ATS 2023 INTERNATIONAL CONFERENCE
MAY 19-24, WASHINGTON, DC

This ATS International Conference Advance Program is published by the ATS as a service to attendees. This publication contains the programs and speakers for the postgraduate courses, scientific and educational sessions presented at the conference.

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The information contained in this program is up to date as of January 20, 2023. Look for 📅 to view more information about ATS events, assemblies and sections.

1 Friday Postgraduate Courses
6 Saturday Postgraduate Courses
19 Sunday Conference Sessions
37 Monday Conference Sessions
60 Tuesday Conference Sessions
79 Wednesday Conference Sessions

https://conference.thoracic.org/attendees/
**Assembly on Critical Care**

8:00 a.m. - 4:00 p.m.

**Target Audience**
Providers of critical care or emergency medicine

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

- apply ultrasound at bedside to assess critically ill patients
- apply ultrasound to guide common ICU procedures
- diagnose alternate etiologies of shock in the critically ill patient

This is a 2-day postgraduate course that consists of didactic lectures and hands-on stations. The focus is primarily bedside transthoracic echocardiography, with some diagnostic ultrasound. The topics include basic and intermediate critical care echocardiography (including hemodynamic measures), assessment of fluid status, procedural guidance for vascular access and thoracentesis, venography. The hands-on stations will include both healthy models and laptops that can demonstrate abnormal pathology.

**Chearing:**
M.J. Lanspa, MD, MSCR, ATSF, Salt Lake City, UT
X. Monnet, MD, PhD, Le Kremlin-Bicêtre, France

**Friday, May 19**

**Click here to register for Friday Sessions and Presentation**

**POSTGRADUATE COURSE**

**PG1A** CRITICAL CARE ULTRASOUND AND ECHOCARDIOGRAPHY I

This is part 1 of a two-part course which includes PG1B on Saturday, May 20. Those registering for PG1A will be registered for PG1A and PG1B. Pre-registration and additional fees required. Attendance is limited.

- Member: $1230
- LMIC Member: $1165
- Non-Member: $1640
- In-Training Member: $935
- LMIC In-Training Member: $655
- In-Training Non-Member: $1060
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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:45</td>
<td>Basic Evaluation of RV Size and Function, Pulmonary Embolus</td>
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<tr>
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<td>D. Pradhan, MD, ATSF, New York, NY</td>
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<td>10:15</td>
<td>Break</td>
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<td>10:30</td>
<td>Practical Skills Session: Hands-On Station I</td>
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<td>Apical Window</td>
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<td>Z. Shaman, MD, Cleveland, OH</td>
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<td>J.C. Klick, MD, Burlington, VT</td>
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<td>S. Sarzynski, MD, MHSc, Bethesda, MD</td>
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<td>P.K. Mohabir, MD, Stanford, CA</td>
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<td>Parasternal Window</td>
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<td>R.E. Burk, MD, Reno, NV</td>
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<td>A. Leibowitz, MD, Boston, MA</td>
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<td>S. Cha, MD, Baltimore, MD</td>
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<td>G.B. Allen, MD, Burlington, VT</td>
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<td>X. Monnet, MD, PhD, Le Kremlin-Bicêtre, France</td>
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<td>J. Kasal, MD, St. Louis, MO</td>
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<td>J.E. Pittman, MD, Salt Lake City, UT</td>
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<td>12:00</td>
<td>Lunch</td>
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<td>12:30</td>
<td>Lunch and Clinical Cases</td>
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<td>S. Sarzynski, MD, MHSc, Bethesda, MD</td>
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<tr>
<td>12:45</td>
<td>Chest Ultrasound</td>
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<td>P.K. Mohabir, MD, Stanford, CA</td>
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<td>1:15</td>
<td>Valvulopathy and Endocarditis</td>
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<td>R.E. Burk, MD, Reno, NV</td>
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<td>1:45</td>
<td>Basic Assessment of Diastolic Function</td>
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<td>A. Leibowitz, MD, Boston, MA</td>
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<td>2:15</td>
<td>Break</td>
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<td>2:30</td>
<td>Practical Skills Session: Hands-On Station II</td>
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<td>Lung Ultrasound</td>
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<td>D.A. Sweeney, MD, La Jolla, CA</td>
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<td>Cardiac Output</td>
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<td>J.C. Klick, MD, Burlington, VT</td>
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<td>S. Bain, MD, Seattle, WA</td>
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<td>Diastolic Measurements</td>
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<td>A. Leibowitz, MD, Boston, MA</td>
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<td>X. Monnet, MD, PhD, Le Kremlin-Bicêtre, France</td>
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<td>J.E. Pittman, MD, Salt Lake City, UT</td>
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<td>R.E. Burk, MD, Reno, NV</td>
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### CLINICAL POSTGRADUATE COURSE

**PG2 BRONCH DAY 2023: A COMPREHENSIVE, HANDS-ON GUIDE TO BASIC BRONCHOSCOPY, EBUS, AND NAVIGATIONAL BRONCHOSCOPY**

- **Pre-registration and additional fees required. Attendance is limited.**
- **Member: $600**
- **In-Training Member: $380**
- **LMIC Member: $420**
- **LMIC In-Training Member: $270**
- **Non-Member: $700**
- **In-Training Non-Member: $500**

**Assemblies on Clinical Problems; Critical Care; Pediatrics; Thoracic Oncology**

- **8:00 a.m. - 4:00 p.m.**

### Target Audience

Adult and pediatric pulmonologists and intensivists, thoracic surgeons, physicians in training, allied health professionals: anesthesiologists interested in improving their skills in diagnostic and therapeutic flexible bronchoscopy and EBUS

### Objectives

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

- diagnose and manage adults and children with benign and malignant respiratory diseases
- improve knowledge of basic flexible bronchoscopy and strengthen procedural skills
- understand the indications for linear and radial endobronchial ultrasound and the skills necessary to perform these

This course is designed to provide a comprehensive introduction to diagnostic and therapeutic flexible bronchoscopy. Participants will acquire the knowledge and skills to improve their proficiency in bronchoscopic techniques and be introduced to linear EBUS, radial EBUS and navigational bronchoscopy. A series of lectures will be followed by intensive, hands-on training. Through the use of physical
and virtual reality simulators participants will strengthen their procedural skills. This course will be of particular interest to providers seeking to refine their bronchoscopy skills and who wish to review the data behind the various bronchoscopic techniques. Audience response will be used during lectures.

**Chairing:**
- C. Argento, MD, Baltimore, MD
- A.V. Gonzalez, MD, MSc, Montreal, Canada
- D. Dibardino, MD, Philadelphia, PA
- R. Semaan, BS, MD, Pittsburgh, PA

**8:00** Introduction  
C. Argento, MD, Baltimore, MD

**8:05** Optimizing Basic Bronchoscopy Skills  
C.R. Macrosty, DO, Chapel Hill, NC

**8:30** Maximize Outcomes in High Risk Patients  
K. Van Nostrand, MD, Atlanta, GA

**8:55** Role of Flexible Bronchoscopy in Management of Hemoptysis  
C.R. Lamb, MD, Burlington, MA

**9:20** Pediatric Flexible Bronchoscopy for the Adult and Pediatric Bronchoscopist  
C. Spencer Grant, MD, New York, NY

**9:45** Break

**9:55** The Fundamentals of Lineal EBUS  
A. Demaio, MD, Baltimore, MD

**10:20** Navigational Bronchoscopy: From Fluoroscopy to Robotics  
L. Frye, MD, Salt Lake City, UT

**10:45** Bronchoscopic Lung Volume Reduction  
P. Lee, MD, Singapore

**11:10** Questions and Answers

**11:30** Lunch

**12:15** Practical Skills Session  
**Bronchoscopy With Biopsy and Needle Aspiration of Endobronchial Lesion**  
M. Weir, MBChB, Philadelphia, PA  
C. Kapp, MD, Chicago, IL

**Bronchoscopic Management of Hemoptysis**  
C.R. Lamb, MD, Burlington, MA  
G.Z. Cheng, MD, PhD, San Diego, CA

**Management of the Difficult Airway and Trachcostomy Tubes**  
E. Volker, MD, MSPH, Denver, CO  
C.R. Macrosty, DO, Chapel Hill, NC

**Techniques for Foreign Body Removal Using Flexible Bronchoscopy**  
D. Dibardino, MD, Philadelphia, PA  
A.V. Gonzalez, MD, MSc, Montreal, Canada

**3:45** Questions and Wrap-Up

C. Argento, MD, Baltimore, MD
• integrate new treatment options into the management of pediatric SRBD to ensure personalized patient-centered care

This, first of its kind, course will provide a state of the art practical, evidence-based, and comprehensive approach to the evaluation and management of pediatric sleep-related breathing disorders (SRBD). There will be a mix of interactive didactic sessions (highlighting the intersection of basic science, translational and clinical aspects of pediatric SRBD), panel discussions, and hands-on stations. Small group, case-based, breakout sessions will give participants the opportunity to interact with national and international experts in the field. Hands-on stations will provide learners with a unique “real-time” experience with advanced diagnostic and therapeutic modalities as they relate to pediatric SRBD.

Chairing:  Z. Ehsan, MD, Kansas City, MO  
C.M. Cielo, DO, Philadelphia, PA  
S.L. Verhulst, MD, PhD, MSc, Edegem, Belgium

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speakers</th>
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<tr>
<td>8:00</td>
<td>Welcome, Introductions and Overview</td>
<td>Z. Ehsan, MD, Kansas City, MO</td>
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<td>8:05</td>
<td>The Future of Pediatric Sleep: Challenges and Opportunities</td>
<td>D. Gozal, MD, MBA, ATSF, Columbia, MO</td>
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<td>8:25</td>
<td>Recognizing OSA in Children With and Without Respiratory Disease</td>
<td>U.A. Katwa, MD, Boston, MA</td>
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<td>8:40</td>
<td>When It’s Not OSA - Understanding Sleep-Related Breathing Disorders in Children</td>
<td>I.A. Perez, MD, ATSF, Los Angeles, CA</td>
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<td>8:55</td>
<td>Polysomnography for the Non-Sleep Doc: Looking Beyond the AHI</td>
<td>J.E. Maclean, BSc(Hons), MD, PhD, Edmonton, Alberta, Canada</td>
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<tr>
<td>9:10</td>
<td>When Polysomnography Is Not an Option: Alternative Testing and Where They Fit In</td>
<td>R. Bhattacharjee, MD, San Diego, CA</td>
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<td>9:25</td>
<td>Break</td>
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<tr>
<td>10:45</td>
<td>Breakout Groups/Case Discussions</td>
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<tr>
<td>11:36</td>
<td>Lunch</td>
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<td>12:36</td>
<td>Overview of Non-Invasive Ventilation in Pediatric SRBD</td>
<td>R. Amin, MD, Toronto, Canada</td>
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<td>12:56</td>
<td>Practical Skills Session</td>
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<td>2:16</td>
<td>Break</td>
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<td>2:45</td>
<td>Practical Skills Session</td>
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<td>3:50</td>
<td>Closing Remarks</td>
<td>Z. Ehsan, MD, Kansas City, MO</td>
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**PG4** STATE OF THE ART MANAGEMENT OF NONINVASIVE VENTILATION FROM HOSPITAL TO AMBULATORY CARE

Pre-registration and additional fees required. Attendance is limited.

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<th>Membership Type</th>
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<td>Member</td>
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<td>LMIC Non-Member</td>
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<td>In-Training</td>
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<td>In-Training LMIC</td>
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Assemblies on Sleep and Respiratory Neurobiology, Clinical Problems, Critical Care

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<tr>
<th>Time</th>
<th>Session</th>
<th>Speakers</th>
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<tr>
<td>8:00</td>
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Target Audience
Health care providers who care for patients with complex pulmonary-sleep disorders and chronic respiratory failure syndromes including noninvasive ventilation; physicians, advanced practice providers, nurses, respiratory therapists, and fellows.

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

- define new strategies for inpatient to ambulatory evaluation and management of complex inpatient pulmonary-sleep disorders
- define strategies for evaluation and management of common chronic hypercapnic respiratory failure syndromes including neuromuscular disease, COPD, obesity hypoventilation syndrome
- develop expertise on management of noninvasive ventilation including advanced respiratory assist devices and home mechanical ventilators

This combined didactic and skills-based course aims to highlight hospital to ambulatory management of complex pulmonary-sleep disorders and chronic hypercapnic respiratory failure syndromes. The skills-based section will focus on state of the art management of noninvasive ventilation including home mechanical ventilation. Attendees will have the opportunity to learn device algorithms, modes, interpretation of device downloads, and apply these skills towards specific disease states to optimize patient care.

