2:00 **Lessons From The NSLT: How Big Is The Need For Diagnostic Procedures?**
P. Boiselle, MD, Boston, MA

2:20 **The Fleischner Guidelines And The Power Of Watchful Waiting**
M.M. Wahidi, MD, Durham, NC

2:40 **Are Multidisciplinary Nodule Clinics Beneficial And Cost-Effective?**
G.C. Michaud, MD, New Haven, CT

3:00 **Bronchoscopic Guidance Modalities: Is One Superior?**
F.J.F. Herth, MD, PhD, Heidelberg, Germany

3:20 **TTNA Versus Bronchoscopy: What Is The True Gold Standard?**
A. Devanand, MD, Singapore, Singapore

3:40 **Primary Surgical Biopsy And Resection: When Is It Indicated?**
P.L. Shah, MD, London, United Kingdom

4:00 **Can Diagnostic And Therapeutic Bronchoscopy Be Combined?**
D.J. Feller-Kopman, MD, Baltimore, MD

4:20 **General Discussion**

2:00 pm-4:30 pm

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.

AMERICAN THORACIC SOCIETY

Invitations for the 2013 Program are now being sent.

For details, please contact
Michelle Turenne
mturenne@thoracic.org

The ATS Would Like to Acknowledge Its 2012 Patron Corporate Members

image © iStockPhoto

Patron

AstraZeneca

Boehringer Ingelheim

INTERMUNE®

NOVARTIS

TEVA Respiratory

Thank you for your support

ATS *We help the world breathe®*
PULMONARY • CRITICAL CARE • SLEEP

For more information about the Corporate Membership Program, please visit **www.thoracic.org**.