Chairing: M. Cao, DO, Stanford, CA
B. Selim, MD, Rochester, MN
S. Sharma, ATSF, Morgantown, WV
J.H. Hansen-Flaschen, MD, ATSF, Wynnewood, PA

8:00 Introductions
M. Cao, DO, Stanford, CA

8:10 Atrial Fibrillation, Arrhythmias, and Transition to Ambulatory Care
R. Mehra, MD, MSCR, ATSF, Cleveland, OH

8:40 Post Operative Discharge on Opiates
J.E. Orr, MD, La Jolla, CA

9:10 ILD Awaiting Lung Transplant
B. Selim, MD, Rochester, MN

9:40 Acute Heart Failure From Inpatient to Ambulatory Care
S. Sharma MD, ATSF, Morgantown, WV

10:10 Break

10:25 Noninvasive Ventilation in Obesity Hypoventilation Syndrome
B. Mokhlesi, MD, MS, Chicago, IL

10:55 Advances in Noninvasive Ventilation for ALS
J.H. Hansen-Flaschen, MD, ATSF, Wynnewood, PA

11:25 Updates in Noninvasive Ventilation for Stable Hypercapnic COPD
J.M. Coleman, MD, Chicago, IL

11:55 Lunch

12:45 Practical Skills Session
Respiratory Assist Devices: Differences Between S/ST/PC
D. Zielinski, MD, Montreal, Canada
M. Kaminska, MD, Montreal, Canada

Differences Between ASV vs VAPS
B. Selim, MD, Rochester, MN
A. Sahni, MBBS, Chicago, IL

Home Mechanical Ventilators
M. Cao, DO, Stanford, CA
J.M. Coleman, MD, Chicago, IL

2:15 Break

2:30 Practical Skills Session
NIV Downloads
J.E. Orr, MD, La Jolla, CA
S.L. Katz, MD, Ottawa, Canada

Daytime Ventilation Modes
L.F. Wolfe, MD, Chicago, IL
B. Lussier, MD, Dallas, TX

Mechanical Airway Clearance
K.A. Provost, DO, PhD, Buffalo, NY
J.P. Brown, MD, PhD, Salt Lake City, UT
This is part 2 of a two-part course which includes PG1A on Friday, May 19. Pre-registration and additional fees required. Attendance is limited. See PG1A for course fees.

Target Audience
Providers of critical care or emergency medicine

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

• apply ultrasound at bedside to assess critically ill patients
• apply ultrasound to guide common ICU procedures
• diagnose alternate etiologies of shock in the critically ill patient

This is a 2-day postgraduate course that consists of didactic lectures and hands-on stations. The focus is primarily bedside transthoracic echocardiography, with some diagnostic ultrasound. The topics include basic and intermediate critical care echocardiography (including hemodynamic measures), assessment of fluid status, procedural guidance for vascular access and thoracentesis, venography. The hands-on stations will include both healthy models and laptops that can demonstrate abnormal pathology.
2:30  **Practical Skills Session: Hands-On Station IV**

**Abdominal Ultrasound**
D.A. Sweeney, MD, La Jolla, CA
Z. Shanman, MD, Cleveland, OH
D. Pradhan, MD, ATSF, New York, NY
S. Sarzynski, MD, MHSc, Bethesda, MD
G.B. Allen, MD, Burlington, VT
S. Cha, MD, Baltimore, MD

**Echo in Shock and CPR**
C. Bennett, DO, Rochester, MN
R.E. Burk, MD, Reno, NV
L. Rapoport, MD, MS, Santa Clara, CA
A. Sarwal, MD, Winston-Salem, NC
S. Bain, MD, Seattle, WA
J.E. Pittman, MD, Salt Lake City, UT

**Ask the Expert**
A. Leibowitz, MD, Boston, MA
X. Monnet, MD, PhD, Le Kremlin-Bicêtre, France
V.A. Dinh, MD, Loma Linda, CA
J. Kasal, MD, St. Louis, MO
J.C. Klick, MD, Burlington, VT
P.K. Mohabir, MD, Stanford, CA

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**CLINICAL POSTGRADUATE COURSE**

**PG5  SEVERE ASTHMA 2023: IMPLEMENTING CURRENT GUIDELINES INTO PRACTICE**

Pre-registration and additional fees required. Attendance is limited.

- Member: $440
- LMIC Member: $310
- Non-Member: $540
- In-Training Member: $255
- LMIC In-Training Member: $180
- In-Training Non-Member: $380

Assemblies on Allergy, Immunology and Inflammation

8:00 a.m. - 4:00 p.m.

**Target Audience**
Pulmonary and allergy physicians, physicians in training, and advanced practice providers who care for patients with asthma.

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

- discuss how to interpret clinical guidelines recommendations
- identify adults and children with asthma in whom monoclonal anti-IL5 antibody, omalizumab, tiotropium, and macrolides are indicated
- describe a NIH clinical trial testing personalized treatment options for severe asthma

This session will provide a comprehensive, pragmatic overview of the latest guidelines for severe asthma management from GINA, the NAEPP and ATS/ERS, with a particular focus on how they can be incorporated into practice. Course faculty are experts involved in the creation of these guidelines. The course will incorporate interactive case-based review and panel discussion.

**Chairing:**  P. Akuthota, MD, ATSF, La Jolla, CA
M. Kraft, MD, ATSF, New York, NY
B.D. Medoff, MD, Boston, MA
F. Holguin, MD, MPH, Aurora, CO

8:00  **How Should I Interpret the ERS/ATS Severe Asthma Guidelines?**
F. Holguin, MD, MPH, Aurora, CO

8:30  **Anti-Eosinophil and Anti-IL-4/IL-13 Therapies in Severe Asthma: What Do the Guidelines Say?**
Speaker to be Announced

9:00  **Omalizumab in Severe Asthma: Where Does It Fit In Now?**
Speaker to be Announced

9:30  **Case-Based Panel Discussion**
M. Kraft, MD, ATSF, New York, NY

10:05  **Long-Acting Muscarinic Antagonists: Good for All with Severe Asthma?**
Speaker to be Announced

10:35  **Macrolides in Severe Asthma: Underutilized in the Age of Biologics?**
Speaker to be Announced

11:05  **Frontiers in Clinical Trial Designs in Severe Asthma**
L.C. Denlinger, MD, PhD, Madison, WI

11:35  **Case-Based Panel Discussion**
P. Akuthota, MD, ATSF, La Jolla, CA

11:55  Lunch

12:35  **GINA and NAEPP Guidelines: Differences, Similarities, and Implementation Challenges**
J.A. Krishnan, MD, PhD, ATSF, Chicago, IL

1:05  Break

1:15  **Severe Asthma Case Discussion**
Speaker to be Announced

3:15  **Panel Discussion with Guideline Co-Chairs**
B.D. Medoff, MD, Boston, MA
# Behavioral • Clinical Postgraduate Course

**PG6** TOWARDS DISMANTLING STRUCTURAL INJUSTICE IN PULMONARY AND CRITICAL CARE MEDICINE - A PRIMER ON HEALTH EQUITY RESEARCH

Pre-registration and additional fees required. Attendance is limited.
- Member: $440
- LMIC Member: $310
- Non-Member: $540
- In-Training Member: $255
- LMIC In-Training Member: $180
- In-Training Non-Member: $380

**Assemblies on Behavioral Science and Health Services Research; Health Equity and Diversity Committee; Section on Medical Education**

8:00 a.m. - 4:00 p.m.

**Target Audience**
Clinicians and scientists interested in health equity research and examining the relationship between social determinants of health and outcomes in pulmonary, critical care, and sleep medicine.

**Objectives**
At the conclusion of this session, the participant will be able to:
- construct a research question grounded in equity theories and frameworks
- propose a research agenda using tailored methods that center marginalized groups
- create a dissemination plan that maximizes reach and policy impact

Structural inequities lead to poor health outcomes for marginalized patients with pulmonary, critical care, and sleep related illnesses. The goal of this postgraduate course is to engage non-equity investigators from all career stages and provide them with a primer on doing health equity research. This session will leverage case studies and facilitated small group exercises to introduce principles of health equity research and allow participants to apply these principles in real time to practice developing their own health equity research proposal.

**Chairing:**
- J. Odackal, MD, MSc, MA, Westerville, OH
- D.C. Ashana, MD, MBA, MS, Durham, NC
- M. Sharp, MD, MHS, Baltimore, MD

8:00 Introduction to Seminar and Learning Objectives
8:15 Health Equity Research Theory and Framework
C.E. Brown, MD, MA, Seattle, WA
8:45 Breakout Session #1: Generating a Health Equity Research Question
9:15 Break
10:45 Selecting and Applying Quantitative Methods in Equity Research
S.O. Okelo, MD, PhD, Los Angeles, CA
11:15 Unique Aspects of Qualitative Methods in Equity Research
T. Bryant-Stephens, MD, Philadelphia, PA
11:45 Lunch
12:45 A Mixed-Methods Evaluation of Disparities in Clinical Communication
D.C. Ashana, MD, MBA, MS, Durham, NC
1:15 Breakout Session #2: Generating a Health Equity Research Agenda
1:40 Break
2:10 Panel Discussion: Writing About Health Disparities
C. Fuller, ScD, MS, Atlanta, GA
3:20 Breakout Session #3: Writing a Health Equity Research Proposal
3:45 Review and Wrap-Up

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# Clinical • Translational Postgraduate Course

**PG7** UPDATES ON LUNG TRANSPLANTATION; WHAT PULMONOLOGISTS NEED TO KNOW

Pre-registration and additional fees required. Attendance is limited.
- Member: $440
- LMIC Member: $310
- Non-Member: $540
- In-Training Member: $255
- LMIC In-Training Member: $180
- In-Training Non-Member: $380

**Assemblies on Clinical Problems, Allergy, Immunology and Inflammation, Critical Care**

8:00 a.m. - 4:00 p.m.

**Target Audience**
Providers caring for patients with end-stage lung diseases, that might benefit from lung transplant. Pulmonologists, thoracic surgeons, physical therapists, pharmacists, transplant pulmonologists, surgeons, and trainees interested in lung transplant.

**Objectives**
At the conclusion of this session, the participant will be able to:
This session will provide updates and cover important topics of lung transplant that are highly relevant to ATS attendees. The audience will learn about indications and proper referral, donor selection, operative care and complication as well as immune mediated rejections and long term outcomes of lung transplant.

**Chairing:**
C.A. Hage, MD, ATSF, Pittsburgh, PA  
C.M. Shaver, MD, PhD, Nashville, TN  
J.F. McDyer, MD, Pittsburgh, PA  
P.M. Shah, MD, Baltimore, MD

### Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Introduction</td>
<td>C.A. Hage, MD, ATSF, Pittsburgh, PA</td>
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<tr>
<td>8:05</td>
<td>Indications and Timing of Referral for Lung Transplant; Who and When?</td>
<td>L.J. Benvenuto, MD, New York, NY</td>
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<td>8:30</td>
<td>Optimization of Lung Transplant Recipients; How Can It Be Achieved?</td>
<td>M.R. Anderson, MD, MS, Philadelphia, PA</td>
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<tr>
<td>8:55</td>
<td>Is My Patient Ready for Listing, Science or Art and How Can We Quantify Readiness?</td>
<td>G.S. Dhillon, MPH, MD, Stanford, CA</td>
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<tr>
<td>9:20</td>
<td>Panel Discussion</td>
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<tr>
<td>9:35</td>
<td>Break</td>
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<tr>
<td>9:50</td>
<td>Donor Management and Selection; Is There a Perfect Donor for My Recipient?</td>
<td>E. Cantu III, MD, MSCE, Philadelphia, PA</td>
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<tr>
<td>10:15</td>
<td>Perioperative Care of Lung Transplant, Mechanical Ventilation, ECMO and Other Critical Care Treatments</td>
<td>J.C. Salgado, MD, Miami, FL</td>
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<tr>
<td>11:05</td>
<td>Panel Discussion</td>
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<tr>
<td>11:20</td>
<td>Airway and Vascular Complications Mimicking Acute Rejection</td>
<td>M.M. Crespo, MD, Philadelphia, PA</td>
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<tr>
<td>11:45</td>
<td>Lunch</td>
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<tr>
<td>12:45</td>
<td>Acute Cellular Rejection; Updates on Diagnosis and Management</td>
<td>M.E. Snyder, MD, Pittsburgh, PA</td>
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**Note:**
Pre-registration and additional fees required. Attendance is limited.

**Member:** $440  
**In-Training Member:** $255  
**LMIC Member:** $310  
**LMIC In-Training Member:** $180  
**Non-Member:** $540  
**In-Training Non-Member:** $380

### Target Audience
This course should be broadly relevant to those who provide clinical care for patients with ILD. This will include fellows, general pulmonologists, ILD specialists, and advanced care nurses.

### Objectives
At the conclusion of this session, the participant will be able to:
- be able to apply a consistent, effective strategy to ILD/IPF diagnosis
- understand the range of therapeutics available for ILD and how and when to prescribe them
be able to integrate a holistic and interdisciplinary approach to ILD patient care

This course will provide a practical approach to the diagnosis and management of patients with ILD. It will bring recommendations and guidelines into a usable strategy that will facilitate the care of patients with ILD. This will occur through didactics, simulated MDD, and panel discussions of difficult cases with audience engagement through audience response which will provide a range of learning strategies to help the largest number of learners.

Chairing: M. Kreider, MD, MSCE, ATSF, Philadelphia, PA  
S.K. Danoff, MD, PhD, ATSF, Baltimore, MD

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Chair(s)</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Introduction</td>
<td>M. Kreider, MD, MSCE, ATSF, Philadelphia, PA</td>
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<tr>
<td>8:10</td>
<td>Clinical Evaluation of the New ILD Patient</td>
<td>S. Sood, MD, MS, Philadelphia, PA</td>
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<tr>
<td>8:35</td>
<td>New Guidelines for the Diagnosis of ILD</td>
<td>K.I. Aronson, MD, MSci, New York, NY</td>
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<tr>
<td>9:00</td>
<td>Recognizing CT Patterns</td>
<td>S. Hobbs, MD, Lexington, KY</td>
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<tr>
<td>9:25</td>
<td>Patients at Risk for ILD</td>
<td>R.K. Putman, MD, MPH, Boston, MA</td>
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<tr>
<td>9:50</td>
<td>Break</td>
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<tr>
<td>10:20</td>
<td>Natural History of Disease and Monitoring</td>
<td>A.O. Adegunsoye, MD, MS, Chicago, IL</td>
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<tr>
<td>10:45</td>
<td>Speed MDD</td>
<td>S.K. Danoff, MD, PhD, ATSF, Baltimore, MD; K.I. Aronson, MD, MSci, New York, NY; L.P. Hariri, MD, PhD, ATSF, Boston, MA; S. Hobbs, MD, Lexington, KY; V. Steen, MD, Washington, DC; A.O. Adegunsoye, MD, MS, Chicago, IL</td>
</tr>
<tr>
<td>11:55</td>
<td>Lunch</td>
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<tr>
<td>12:55</td>
<td>Therapies for Pulmonary Fibrosis</td>
<td>T.J. Corte, MBBS, BScM, PhD, Sydney, Australia</td>
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<tr>
<td>1:20</td>
<td>Therapies for CTD-ILD</td>
<td>F. Castelino, MD, Boston, MA</td>
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<tr>
<td>1:45</td>
<td>Non-Pharmacologic Care in ILD</td>
<td>M. Wijsenbeek, MD, PhD, Rotterdam, Netherlands</td>
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<tr>
<td>2:10</td>
<td>Break</td>
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**PG9 FUND ME: OVERCOMING THE BARRIERS AND CHALLENGES TO SUCCESSFUL CAREER DEVELOPMENT AWARDS**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>2:40</td>
<td>Tough Cases</td>
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</table>
| M. Kreider, MD, MSCE, ATSF, Philadelphia, PA  
R.K. Putman, MD, MPH, Boston, MA  
A.O. Adegunsoye, MD, MS, Chicago, IL  
T.J. Corte, MBBS, BScM, PhD, Sydney, Australia  
M. Wijsenbeek, MD, PhD, Rotterdam, Netherlands  
S.K. Danoff, MD, PhD, ATSF, Baltimore, MD  
V. Steen, MD, Washington, DC  
L.P. Hariri, MD, PhD, ATSF, Boston, MA  
S. Hobbs, MD, Lexington, KY  
A. Calypso, MSN, CRNP, Baltimore, MD |
| 3:50          | Wrap-Up                                                                 |
| S.K. Danoff, MD, PhD, ATSF, Baltimore, MD |

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**BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL POSTGRADUATE COURSE**

**Pre-registration and additional fees required. Attendance is limited.**

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Assemblies on Critical Care, Behavioral Science and Health Services Research, Clinical Problems, Nursing, Pediatrics, Pulmonary Infections and Tuberculosis, Respiratory Cell and Molecular Biology; Supported by MITT

**8:00 a.m. - 4:00 p.m.**

**Target Audience**

Early-stage investigators (fellows, junior faculty, advanced practice nurses, PhDs) interested in submitting clinical, translational, health services, or implementation science F, K, or other career development awards.

**Objectives**

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

- compose a competitive mentored grant award application with an emphasis on innovative research and training plans that highlight the candidate’s potential as well as the strength of their mentorship team and institutional environment
- formulate and articulate integrated training, mentoring, and research plans that outline a clear path forward for future independent funding and career development
- gain a better understanding of the grant review process, including resubmission, through participation in a mock study section

Writing mentored research awards can be paralyzing and stressful. In this session, participants will learn fundamental skills needed to develop a competitive mentored grant proposal, including how to write...
compelling specific aims and develop integrated research, mentoring, and training plans that outline a clear trajectory to future awards and independence. Participants will gain an appreciation of the review process through participation in a mock study section and interact throughout the day with a diverse faculty composed of previous awardees, experienced mentors, grant reviewers and program officers from various funding bodies. This session will be broadly applicable to potential applicants with any clinical, basic, translational, or health services research focus.

Chairing: E.M. Viglianti, MD, MPH, MSc, Ann Arbor, MI  
S.J. Denstaedt, MD, Ann Arbor, MI  
H.L. Lindroth, PhD, RN, Rochester, MN  
M. Long, PhD, Columbus, OH

8:00 Introductions  
E.M. Viglianti, MD, MPH, MSc, Ann Arbor, MI

8:10 Anatomy of a Career Development Award  
H.L. Lindroth, PhD, RN, Rochester, MN

8:25 How Do You Know You Are Ready to Write a Mentored Grant?  
D. Sheppard, MD, San Francisco, CA

8:35 What Are Potential Sources of Funding for Mentored Grants?  
D.K. Costa, PhD, RN, Orange, CT

8:45 Panel Discussion: Tips From Successful Grant Recipients  
K.O. Lindell, PhD, RN, ATSF, Charleston, SC

9:20 Break

9:30 Integrated Career Development and Training Plans  
T.S. Valley, MD, MSc, Ann Arbor, MI

10:00 Small Group Breakout: Career Development/Training Plans  
S.J. Denstaedt, MD, Ann Arbor, MI

10:50 Break

11:00 Writing Compelling Specific Aims  
J.A. Bastarache, MD, Nashville, TN

11:30 Small Group Breakout: Writing Specific Aims  
E.M. Viglianti, MD, MPH, MSc, Ann Arbor, MI

12:00 Research Plan Basics  
T.J. Iwashyna, MD, PhD, Baltimore, MD

12:30 Lunch

1:00 The Other Sections: Facilities, Budget, Animals, Humans and More  
K.M. Ridge, PhD, Chicago, IL

1:25 Questions and Answers With NIH Program Officers  
M. Craig, PhD, Bethesda, MD

1:50 NIH Scoring  
E.M. Viglianti, MD, MPH, MSc, Ann Arbor, MI

2:05 Mock Study Section  
S.J. Denstaedt, MD, Ann Arbor, MI

2:45 Break

2:55 Post-Grant Review: What Happens Next  
J.W. Christman, MD, ATSF, Columbus, OH

3:10 Making the Most of a Career Development Grant and Other Nitty-Gritty  
C.T. Hough, MD, MSc, Portland, OR

3:25 Disparities Across Grantee Populations  
N. Kaminski, MD, ATSF, New Haven, CT

3:40 Panel Discussion and Wrap-Up  
M. Long, PhD, Columbus, OH

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**Clinical Postgraduate Course**

**PG10 QUITTING IS WINNING: TOBACCO AND E-CIGARETTE CESSATION**

- Pre-registration and additional fees required. Attendance is limited.
- **Member:** $440  
  **In-Training Member:** $255  
  **LMIC Member:** $310  
  **LMIC In-Training Member:** $180  
  **Non-Member:** $540  
  **In-Training Non-Member:** $380

- Assemblies on Environmental, Occupational and Population Health; Behavioral Science and Health Services Research; Nursing; Pediatrics; Tobacco Action Committee, Pediatric Advocacy Subcommittee

- **8:00 a.m. - 4:00 p.m.**

**Target Audience**  
Clinicians, trainees and multidisciplinary allied health personnel.

**Objectives**

- At the conclusion of this session, the participant will be able to:
  - describe the differences between various types of tobacco, nicotine, and vaping products and how this affects risk and nicotine dependence
  - appropriately evaluate and treat patients of all ages with nicotine dependence, utilizing both behavioral and pharmacologic interventions based on new guideline recommendations and best practices
  - improve the quality of care provided to those with nicotine dependence by understanding how to develop inpatient and outpatient treatment services

The primary goal of this session is to provide learners with up-to-date, evidence-based knowledge and skills in the assessment and treatment of nicotine dependence. The course will provide timely information about tobacco products, associated risks, and how this knowledge informs the approach to tobacco cessation. The treatment approach will be individualized and evidence-based, and will span all age groups.
(adolescent to adult) and practice settings (inpatient and outpatient). Timely updates about regulation/policy, cannabinoid use in e-cigarettes, and EVALI will be shared. Course faculty include multidisciplinary clinical, research, and advocacy experts. Participants will attend breakout sessions to refine new skills.

Chairing:
S.C. Sadreameli, MD, MHS, Baltimore, MD
A.E. Lang, PharmD, Fort Eustis, VA
M.E. Rebuli, PhD, Chapel Hill, NC

8:00 Opening Remarks
S.C. Sadreameli, MD, MHS, Baltimore, MD

8:05 Product Overview: From Cigarettes to ENDS and More
S.C. Sadreameli, MD, MHS, Baltimore, MD

8:30 Tobacco Policy and Regulation Updates
G. Ewart, MHS, Washington, DC

8:55 Questions and Answers for Talks 1 and 2
S.C. Sadreameli, MD, MHS, Baltimore, MD
G. Ewart, MHS, Washington, DC

9:05 How Do We Take an Effective History?
S.D. Krefft, MD, MPH, Aurora, CO

9:30 Motivational Interviewing as an Approach to Cessation
M. Eakin, PhD, Baltimore, MD

9:55 Questions and Answers for Talks 3 and 4
S.D. Krefft, MD, MPH, Aurora, CO
M. Eakin, PhD, Baltimore, MD

10:05 Break

10:15 Treatment of Adult Nicotine Dependence
A.E. Lang, PharmD, Fort Eustis, VA

10:40 Treating Tobacco Dependence in the Pediatric Clinic
H.J. Farber, MD, MSPH, ATSF, Houston, TX

11:05 Questions and Answers for Talks 5 and 6
A.E. Lang, PharmD, Fort Eustis, VA
H.J. Farber, MD, MSPH, ATSF, Houston, TX

11:15 Lunch

11:45 Breakout Session

12:45 EVALI: Diagnosis, Treatment, Prevention
M.E. Rebuli, PhD, Chapel Hill, NC

1:10 E-Cigarettes and Cannabinoids
A.P. Tackett, PhD, Los Angeles, CA

1:35 Questions and Answers for Talks 7 and 8
M.E. Rebuli, PhD, Chapel Hill, NC
A.P. Tackett, PhD, Los Angeles, CA

1:45 Break

1:55 Concluding Remarks and Dismissal
A.E. Lang, PharmD, Fort Eustis, VA

ATS  2023 • Washington, DC
Experiences will include didactic sessions, facilitated small-group discussions on designing and executing lung microbiome studies, and demonstrations on the use of statistical software to analyze microbiome data. Attendees will be provided with a set of microbiome data as well as annotated code for hands-on analysis.

Chairing: A.A. Pragman, MD, PhD, Minneapolis, MN  
R.P. Dickson, MD, Ann Arbor, MI  
L.N. Segal, MD, New York, NY

8:00 An Introduction to Thinking About the Microbiome  
R.P. Dickson, MD, Ann Arbor, MI

8:45 Contaminomics  
M.J. Cox, BSc(Hons), PhD, London, United Kingdom

9:15 Integrating Microbiota Findings With Our Disease Models  
A.A. Pragman, MD, PhD, Minneapolis, MN

9:45 Break

10:15 Longitudinal Microbiome Studies  
D. Bogaert, MD, PhD, Edinburgh, United Kingdom

10:45 Studying Viruses and Fungi in Lung Microbiome Studies  
R.G. Collman, MD, Philadelphia, PA

11:15 Hands-On Microbiome Analysis - Part I  
C. Brown, BA, MS, Ann Arbor, MI

12:15 Lunch

1:15 Hands-On Microbiome Analysis - Part II  
C. Brown, BA, MS, Ann Arbor, MI

1:45 Microbial-Host Interactions  
L.N. Segal, MD, New York, NY

2:15 Metagenomics and Metatranscriptomics  
C. Langelier, MD, PhD, San Francisco, CA

2:45 Break

3:15 Introduction to Integrative, Therapeutic and Environmental Applications in Microbiome Studies  
S.H. Chotirmall, MD, PhD, Singapore

3:30 An Introduction to Microbiome Analytics for Integrative Microbiome Studies  
J.K. Narayana, BS, MS, Singapore

3:45 Consultation Session

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### BASIC • TRANSLATIONAL

#### POSTGRADUATE COURSE

**PG12 MOLECULAR TARGETING IN COPD - FROM BASICS THROUGH MULTI-OMIC INTEGRATION TO NOVEL THERAPEUTICS**

Pre-registration and additional fees required. Attendance is limited.  
Member: $440  
In-Training Member: $255  
LMIC Member: $310  
LMIC In-Training Member: $180  
Non-Member: $540  
In-Training Non-Member: $380

Registrants must bring a laptop to the course to view the course material.

Assemblies on Respiratory Cell and Molecular Biology; Environmental, Occupational and Population Health; Respiratory Structure and Function

8:00 a.m. - 4:00 p.m.

**Target Audience**

Basic science researchers looking for novel druggable targets in COPD. Clinicians (clinician scientist) interested in novel approaches to treat COPD.

**Objectives**

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

- understand genetic susceptibility, disease heterogeneity and pathological mechanisms underlying COPD
- learn about novel molecular pathways currently being targeted for future therapeutics
- learn and understand how to use current technologies to delineate novel targets for drug discovery

COPD is the third leading cause of death worldwide but there are only limited symptomatic therapeutic options available with no causal treatment able to reverse or prevent the progression of COPD, revealing a high unmet medical need for novel therapeutics. To combat this problem a thorough understanding of the molecular mechanisms behind COPD are crucial for the development of new targets. Here we present leading avenues of investigation that will enhance the participants understanding of COPD patho-mechanisms and how the integration of cutting-edge technologies can help in our stride towards finding more efficient therapies.

Chairing: Y. Tesfaigzi, PhD, Boston, MA  
E.R. Neptune, MD, ATSF, Baltimore, MD  
I.M. Adcock, PhD, London, United Kingdom  
M.P. Goldklang, MD, New York, NY

8:00 The Future of COPD Research - How We Can Model Susceptibility, Exposures and the Resultant Endotypes?  
A.O. Yildirim, PhD, Munich, Germany

COPD Setting the Scene
CLINICAL POSTGRADUATE COURSE

PG13 HUFFING AND PUFFING: BEST PRACTICE AND STATE OF THE ART IN CPET AND PFT

Pre-registration and additional fees required. Attendance is limited.
- Member: $440
- In-Training Member: $255
- LMIC Member: $310
- LMIC In-Training Member: $180
- Non-Member: $540
- In-Training Non-Member: $380

Target Audience
Current and future directors of PFT and CPET labs, attending physicians, respiratory therapists, clinical physiologists, trainees, fellows, and other interested health care providers.

Objectives
At the conclusion of this session, the participant will be able to:
- integrate/incorporate the principles and practice of pulmonary function diagnostic tests
- improve and develop greater confidence interpreting pulmonary function test results in clinical practice
- apply and improve the performance and interpretation of cardiopulmonary exercise testing

This course will focus on clinical physiology, combining guidelines from the new technical standards published in the past three years and interpretive strategies document published in the last year with interactive experience in small group settings focusing on the performance, interpretation, and reporting of pulmonary function testing (PFT) and cardiopulmonary exercise testing (CPET). We will combine didactic lectures with case-based instruction, small group discussion, and live demonstration of cardiopulmonary exercise testing. We will use a multidisciplinary team approach to facilitate case discussions including content experts, clinicians, physiologists, and pulmonary function laboratory medical directors from around the world.

Chairing:
- T. Decato, MD, Torrance, CA
- M.C. Mccormack, MHS, MD, Baltimore, MD
- H.B. Rossiter, PhD, Torrance, CA

8:00 Blows and Flows: State of the Art in Spirometry
- S. Stanojevic, PhD, Halifax, Canada

8:30 Pump Up the Volume: Interpretation and Assessment of Lung Volumes
- B. Borg, BSc, Melbourne, Australia

8:55 Insane in the Membrane: Demystifying DLCO
- T. Decato, MD, Torrance, CA
9:20 Turbulence Ahead: Updates in Bronchoprovocation Testing
T.S. Hallstrand, MD, MPH, ATSF, Seattle, WA

10:00 Break

10:20 Don’t Forget About the Kids: Essentials in Pediatric Pulmonary Function Testing
C.L. Ren, MD, MBA, ATSF, Philadelphia, PA

10:50 Putting It All Together: Small Group PFT Case Discussions
R. Clay, MD, Clackamas, OR
A.S. Niven, MD, Rochester, MN
K. Jakharia, MBBS, MD, Chapel Hill, NC

11:40 Lunch

12:10 Start Me Up: CPET Patient Setup and Demonstration
C.D. Mottram, RRT, RPFT, Rochester, MN

1:10 Dancing in the Dark: CPET Reference Values
H.B. Rossiter, PhD, Torrance, CA

1:40 Blinded Me With Science: CPET Data Display and Interpretation
D.A. Kaminsky, MD, Burlington, VT

2:10 Break

2:30 What I Like About You: Typical CPET Responses Among Disease States
K.E. Sietsema, MD, Torrance, CA

3:00 Express Yourself: CPET Small Group Cases
T. Decato, MD, Torrance, CA

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CLINICAL • TRANSLATIONAL
POSTGRADUATE COURSE

PG14 STATE OF THE ART: LUNG CANCER IN 2023

Pre-registration and additional fees required. Attendance is limited.
Member: $440
LMIC Member: $310
Non-Member: $540
LMIC In-Training Member: $255
In-Training Member: $180
In-Training Non-Member: $380

Assemblies on Thoracic Oncology; Clinical Problems
8:00 a.m. - 4:00 p.m.

Target Audience
All providers caring for patients with lung nodules/lung cancer (pulmonologists, thoracic surgeons, radiation oncologists, NP/PAs). Those interested in the translational research being done in this field.

Objectives
At the conclusion of this session, the participant will be able to:
• understand recent developments in lung cancer diagnosis
• understand recent advances in the treatment of lung cancer

This course will provide a comprehensive review of topics in the evaluation and management of patients with lung cancer. We discuss recent developments in tobacco control, updated guidelines and practical tips for lung cancer screening, and minimally invasive diagnostic approaches for patients with lung nodules. The treatment of early stage, locally advanced and metastatic disease, highlighting novel/minimally invasive approaches as well as the use, and toxicities of immunotherapy will also be covered. Attention will be given to the impact of lung cancer on underrepresented populations as well as the rising incidence of lung cancer in non-smoking females. Interactive tumor boards will be held to highlight these topics and facilitate audience engagement.

Chairing:
D.J. Feller-Kopman, MD, Lebanon, NH
N.T. Tanner, MD, MSCR, Charleston, SC

8:00 Introduction
D.J. Feller-Kopman, MD, Lebanon, NH

8:05 Engaging the Community in Lung Cancer Screening & Tobacco Cessation
P. Galiatsatos, MD, Baltimore, MD

8:30 Addressing Disparities in Lung Cancer: The Rural Population
R. Hasson, MD, Lebanon, NH

8:55 Lung Cancer Screening: Ensuring High Quality and Improving Uptake
R.S. Wiener, MD, MPH, ATSF, Boston, MA

9:20 Getting to the Nodule: Updates in Advanced Bronchoscopy
S. Shojaee, MD, MPH, Nashville, TN

9:45 Break

10:05 Interactive Tumor Board
D.A. Arenberg, MD, ATSF, Ann Arbor, MI

10:35 Biomarkers in Lung Cancer: From Early Detection to Prognosis
A. Vachani, MD, MS, Philadelphia, PA

11:00 Addressing Disparities: Lung Cancer in Women
N.T. Tanner, MD, MSCR, Charleston, SC

11:25 Updates in the Surgical Treatment of Lung Cancer
D. Molena, MD, New York, NY

11:50 Lunch

12:50 Updates on SBRT for Lung Cancer
S. Badiyan, MD, St. Louis, MO

1:15 The Role of Immunotherapy in Lung Cancer
S. Scott, MD, Baltimore, MD

1:40 Interactive Tumor Board
D.J. Feller-Kopman, MD, Lebanon, NH
PG15  TEACHING SKILLS FOR BUSY CLINICIANS: EFFICIENT AND EFFECTIVE TEACHING STRATEGIES FOR ALL CLINICIANS

Pre-registration and additional fees required. Attendance is limited.
- Member: $440
- In-Training Member: $255
- LMIC Member: $310
- LMIC In-Training Member: $180
- Non-Member: $540
- In-Training Non-Member: $380

Education Committee
8:00 a.m. - 4:00 p.m.

Target Audience
Physicians, Physicians In-Training, Advanced Practice Providers, Nurses, Pharmacists, Respiratory Therapists, Medical Students, anyone who teaches

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

• identify and define effective strategies for teaching adult medical learners in different clinical settings
• describe educational strategies for promoting critical thinking, giving feedback, and mentoring effectively
• review and practice strategies to improve your white board teaching and your PowerPoints

Teaching is a core component of medical practice, from teaching patients about their medical conditions to helping students and trainees develop their clinical skills. Most physicians, however, have not had formal training on best practices in medical education, and are not aware of evidence-based strategies for teaching medical learners. In this postgraduate course, medical education experts from the American Thoracic Society will review effective and efficient teaching strategies that participants can incorporate into their teaching activities. Through an interactive, hands-on approach participants will learn about and have the opportunity to practice the teaching skills covered in this course.

Chairing:
- M.M. Hayes, MD, ATSF, Boston, MA
- J.B. Richards, MD, MA, ATSF, Cambridge, MA
- J.C. Ferreira, MD, PhD, ATSF, Sao Paulo, Brazil
ATS 2023 kicks off with the Opening Ceremony, featuring a keynote address by Stephen K. Klasko, MD, MBA. During his career he has been dean at two medical colleges (Drexel and University of South Florida), president of a University (Thomas Jefferson University) and CEO of two academic health systems (USF Health and Jefferson Health).

Dr. Klasko was named a distinguished fellow of the World Economic Forum in 2020, the #2 most influential person in healthcare in 2018 by Modern Healthcare, the #21 most creative person in business by Fast Company in 2019 and has been a Becker’s top 100 healthcare leader for the last 5 years in a row.

At Thomas Jefferson University, he led a system that in eight years went from a two hospital, one campus university with $1 billion in revenue to an 18 hospital, two campus university with almost 10,000 students and a Medicaid and Medicare Advantage health insurance plan, making Jefferson the first “integrated delivery and financial network” in Philadelphia. He led the integration of Jefferson’s extensive academic pulmonary program through a significant donation to create the Korman Respiratory Institute and led the integration of that institute into a partnership with National Jewish.

He has written six books from 1999 to 2023 each one advocating for transformations in patient centered healthcare and innovative medical education. His book UnHealthcare: A Manifesto for Health Assurance has been translated to several languages.

Dr. Klasko has written more than 100 articles for business journals, blogs and podcasts on the need for more equitable healthcare and “healthcare at any address” and started the Philadelphia Collaborative for Health Equity which has been replicated in several other cities. He was featured in the European Business Review for his exemplary leadership during the COVID crisis in an article called Leadership Plus penned by the chair of leadership at Wharton Business School, Michael Useem.

Also during the Opening Ceremony:

• ATS President Greg Downey, MD, ATSF, will provide an update of the Society’s major accomplishments for the past year and priorities for the coming one;

• The latest class of ATS Fellows and Research Program awardees will be recognized; and

• The Public Service Award, World Lung Health Award, Jo Rae Wright Award for Outstanding Science and J. Randall Curtis Humanism Award will be presented.
The Network Exchange is a welcome event for all Early Career Professionals (residents, fellows, post docs, IP members, and other medical professionals) and takes place on Saturday following the Opening Ceremony. This one-hour event allows attendees to network and mingle with peers as well as provides information at the start of the conference. This event includes cocktails and appetizers.

What to expect at the one-hour event?
- Come mingle with colleagues, mentors and peers
- Learn about the ATS Road Map for Early Career Professionals
- Learn how you can become an ATS member for FREE and much more

This event is sponsored / organized by the Members in Transition and Training (MITT) committee.

This event is free to paid conference registrants
MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.

$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members

7:00 a.m. - 8:00 a.m.

MTE1 EMERGING PRESENTATIONS OF ILLICIT OR SYNTHETIC DRUGS TOXICITY
P. Camus, MD, Dijon, France
A.H. Limper, MD, Rochester, MN

MTE2 IS OBSTRUCTIVE SLEEP APNEA EFFECTING MY BRAIN; LESSONS FROM BENCH TO BEDSIDE
C. Lal, MD, ATSF, Charleston, SC

MTE3 CYSTIC FIBROSIS IN THE ICU: BPH, BACTERIA, AND BEYOND
G.R. Winter, MD, Birmingham, AL

MTE4 CARING FOR CHILDREN WHO RECEIVE HEMATOPOIETIC STEM CELL TRANSPLANTATION FOR NON-MALIGNANT INDICATIONS
C. Towe, MD, Cincinnati, OH
A. Gupta, MBBS, MPH, Minneapolis, MN

10:45 a.m. - 11:45 a.m.

MTE5 LUNG NODULE: HOW CAN WE INCREASE THE BIOPSY DIAGNOSTIC YIELD
W. Hadid, MD, Lexington, KY

MTE6 QUALITATIVE RESEARCH FOR THE QUANTITATIVE SCIENTIST: INCORPORATING QUALITATIVE METHODS INTO SCHOLARSHIP AND CLINICAL PRACTICE
M. Eakin, PhD, Baltimore, MD
C.T. Hough, MD, MSc, Portland, OR
S.J. Niranjhan, PhD, MS, BPharm, Birmingham, AL
K. Hauschildt, PhD, Baltimore, MD

K1: KEYNOTE SERIES

8:00 a.m. - 8:45 a.m.

The ATS Keynote Series focuses on timely topics of high relevance to the pulmonary, critical care, and sleep medicine community. Keynote lectures feature leaders who have made major contributions in the important themes programmed at the 2023 conference and are unopposed by any other programming.

The inaugural Fran Comi Keynote Lecture will focus on: Minority Health Equity and Disparities

Speaker: Eliseo J. Pérez-Stable, M.D

YEAR IN REVIEW

A1 CLINICAL YEAR IN REVIEW 1

9:00 a.m. - 10:30 a.m.

Target Audience
Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

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

• apply new clinical research knowledge to clinical practice
• apply new findings about key conditions in pulmonary, critical care and sleep
• learn new strategies to manage the care of common conditions in pulmonary, critical care, and sleep

Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

Chairing:
R.J. Shah, MD, MSCE, San Francisco, CA
J.C. Ferreira, MD, PhD, ATSF, Sao Paulo, Brazil
S. Auld, MD, MSc, Atlanta, GA

9:00 ALI/ARDS
D.W. Russell, MD, Birmingham, AL
9:22  Pulmonary Vascular Disease  
G.A. Heresi, MD, MSci, Cleveland, OH

9:45  COPD  
S. Christenson, MD, MS, San Francisco, CA

10:07  ILD  
R.K. Putman, MD, MPH, Boston, MA

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**A2  JAMA AND THE NEW ENGLAND JOURNAL OF MEDICINE. DISCUSSION ON THE EDGE: REPORTS OF RECENTLY PUBLISHED CRITICAL CARE RESEARCH**

9:00 a.m. - 10:30 a.m.

This session will provide a forum for attendees to interact with the authors and editors about papers published in JAMA 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 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.

*Speakers and Talks to be Announced*

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**A3  FELLOWS CASE CONFERENCE**

Assemblies on Behavioral Science and Health Services Research; Training Committee

9:00 a.m. - 10:30 a.m.

**Target Audience**
Clinicians, nurses, fellows, residents, and researchers looking to broaden their clinical acumen to facilitate clinical and translational research

**Objectives**
At the conclusion of this session, the participant will be able to:
- recognize clinical, radiographic, and pathologic findings of rare diseases
- gain insight into clinical decision-making skills demonstrated by master clinicians, radiologists, and pathologists which will improve the quality of learners’ practice and potentially improve the quality of care for the learner’s patients
- develop strategies to evaluate patients with common symptoms that include uncommon/rare diseases in the differential diagnosis when appropriate

In this session, six unknown cases will be presented by fellows to a panel of experts in a traditional Clinical Pathology Conference (CPC) format. The panel of experts includes three clinician experts, an expert radiologist, and an expert pathologist. The panel of clinician experts will discuss the key clinical elements of the history and a differential diagnosis. The expert radiologist and pathologist will interpret the imaging and pathology, respectively, which the expert clinician will then use to further the discussion and ultimately make a diagnosis.

*Chairing:  M.M. Lee, MD, ATSF, FCCP, FACP, Los Angeles, CA  
C.M. Bojanowski, MD, MSCR, New Orleans, LA*

9:00  Expert Clinician  
A.E. Dixon, MA, BM BCH, ATSF, Burlington, VT

9:20  Expert Clinician  
M.P. Rivera, MD, ATSF, Rochester, NY

9:40  Expert Clinician  
E. Schmidt, MD, ATSF, Aurora, CO

10:00  Expert Radiologist  
B. Elicker, MD, San Francisco, CA

10:20  Expert Pathologist  
J.L. Myers, MD, Ann Arbor, MI

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**A4  ACHIEVING HEALTH EQUITY IN GLOBAL CRITICAL CARE: CHALLENGES AND INNOVATIONS**

Assembly on Critical Care; Africa Interest Group

9:00 a.m. - 10:30 a.m.

**Target Audience**
All critical care physicians, advance practice providers, nurses and allied health providers with an interest in healthcare equity and diversity on a global level

**Objectives**
At the conclusion of this session, the participant will be able to:
- better understand challenges and nuances of critical care delivery in diverse practice settings globally
- incorporate innovative solutions to best practices in critical care in lower-resourced settings around the world
- describe innovations in critical care research, education and practice in lower-resourced settings
The practice of critical care around the world varies considerably based on environment, geography, and human and material resource availability. Consequently, effective critical care delivery often requires nuance and adaptation. With an emphasis on global equity and diversity, this session provides perspective on innovations that improve outcomes in lower-resourced settings. This multidisciplinary session will cover a diversity of essential topics relevant to attendees interested in critical care delivery in strained settings around the world.

Chairing:
A. Papali, MD, CM, Charlotte, NC
D.O. Obaseki, MD, ATSF, Ile-Ife, Nigeria

9:00 Crisis Standard of Care Protocols in Low-Resource Settings: Ensuring Equity Amidst Scarcity
E.D. Riviello, MD, MPH, Boston, MA

9:07 Crisis Standards of Care Protocols in Low-Resource Settings: Ensuring Equity Amidst Scarcity
Speaker To Be Announced

9:15 Sepsis Treatment Around the World: Challenges and Innovations
J.C. Ferreira, MD, PhD, ATSF, Sao Paulo, Brazil

9:30 Oxygen Delivery: Overcoming Supply Chain Problems During the COVID-19 Pandemic
E. Vanderwal, PA, Sidvokodvo, Swaziland

9:45 Innovations in Critical Care Education: Lessons from Kenya
B.W. Lee, MD, Bethesda, MD

10:00 Decolonizing Global Critical Care
R. Haniffa, MD, Edinburgh, United Kingdom

10:15 Essential Emergency and Critical Care
Speaker To Be Announced

Occupational and environmental lung diseases are caused by the inhalation of chemical irritants, allergens or toxins in work or home environments. Most diseases are caused by repeated, long-term exposure, but even a one-time or indirect contact with a hazardous agent can result in lung diseases with lasting effects.

Environmental exposures related to fossil fuel and heavy metals and occupational exposures related to silica and coal mining generate oxidative stress and inflammation in the lungs. Sustained oxidative stress causes DNA damage, epigenetic instability, mitochondrial dysfunction, and cell cycle arrest in key progenitor cells in the lung.

Inhaled environmental exposures accelerate lung aging by injuring the lungs and damaging the cells responsible for wound healing. Novel exposure assessment methods, including functional imaging and -omics studies, together with mathematical models are needed to quantify environmental exposures. Interventions that minimize exposure to noxious antigens are critical to improve lung health, and novel research is required to expand our knowledge of therapies that may slow or prevent premature lung aging.

Speakers and Talks to be Announced

Beyond Transcriptomics: The Next Frontier in COPD/Emphysema

A6

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Clinical Problems; Section on Genetics and Genomics

9:00 a.m. - 10:30 a.m.

Target Audience
Providers of lung health care, those who provide care to patients with COPD/emphysema, and basic and translational scientists with an interest in COPD/emphysema and gene x environment interactions

Objectives
At the conclusion of this session, the participant will be able to:
• apply emerging data to identify cell types and lung compartments injured in COPD to more accurately discuss disease biology and likely disease trajectories with patients to improve care quality
• understand existing gaps in the knowledge of pathobiology in COPD
• identify emerging resources and data being applied to facilitate future therapeutic development

Therapeutic discoveries have not kept pace with the significant, world-wide burden of disease associated with COPD/emphysema. No major class of drugs has introduced for COPD therapy in decades, suggesting the urgent need to delineate disease mechanisms that will facilitate drug discovery. Multiple recent publications have detailed at single-cell resolution the cellular transcriptional response to chronic smoke exposure and COPD/emphysema, particularly in the in the distal airways and alveoli. This session will explore approaches, including the integration of multi-omic datasets and the application of longitudinal

This is part 1 of a 2-part symposium.
Part 1 focuses on quantification of environmental exposures using state-of-the-art methods.
Part 2 on Sunday, May 21, 2:15 p.m.-3:45p.m. focuses on the physiological and cellular impact of environmental exposures.
cohorts and novel model systems that will extend understanding of disease mechanisms to facilitate therapeutic discovery.

Chairing:
- A.A. Wilson, MD, Boston, MA
- A.X. Zhou, PhD, Boston, MA
- M.C. Basil, MD, PhD, Philadelphia, PA

09:00 RASCs, BASCs, or TASCs? ASCing What Cells in the Respiratory Bronchioles Contribute to COPD Pathogenesis
M.C. Basil, MD, PhD, Philadelphia, PA

09:13 CAPitalizing on Single Cell RNA Sequencing to Identify Dysregulated Alveolar Endothelium in COPD
M. Sauler, MD, New Haven, CT

09:26 Integrating GWAS Signals with Omics Datasets to Identify Causal Variants in COPD
M.H. Cho, MPH, MD, Boston, MA

09:39 Application of Human iPSC Model Systems to Illuminate the Functional Contribution of COPD GWAS Genes to Cellular Phenotypes
R. Werder, PhD, Melbourne, Australia

09:52 Novel Signaling Pathways as Potential Therapeutic Targets in COPD Pathogenesis
E.R. Neptune, MD, ATSF, Baltimore, MD

10:04 Can Insights from the Pediatric Lung Teach Us About COPD?
X. Sun, PhD, San Diego, CA

10:17 Leveraging Multilevel Profiling of Longitudinal Cohort Participants to Illuminate COPD Endotypes
M.R. Faner, PhD, BSc, Barcelona, Spain

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**BEHAVIORAL • CLINICAL • SCIENTIFIC SYMPOSIUM**

**A7 THE NEW ATS CLINICAL PRACTICE GUIDELINES FOR PULMONARY REHABILITATION**

Assemblies on Pulmonary Rehabilitation; Behavioral Science and Health Services Research

09:00 a.m. - 10:30 a.m.

**Target Audience**
Clinicians and researchers working with patients with chronic respiratory disease, in particular those involved in PR, as well as patients, care givers and patient advocacy groups with an interest in PR.

**Objectives**
At the conclusion of this session, the participant will be able to:
- describe the current evidence underpinning the new PR clinical practice guidelines
- apply the new clinical practice guidelines into current practice
- better understanding of the evidence and implementation of clinical practice guidelines for PR will improve the quality of life/health status of this patient group

Attendees will develop an understanding of the new pulmonary rehabilitation (PR) clinical practice guidelines, recommendations across the spectrum of chronic lung disease and the evidence that underpin this guidance. The session will also give practical tips on how to implement this guidance.

Chairing:
- L. Houchen-Wolloff, PhD, Leicester, United Kingdom
- S.P. Bhatt, MD, MSPH, Birmingham, AL

09:00 Rationale for New ATS Clinical Practice Guidelines in Pulmonary Rehabilitation
C.L. Rochester, MD, New Haven, CT

09:10 Overview of New Guidelines
A.E. Holland, PT, PhD, Melbourne, Australia

09:35 Spotlight on Post-Hospitalization Rehabilitation
P. Camp, PT, PhD, Vancouver, Canada

09:55 Patient Speaker
Speaker To Be Announced

10:00 Strategies for Implementation of the New Guidelines
N.S. Cox, PT, MSci, PhD, Melbourne, Australia

10:15 Panel and Audience Discussion

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**BASIC • CLINICAL • TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

**A8 BRONCHOPULMONARY DYSPLASIA ACROSS THE LIFESPAN**

Assembly on Pediatrics

09:00 a.m. - 10:30 a.m.

**Target Audience**
Neonatologists, pediatric pulmonologists, pediatric radiologists, respiratory therapists, adult pulmonary critical care specialists, and basic science researchers interested in pulmonary development and molecular mechanisms of lung injury

**Objectives**
At the conclusion of this session, the participant will be able to:
- to describe new findings about pre- and postnatal molecular mechanisms of lung injury that may plausibly serve as therapeutic targets that mitigate severe respiratory disease trajectories in preterm at risk for BPD
Bronchopulmonary dysplasia (BPD), the chronic lung disease of infancy, is the most common morbidity of preterm birth. Despite improvements in the respiratory care of infants born preterm, the incidence of BPD is increasing, owing to the improved survival of infants born extremely preterm. As increasing numbers of preterm infants survive to adulthood, BPD is increasingly recognized as an important contributor to morbidity and mortality throughout life even into adulthood. This session will situate current information regarding the molecular mechanisms of BPD pathogenesis within the context of longitudinal state-of-the-art, evidence-based respiratory care practices and outcomes research of individuals with established BPD.

Chairing:

J.A. Wambach, MD, MS, St. Louis, MO
M.J. Kielt, MD, Columbus, OH

9:00  Introduction
M.J. Kielt, MD, Columbus, OH

9:03  Antenatal Determinants of Bronchopulmonary Dysplasia
S.H. Abman, MD, Aurora, CO

9:15  Lung Injury and Lung Developmental Programming in BPD
E. Plosa, MD, Nashville, TN

9:27  Multidisciplinary BPD Care
L.D. Nelin, MD, Columbus, OH

9:39  Evaluation and Management of Pulmonary Vascular Disease in BPD
S. Bhombal, MD, Palo Alto, CA

9:51  Advanced Imaging in Bronchopulmonary Dysplasia
N. Higano, PhD, Cincinnati, OH

10:03 BPD Respiratory Trajectories in Childhood, Adolescence, and Adulthood
S.A. Mcgrath-Morrow, MD, Philadelphia, PA

10:15 Panel Discussion
J.A. Wambach, MD, MS, St. Louis, MO

Assemblies on Nursing; Critical Care

9:00 a.m. - 10:30 a.m.

Target Audience
Providers at all levels in critical care, as well as patients, caregivers and administrators

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

• describe novel non-pharmacological interventions to manage pain, anxiety, stress and delirium, and how they can be utilized to improve delirium outcomes in critically ill adults

• define strategies and pitfalls involving use of technologies to aid patient assessment in the ICU, including machine-learning technologies

• apply an understanding of the advantages and challenges of novel technologies, and how to implement these to improve outcomes in ICU delirium survivors

Delirium occurs in up to 80% of patients admitted to the Intensive Care Unit (ICU) and is a major risk factor for Post-Intensive Care Syndrome (PICS). In addition to delirium, ICU patients experience pain and anxiety secondary to procedures, invasive ventilation, forced immobilization, and inability to communicate. Our symposium presents innovative clinical care approaches leveraging technology to provide non-pharmacological interventions for management of pain, anxiety, and delirium. We will also present machine learning approaches for patient assessment, patient communication technology, music applications to manage delirium, pain and anxiety, and telehealth-based cognitive and physical training for ICU delirium survivors.

Chairing:

S.H. Khan, DO, Indianapolis, IN
H.L. Lindroth, PhD, RN, Rochester, MN

9:00 Ready for Prime Time: Novel Technology Applications to Manage Pain, Anxiety, Sleep in ICU Patients
L.L. Chlan, PhD, RN, ATSF, Rochester, MN

9:15 Revitalizing Brain Body After Critical Illness: Lessons Learned from a Remote, Video-Based Physical and Cognitive Training Program
B.A. Khan, MD, Zionsville, IN

9:30 Designing and Implementing a Music Listening Intervention to Manage the Complex Needs of Patients in the ICU Environment
A. Heiderscheit, PhD, MT-BC, LMFT, Minneapolis, MN
9:45 Benefits and Challenges in Implementation of a Music Intervention Application in an Academic ICU  
S.H. Khan, DO, Indianapolis, IN

10:00 Safer Than Skynet: Using Machine Learning to Save Patients from Delirium  
H.L. Lindroth, PhD, RN, Rochester, MN

10:15 We Can’t Manage What We Do Not Assess: Supporting Patient Communication and Symptom Assessment in the ICU  
J. Guttormson, MS, PhD, RN, Milwaukee, WI

A10 ASTHMA HOT TOPIC 2023: WHICH “ICS PLUS BRONchodILATOR” RELIEVER FOR WHICH PATIENT?  
Assemblies on Allergy, Immunology and Inflammation; Pediatrics  
9:00 a.m. - 10:30 a.m.

Target Audience  
Clinicians (physicians, nurses, fellows, residents, pharmacists), researchers, administrators, regulators and policymakers, or anyone involved in delivery of care and the science of patients with asthma

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

• understand the evidence behind various options for asthma reliever inhalers, and their strengths and potential limitations. The audience will be able to fill their knowledge gaps about reliever inhalers for both pediatric and adult patients

• learn about the practical application of each reliever option for different populations and settings (pediatrics, adults, US, international) and gain knowledge on how to integrate the decision on the choice of reliever in asthma patient management

• improve the understanding of challenges and remaining implementation and research gaps in reliever therapy in asthma. The audience will be able to identify implementation gaps in care and begin to develop methods to address those gaps

Evidence regarding use of a reliever coupled with inhaled corticosteroids (ICS) in asthma has been mounting and there have been substantial changes in guideline-based recommendations in recent years. Currently, three reliever options are available; short-acting beta-agonist (SABA), ICS plus SABA, and ICS plus formoterol. This symposium will review the current evidence, research gaps, controversies, implementation challenges and equity around the clinical application of each reliever option in asthma in a broad range of patients and settings (mild-severe, pediatric-adults, international-US). The session will enhance understanding of how to choose and use asthma relievers in clinical practice, and identify future research needs.

Chairing:  
F. Holguin, MD, MPH, Aurora, CO  
K. Sumino, MD, MPH, Saint Louis, MO

9:00 Introduction, Current Options for Asthma Reliever and the Guidelines  
K. Sumino, MD, MPH, Saint Louis, MO

9:07 Use of ICS Plus SABA As-Needed in Asthma  
J.C. Cardet, MD, MPH, Tampa, FL

9:22 Use of ICS Plus Formoterol As-Needed in Asthma  
H. Reddel, MBBS, PhD, Glebe, Australia

9:39 Pediatric Perspective of Reliever Therapy in Asthma  
F.D. Martinez, MD, Tucson, AZ

9:55 Challenges and Equity in US and Global Perspective Surrounding Choice of Relievers in Asthma  
F. Holguin, MD, MPH, Aurora, CO

10:11 Panel Discussion/Questions: Panel 1  
A. Papi, MD, Ferrara, Italy

10:15 Panel Discussion/Questions: Panel 2  
E. Israel, MD, Boston, MA

10:19 Panel Discussion/Questions: Panel 3  
H. Reddel, MBBS, PhD, Glebe, Australia

10:23 Panel Discussion/Questions: Panel 4  
F.D. Martinez, MD, Tucson, AZ

10:27 Panel Discussion/Questions: Panel 5  
F. Holguin, MD, MPH, Aurora, CO

10:29 Panel Discussion/Questions: Panel 6(Moderator)  
K. Sumino, MD, MPH, Saint Louis, MO

A11 CARING FOR HISTORICALLY MARGINALIZED PATIENTS: ETHICAL, LEGAL AND ADVOCACY PRIMER FOR PROVIDERS  
Assemblies on Critical Care; Nursing; Ethics and Conflict of Interest Committee  
9:00 a.m. - 10:30 a.m.

Target Audience  
ICU clinicians including physicians, nurses, and respiratory therapists, as well as healthcare administrators, health policy makers and patient advocates

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

• understand complexity around care and decision making for patients who are undocumented or crossing state lines to seek medical therapies not offered in their home state
• recognize and mitigate issues surrounding care of incarcerated patients and clinician interactions with law enforcement
• define new strategies to understand ethical issues surrounding patients medical decision making for patients limited health literacy or with non-traditional alternate decision making structure, or no legally authorized representative

In this symposium, we consider practical ethics involved in the care for a wide range of patients with vulnerabilities, due to lack of representation, that may be underappreciated by their providers: internally displaced people and refugees seeking asylum; individuals along the spectrum of criminalization from arrest to incarceration; patients without consistent housing; and those without legally-recognized heteronormative relationships. Additionally, we acknowledge, across all topics, of the effects of systemic racism that disproportionately disenfranchise communities of color. This session presents ethical challenges while also proposing a framework for advocacy for these patient groups from the bedside to the seats of government.

Chairing:
E.S. Demartino, MD, Rochester, MN
K.M. Akgun, MD, MS, ATSF, West Haven, CT
S. Beesley, MD, MSc, Salt Lake City, UT
M.F. Griffith, MD, MPH, Aurora, CO

9:00 Intro: Practical Ethics: Caring for Underrepresented Patients in the ICU
S. Beesley, MD, MSc, Salt Lake City, UT

9:08 A Chilling Effect: Immigration Policy and Documentation Status-Related Challenges to the Delivery of Critical Care for Immigrant Populations
M. Venkataramani, MD, MPH, Baltimore, MD

9:18 Serious Mental Health, Home Insecurity and Family Estrangement: Clinical Challenges in Medical Decision Making and Patients Declining Treatment
M.F. Griffith, MD, MPH, Aurora, CO

9:30 Advocating for the Rights of Justice-Involved Patients
E.S. Demartino, MD, Rochester, MN

9:45 Decision Making for ICU Patients Without Heteronormative Partners/Surrogates
K.M. Akgun, MD, MS, ATSF, West Haven, CT

9:55 Navigating Variable Legal Access to Standard Therapies Across State Lines
A.E. Turnbull, DVM, MPH, PhD, Baltimore, MD

10:10 Reducing Stigma During Home Care Transition Education Out of the ICU of Low-Literacy Parents of Children with Heart Disease
S. Staveski, PhD, RN, CPNP-AC, OAKLAND, CA

10:25 Questions and Discussion
S. Beesley, MD, MSc, Salt Lake City, UT

A12 PUBLICATION TO EMPOWERMENT-TRANSITIONING SCIENCE INTO ENVIRONMENTAL JUSTICE ADVOCACY

Assemblies on Environmental, Occupational and Population Health; Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Clinical Problems; Nursing; Pediatrics

9:00 a.m. - 10:30 a.m.

Target Audience
Providers of lung health, including basic, clinical, and translational researchers focused on disparities, environmental or occupational exposures, community engaged research or health policy

Objectives
At the conclusion of this session, the participant will be able to:
• to contrast spatial epidemiology and community participatory-based research approaches to quantifying the health impacts of environmental injustice
• to develop a framework for clinical and community-based approaches to reducing environmental injustice and improve respiratory health outcomes for individual patients and communities
• to examine the impact of policy-based initiatives to reduce environmental injustice

Environmental justice recognizes the disparities in exposure to environmental hazards borne by communities of color as a result of structural racism. These disparities have profound health impacts, from birth into adult life. Improving respiratory health for communities impacted by environmental injustice requires both high quality research, and mechanisms to move from research into action. This jointly sponsored, multi-disciplinary symposium aims to bridge this gap, highlighting both advances in research capturing the impact of environmental injustice, and the role of policy, community advocacy and clinical care in translating research into meaningful change.

Chairing:
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN
N. Thakur, MD, MPH, San Francisco, CA
A. Lee, MD, MS, New York, NY
M.G. Macmurdo, MBChB, MPH, Cleveland, OH

9:00 The Environmental Injustice of Childhood Asthma
S. Lovinsky-Desir, MD, MS, New York, NY

9:15 Utilizing Community Based Participatory Research in Environmental Justice Research
N. Thakur, MD, MPH, San Francisco, CA

9:30 Disparities in Heat Exposure: Utilizing Remote Sensing to Drive Policy Change
T. Insaf, PhD, MBBS, Albany, NY
9:45 Research in Action: Utilizing Policy Interventions to Address Environmental Injustice
Speaker To Be Announced

10:00 Confronting Environmental Injustice in the Clinical Care of Asthma and COPD
D. Belz, MD, MPH, Baltimore, MD

10:15 Panel Discussion on Addressing Environmental Injustice Through Inter-Professional Collaboration
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN

MEDICAL EDUCATION SEMINAR

ME101 BUILDING BLOCKS TO CRAFTING A SUCCESSFUL CLINICIAN-EDUCATOR CAREER
Assembly on Behavioral Science and Health Services Research
10:15 a.m. - 11:15 a.m.

Target Audience
Trainees, junior and mid career faculty pursuing careers as clinician educators although all clinician educators are likely to benefit from this session

Objectives
At the conclusion of this session, the participant will be able to:
• understand how to create an educational portfolio and identify mentors early in one's career
• describe opportunities for production of scholarly work as a clinician educator
• identify opportunities for leadership in medical education locally, regionally and nationally

During this interactive session, participants will have the opportunity to hear from successful, nationally recognized clinician educators in pulmonary & critical care medicine regarding career advancement as clinician educators. Topics will include developing an educational portfolio, fostering successful mentoring relationships, scholarly productivity, leadership, and networking locally, regionally and nationally through organizations such as the ATS. Discussants will provide attendees with practical tips and focused suggestions as well as ample opportunity for discussion and questions regarding how to best achieve success in each of the content domains being presented

Faculty
S.M. Kassutto, MD, Philadelphia, PA
L. Santhosh, MD, MEd, San Francisco, CA
B. Coruh, MD, ATSF, FCCP, Seattle, WA
W.G. Carlos, MD, MSCR, ATSF, Indianapolis, IN

CLINICAL
ADULT CLINICAL CORE CURRICULUM

CC1 SLEEP CLINICAL CORE CURRICULUM
Education Committee
11:30 a.m. - 1:00 p.m.

Target Audience
Clinicians who are engaged in maintenance of certification activities

Objectives
At the conclusion of this session, the participant will be able to:
• describe the nuts and bolts of positive airway pressure and when and how to use it for patients with heart failure and patients with different types of sleep disordered breathing
• identify best practices for diagnosis and management of sleep disorders in patients with long COVID characterize common manifestations of sleep disordered breathing in patients with neuromuscular disease

Chairing:
S. Shafazand, MD, Miami, FL
K. Dudley, MD, Boston, MA

11:30 Wheezing and Snoring: The Intersection of Obstructive Lung Disease and Sleep Disordered Breathing
M. Lowery, MD, Gainesville, FL

11:55 Weak Muscles and Restless Sleep: Neuromuscular Disease and Sleep Disordered Breathing
J. Contreras, MD, Cleveland, OH

12:2 Shallow Breathing into the Night: Obesity Hypoventilation Syndrome
K. Dupuy-McCauley, MD, Rochester, MN

12:45 Questions and Answers
11:45 a.m. - 1:15 p.m.

DIVERSITY FORUM

The annual ATS Diversity Forum focuses on diversity within the fields of pulmonary, critical care, and sleep medicine and research. All ATS Members are invited to attend this event to find inspiration and valuable career insights.

The Underrepresented Trainee Development Scholarship will be presented at this forum. The scholarship was created to increase representation of underrepresented racial and ethnic groups as defined by the National Institutes of Health (NIH) (African American, Hispanic or Latinx, American Indian, Alaskan Native and Pacific Islander) in pulmonary, critical care, and sleep medicine research by providing an opportunity for trainees in U.S. based programs to attend the ATS International Conference.

The 2023 Diversity Fellowship recipients will also be presented during the forum. These fellowships are designed to support the efforts of senior fellows, post-doctoral students, or junior faculty with research, clinical and policy endeavors to advance health equity for patients with respiratory disease, critical care illness or injury, and sleep disordered breathing.

The Diversity Forum is organized and presented by the ATS Membership Committee and will be hosted by its Chair Meshell Johnson, MD and Vice Chair Alexandra Noel, PhD. The Underrepresented Trainee Development Scholarship are supported by the American Thoracic Society.

Pre-registration and an additional fee are required.
$30 members/non-members

12:00 p.m. - 1:00 p.m.

NATIONAL INSTITUTE ON MINORITY HEALTH AND HEALTH DISPARITIES
OUTSIDE ORGANIZATION SESSION

L1 OPPORTUNITIES IN SLEEP AND RESPIRATORY HEALTH DISPARITIES RESEARCH FUNDED BY NIMHD

Target Audience
Providers serving patients that experience health disparities, including racial and ethnic minority, low SES, rural, and sex and gender minority populations; and members engaged in sleep and respiratory health research

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

- describe NIH/NIMHD programs and funding opportunities for research on the causes and consequences of sleep and respiratory health disparities in the US
- examine how social determinants of health may impact sleep and respiratory health disparities
- integrate an understanding of the multilevel causes and consequences of sleep and respiratory health disparities into current practice

Racial and ethnic minority and socioeconomically disadvantaged populations in the US face sleep and respiratory health inequalities. The National Institute on Minority Health and Health Disparities (NIMHD), in collaboration with other NIH institutes, promotes and funds research to understand how social, cultural, and environmental factors contribute to sleep and respiratory health and health disparities. This session will highlight NIMHD programs and funding opportunities of interest to ATS.
members and showcase the work of NMIHD grantees, including those studying biobehavioral, structural, environmental, and social determinants of sleep and respiratory health and health disparities. Research gaps, future directions, and NIH funding opportunities will be discussed.

Chairing: R. Das, PhD, Bethesda, MD

12:00 Director’s Introduction to NIMHD
E. Perez-Stable, MD, Bethesda, MD

12:05 Programs and Funding Opportunities in Sleep and Respiratory Health Disparities: Community Health and Population Sciences
N. Jones, PhD, Bethesda, MD

12:15 Programs and Funding Opportunities in Sleep and Respiratory Health Disparities: Integrative Biological and Behavioral Sciences
A.S. Gillman, PhD, MPH, Bethesda, MD

12:25 Programs and Funding Opportunities in Sleep and Respiratory Health Disparities: Clinical and Health Services Research
L. Aviles-Santa, MD, MPH, Bethesda, MD

12:35 Exposure to Violence, Epigenetic Variation, and Asthma in Puerto Rican Children
J.C. Celedon, MD, DrPH, ATSF, Pittsburgh, PA

12:50 Panel Discussion
R. Das, PhD, Bethesda, MD

CENTERS FOR DISEASE CONTROL
OUTSIDE ORGANIZATION SESSION

L2 UPDATES FROM THE CENTERS FOR DISEASE CONTROL AND PREVENTION: TOOLS FOR CLINICIANS

12:00 p.m. - 1:00 p.m.

Target Audience
Clinicians, academics, and public health practitioners interested in chronic and acute lung disease

Objectives
At the conclusion of this session, the participant will be able to:
- Identify local geographic areas where chronic pulmonary disease burden is highest and better understand demographic differences within their state.
- Improve communication and education with patients at risk for acute and chronic disease by using evidence-based, culturally- and linguistically-appropriate resources to explain tuberculosis risk, recommended testing, and treatment options.
- Incorporate updated recommendations and describe the current evidence, operational challenges, and need to address patient preferences for the use of directly observed therapy during treatment and management of medication adherence.

New tools from the U.S. Centers for Disease Control presented will help clinical providers and researchers to identify local populations among whom tuberculosis and chronic pulmonary disease risk is highest, to better understand demographic differences in risk within their local area, to communicate effectively with patients, and to use an updated approach to monitoring medication adherence. These tools and resources will enhance health screenings and patient outcomes.

Chairing: C. Winston, PhD, Atlanta, GA

12:00 Data Tools for State and Local Estimates for Chronic Obstructive Pulmonary Disease - part 1
S.A. Carlson, PhD, MPH, Atlanta, GA

12:10 Data Tools for State and Local Estimates for Chronic Obstructive Pulmonary Disease - part 2
K. Watson, PhD, Atlanta, GA

12:20 Think. Test. Treat TB. Starting the Conversation
N. DeLuca, PhD, MA, Atlanta, GA

12:35 Directly Observed Therapy Updates and Recommendations
J.M.C. Mangan, PhD, Atlanta, GA

12:50 Panel Discussion and Audience Questions
C. Winston, PhD, Atlanta, GA

DIVISION OF LUNG DISEASES, NHLBI/NIH
OUTSIDE ORGANIZATION SESSION

L3 RECENT CLINICAL AND OMICS FINDINGS IN PATIENTS WITH PULMONARY HYPERTENSION FROM THE NHLBI PVDOMICS PROGRAM

12:00 p.m. - 1:00 p.m.

Target Audience
Healthcare providers, researchers, and trainees with an interest in pulmonary hypertension

Objectives
At the conclusion of this session, the participant will be able to:
- Learn about new genomic findings including rare variant analysis and mRNA transcriptomic profiles in the peripheral blood of patients with pulmonary hypertension
- Learn about metabolic changes that precede a diagnosis of PAH in scleroderma patients.
- Learn about the effect of pollution on pulmonary vascular disease, right ventricular function and HRQL in the PVDOMICS cohort.
This session will cover new research discoveries stemming from the NHLBI “Redefining Pulmonary Hypertension through Pulmonary Vascular Disease Phenomics (PVDOMICS)” program that seeks to better understand clinical and molecular aspects of pulmonary hypertension (PH), a complex disease with high mortality. This national observational clinical study co-sponsored by NHLBI and the Pulmonary Hypertension Association is performing extensive phenotyping in a large cohort of 1200 participants, which includes the prospective collection and analysis of biomarker, genetic, genomic, and phenotypic clinical data from subjects with PH for the purpose of identifying subpopulations and intermediate outcome measures.

Chairing: L. Xiao, MD, PhD, Bethesda, MD
N.S. Hill, MD, Boston, MA

12:00 Rare Variant Analysis in Non-Group 1 Pulmonary Hypertension
M. Aldred, PhD, ATSF, Indianapolis, IN

12:15 The Effect of Pollution on Pulmonary Vascular Disease, Right Ventricular Function and HRQL in the PVDOMICS Cohort
C. Lim, PhD, Tucson, United States

12:30 Metabolic Evolution Precedes PAH Diagnosis in Scleroderma: Insights from PVDOMICS and the Johns Hopkins Scleroderma Centerr
C. Simpson, MD, Baltimore, MD

12:45 Genomics Analysis of mRNA in Peripheral Venous Blood Leukocytes for Identification of Clusters Across WSPH Groups and Associations with Severe or Mild
G. Grunig, DVM, PhD, New York, NY

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
OUTSIDE ORGANIZATION SESSION

L4 ADVANTAGES OF NASA SATELLITE DATA IN AIR QUALITY AND RESPIRATORY HEALTH APPLICATIONS

12:00 p.m. - 1:00 p.m.

Target Audience
Physicians; nurses; allied health professionals; public health practitioners; community health educators; researchers who are interested in using Earth observation data for environmental and occupational health research applications

Objectives
At the conclusion of this session, the participant will be able to:
• provide an overview of the NASA Health and Air Quality Program activities that are of interest to clinicians and researchers.
• analyze at least three cross-cutting applications where NASA satellite data can strengthen scientific understanding of the global health risk of air pollution.

• inform clinicians and researchers about the PAHO/WHO experiences fostering integrative air quality monitoring as well as training opportunities in applying satellite data for health and air quality topics.

NASA Earth-observing satellites offer real-time data about natural and anthropogenic processes within atmospheric, aquatic, and terrestrial ecosystems. These data, which complement ongoing epidemiological surveillance programs, provide health leaders with valuable insight on the spatial and temporal variation of health risks attributed to harmful exposure to poor air quality. In this session, panelists will demonstrate how NASA satellite data can strengthen health applications related to air quality and respiratory health with community decision-makers. Panelists will share ongoing NASA projects that apply satellite data to quantify health risks associated with exposure to urban ambient pollution to enhance clinical practice and policy decision-making.

Chairing: H. Chapman, MD, PhD, MPH, Washington, DC
L. Judd, PhD, Hampton, VA

12:00 NASA Health and Air Quality Applications: Applying Satellite Data to Respiratory Health
J. Haynes, MS, WASHINGTON, DC

12:15 Advancing Air Quality Monitoring and Health Surveillance in the Americas
J. Castillo, MSc, Washington, DC

12:30 The Impacts of Drought on Respiratory Health: Using NASA Data Products to Understand these Connections
J. Bell, PhD, Omaha, NE

12:45 NASA Applied Remote Sensing Training (ARSET) for Health and Air Quality Applications
M. Follette Cook, PhD, Greenbelt, MD
The NHLBI Catalyze Program provides a comprehensive suite of support and services to facilitate the translation of basic scientific discoveries into viable therapeutics, devices, and diagnostics ready for human testing. Currently, the Catalyze Program supports five funding opportunities with different funding mechanisms, budget limits, cost sharing requirements, application materials, and project periods. The Catalyze program have funded 14 awards in lung or lung related research areas, ranging from device, imaging technique, small molecules to biologics on a variety of lung diseases, acute or chronic. ATS noon session will be a good opportunity to highlight/showcase catalyze program and to advocate the cutting edge translational effort in NHLBI/DLD mission space.

Chairing:  
G. Zhou, PhD, Bethesda, MD  
M. Pieck, PhD, Bethesda, MD

12:00  
Introduction to the Catalyze Program  
M. Pieck, PhD, Bethesda, MD

12:10  
Optimization of PET Probe for Imaging Lung Fibrogenesis  
P.D. Caravan, PhD, Charlestown, MA

12:20  
Bedside Tomosynthesis Imaging for ICU Patients  
O. Zhou, PhD, Chapel Hill, NC

12:30  
Therapeutic Targeting a Ubiquitin E3 Ligase to Control Pulmonary Inflammation  
R.K. Mallampalli, MD, Columbus, OH

12:40  
Panel Discussion  
G. Zhou, PhD, Bethesda, MD

In 2017, NHLBI funded 4 groups of investigators to conduct multi-level clinical trials to provide comprehensive asthma care within communities where children were at high risk for poor asthma outcomes. The trials were designed with evidence based interventions targeted to address findings from a formal needs assessment in each community. Key aspects of these trials included the integration of asthma care for the children and their families as well as efforts to facilitate the sustainability of the programs after the conclusion of the trials. Investigators will briefly review the protocols conducted in each community and provide the available results as most of these multi-year trials were recently completed. The assessment of the sustainability of the programs will be conducted in the future.

Chairing:  
M.M. Freemer, MD, MPH, Bethesda, MD

12:00  
Asthma among Dine children living on the Navajo Nation  
B.G. Bender, PhD, Denver, CO

12:15  
Asthma among West Philadelphia Asthma Care Collaborative (WePACC) participants  
T. Bryant-Stephens, MD, Philadelphia, PA

12:30  
Asthma among RVA Breathes participants  
R.S. Everhart, PhD, Richmond, VA

12:45  
Asthma among Rhode Island Asthma Integrated Care (RI AIR) participants  
D. Koinis-Mitchell, PhD, Providence, RI

MEET THE EXPERT SEMINARS

MTE8  
MITIGATING DISPARITIES IN THE LUNG CANCER SCREENING PIPELINE  
F.C. Duncan, MD, MS, Indianapolis, IN  
S.B. Ogake, MD, Plain City, OH  
E.R. Nunez, MD, Boston, MA

MTE9  
PEDIATRIC INVASIVE VENTILATION: MANAGEMENT AND RESOURCE CONUNDRUMS  
F. Afolabi, MD, Dallas, TX  
C.D. Baker, MD, Aurora, CO  
A.S. Gelfand, MD, Dallas, TX  
D. Liptzin, MD, MS, Missoula, MT

MTE10  
ENGAGING PATIENT, COMMUNITY, AND POLICY PARTNERS TO BRING EVIDENCE INTO CLINICAL PRACTICE  
M. Trivedi, MD, MPH, Worcester, MA  
A.A. Lowe, PhD, MSPH, Tucson, AZ
A81  PEDIATRIC YEAR IN REVIEW

Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Clinical Problems; Environmental, Occupational and Population Health

2:15 p.m. - 3:45 p.m.

Target Audience
Any provider of lung health care for children, as well as clinical and translational researchers who study pediatric respiratory problems

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

• learn about the latest science and advocacy related to the impact of climate change on global respiratory health
• determine local environmental factors that influence respiratory health (exposome) with a focus on health equity
• learn about the long-term impact of viral pandemics on pediatric health

This session will provide up-to-date and state-of-the-art information on four topics: (1) global respiratory health during climate change (2) pediatric exposome, (3) pandemic science (4) well-being and resilience

Chairing:  E. Forno, MD, MPH, ATSF, Pittsburgh, PA
B.T. Kopp, MD, MPH, ATSF, Atlanta, GA

2:15  Pediatric Exposome
S. Lovinsky-Desir, MD, MS, New York, NY

2:38  Epidemic and Pandemic Viruses — Long-term Impact on Respiratory Health
C. Rosas-Salazar, MD, MPH, ATSF, Nashville, TN
**A82** RACE AND PFTs: USE, CONTROVERSIES, AND ALTERNATIVES

Assembly on Clinical Problems; Pulmonary Function Testing Committee

**2:15 p.m. - 3:45 p.m.**

**Target Audience**
Clinicians that use PFTs to diagnose or assess patients with respiratory disease, and/or clinical researchers with an interest in race or health equity

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

- understand the scientific justification for, potential benefits of, and potential harms from the use of race-specific equations
- improve interpretation and clinical application of PFT reports via understanding of how race-specific equations impact percent-predicted PFT values
- describe potential alternatives to current interpretation strategies and race-specific GLI equations, and their impact on patient care

Currently, ATS/ERS guidelines recommend the use of race-specific equations for the interpretation of spirometry. However, their use has recently been the subject of intense debate due to concerns that the equations may inappropriately normalize lower average lung function observed in Black and Asian populations. The session will present research related to why race-specific equations are used and what the potential harms and benefits of their use may be. Additionally, the session will highlight proposed alternatives to race-specific equations from the literature and discuss pros and cons of their use.

**Chairing:**

N. Thakur, MD, MPH, San Francisco, CA
J.H. Brems, MD, MBE, Baltimore, MD
S. Lovinsky-Desir, MD, MS, New York, NY

**2:15** Race-Specific Equations: Why We Use Them, What We Know, and What We Don’t
S. Stanojevic, PhD, Halifax, Canada

**2:33** Prediction of Clinical Outcomes with Race-Specific Versus Race-Neutral Equations
A.D. Baugh, MD, San Francisco, CA

**2:51** Implications for Care and Impact on Health Disparities
R. Adamson, MBBS, ATSF, Seattle, WA

**3:09** Proposed Alternatives to Race-specific Equations: Possibilities, Pros and Cons
M.C. McCormack, MHS, MD, Baltimore, MD

**3:27** Panel Discussion with Q+A
N.R. Bhakta, MD, PhD, San Francisco, CA

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**A83** GREAT CASES: CLINICAL, RADIOLOGIC, AND PATHOLOGIC CORRELATIONS BY MASTER CLINICIANS

Council of Chapter Representatives

**2:15 p.m. - 3:45 p.m.**

**Target Audience**
Clinicians in adult and pediatric PCCM

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

- describe findings based on observing master clinicians describe clinical, radiologic, and pathologic findings to challenging patient cases
- describe clinical reasoning used to reach a differential diagnosis based on a multidisciplinary team model
- learners will garner knowledge about treatment & management approaches to different pathologies presented at the conference

Junior physicians (trainees) present interesting cases to a multidisciplinary panel to demonstrate a team approach to diagnosing and managing challenging clinical cases. It will enhance medical knowledge, and diagnostic and management skills.

**Chairing:**

M.J. Mammen, FACP, ATSF, Rochester, NY
N.-C. Liang, MD, Encinitas, CA

**2:15** Master Clinician
A.E. O’Donnell, MD, WASHINGTON, DC

**2:25** Master Clinician
M. Kreider, MD, Philadelphia, NY

**2:43** Master Clinician
P.C. Stillwell, MD, Aurora, CO

**2:53** Master Clinician
J.B. Taylor, MD, MSCR, Pittsburgh, PA

**3:11** Pathology Findings
J.L. Myers, MD, Ann Arbor, MI

**3:27** Radiological Findings
P. Bergquist, Washington, DC
This session will provide a forum for attendees to interact with the authors and editors about papers published in JAMA 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 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.

Speakers and Talks to be Announced

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**A85** PHYSIOLOGICAL AND CELLULAR IMPACT OF ENVIRONMENTAL EXPOSURES

2:15-3:45pm

*This is part 2 of a 2-part symposium.*

**Part 1 on Sunday, May 21, 9:00 a.m. -10:30 a.m. focuses on quantification of environmental exposures using state-of-the-art methods.**

**Part 2 focuses on the physiological and cellular impact of environmental exposures.**

Occupational and environmental lung diseases are caused by the inhalation of chemical irritants, allergens or toxins in work or home environments. Most diseases are caused by repeated, long-term exposure, but even a one-time or indirect contact with a hazardous agent can result in lung diseases with lasting effects.

Environmental exposures related to fossil fuel and heavy metals and occupational exposures related to silica and coal mining generate oxidative stress and inflammation in the lungs. Sustained oxidative stress causes DNA damage, epigenetic instability, mitochondrial dysfunction, and cell cycle arrest in key progenitor cells in the lung.

Inhaled environmental exposures accelerate lung aging by injuring the lungs and damaging the cells responsible for wound healing. Novel exposure assessment methods, including functional imaging and -omics studies, together with mathematical models are needed to quantify environmental exposures. Interventions that minimize exposure to noxious antigens are critical to improve lung health, and novel research is required to expand our knowledge of therapies that may slow or prevent premature lung aging.

*Speakers and Talks to be Announced*

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**A86** PHYSICAL FITNESS AND LUNG HEALTH

ATS Public Advisory Roundtable

2:15 p.m. - 3:45 p.m.

**Target Audience**

Providers of lung health and allied services

**Objectives**

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

- Describe current ‘state of the art’ evidence supporting the role of physical activity in maintaining lung health
- Improve the quality of life/health status of patients by assessing technologies that may encourage patient engagement in physical fitness initiatives.
- Describe new findings related to the role of pulmonary rehabilitation in preserving lung function and improving quality of life for individuals with lung disease

This session will focus on the critical role of physical activity and conditioning in supporting respiratory health and improving patient quality of life. It will explore the current science on exercise and cardiorespiratory health, technologies to engage patients in physical activity, and the critical role of pulmonary rehabilitation in preserving respiratory health.

**Chairing:** M. Manion, BS, Minneapolis, MN
L.M. Schnapp, MD, ATSF, Madison, WI

2:15 **Session Introduction**
L.M. Schnapp, MD, ATSF, Madison, WI

2:30 **Every Mile Changes You**
E. Schaller, Patient Speaker, Detroit, MI

2:45 **The Role of Physical Conditioning in Respiratory Health**
D.M. Mannino, MD, Lexington, KY

3:00 **Pulmonary Rehab to Support Physical Conditioning**
C.L. Rochester, MD, New Haven, CT

3:15 **Monitoring and Tracking Physical Activity: The Role of Wearable Tech**
*Speaker To Be Announced*

3:30 **Exercise for Chronic Lung Conditions: What is the Evidence?**
M.B. Brown, PT, PhD, Seattle, WA
A87  NEW TREATMENT APPROACHES FOR BRONCHIECTASIS
Assemblies on Pulmonary Infections and Tuberculosis; Allergy, Immunology and Inflammation; Clinical Problems
2:15 p.m. - 3:45 p.m.

Target Audience
Clinicians and scientists engaged in clinical care and research for bronchiectasis and related conditions

Objectives
At the conclusion of this session, the participant will be able to:
• describe new findings about the epidemiology and unmet need in patients with bronchiectasis
• improve the treatment of bronchiectasis patients by better applying the evidence for long term inhaled and oral antibiotics in clinical practice
• improve the treatment of bronchiectasis patients by better applying the evidence for mucus clearance treatments including airway clearance/physiotherapy and mucus targeting treatments

This symposium will review the emerging evidence in the field of bronchiectasis including new data from randomized controlled trials of inhaled antibiotics, cutting edge science around endotyping, and the application of personalized medicine as well as evidence for emerging therapies targeting inflammation.

Chairing: S.H. Kasperbauer, MD, Denver, CO
A.E. O’Donnell, MD, WASHINGTON, DC

2:15  Patient Speaker
Speaker To Be Announced

2:20  Epidemiological Approaches to Investigating Treatment Effects and Unmet Need
E. Henkle, PhD, MPH, Portland, OR

2:40  New Data for Airway Clearance and Mucoactive Approaches in Bronchiectasis
A. Basavaraj, MD, FCCP, ATSF, New York, NY

3:00  The Role of Long Term Antibiotic Treatments in Bronchiectasis
T.R. Aksamit, MD, Rochester, MN

3:20  Neutrophils, Eosinophils and Endotyping Bronchiectasis
J.D. Chalmers, MD, PhD, Dundee, United Kingdom

3:40  Wrap Up and Panel Discussion
S.H. Kasperbauer, MD, Denver, CO

A88  NEURO-IMMUNE INTERACTIONS IN LUNG DEVELOPMENT AND DISEASE
Assemblies on Respiratory Structure and Function; Respiratory Cell and Molecular Biology; Sleep and Respiratory Neurobiology
2:15 p.m. - 3:45 p.m.

Target Audience
Those with clinical and/or research responsibilities

Objectives
At the conclusion of this session, the participant will be able to:
• understand the anatomy and function of the airwayneural network in development and physiology
• understand how the airway neural network is altered in chronic lung disease
• integrate this knowledge to better understand how current and prospective pharmacological and nonpharmacological treatments modifying the airway neural network, improve symptoms in patients with chronic lung disease

The vagal nerve integrates afferent and efferent peripheral nerve fibers that control the functions of a large number of internal organs including the respiratory tract. Chronic inflammation drives plasticity of those neurons, contributing to increased neuronal density in a variety of pathological conditions including asthma and chronic cough. In addition, evidence is building for a role of the nervous system in guiding immunological responses. In fact, neuro-immune interactions are recognized to play key roles in inflammation and remodeling in a variety of chronic lung diseases. As a consequence, there is a need to review current concepts surrounding neuronal development, neuroplasticity and neuro-immune interactions in chronic lung disease.

Chairing: N. Jendzjowsky, PhD, Torrance, CA
R. Gosens, PhD, Groningen, Netherlands

2:15  In Utero Development of the Pulmonary Nervous System
X. Ai, PhD, Boston, MA

2:33  Dissection of Neuroimmune Control of Lung Function in Animal Models of Disease
X. Sun, PhD, San Diego, CA

2:51  Airway Neuroplasticity in Asthma
M.G. Drake, MD, Portland, OR

3:09  Macrophage Derived Netrin in Fibrosis
E. Herzog, MD, PhD, New Haven, CT

3:27  Targeted Lung Denervation for COPD
D.-J. Slebos, MD, PhD, Groningen, Netherlands
CAN ENVIRONMENTAL INTERVENTIONS CHANGE THE SOCIAL DETERMINANTS OF HEALTH?

Assemblies on Environmental, Occupational and Population Health; Behavioral Science and Health Services Research; International Health Committee

2:15 p.m. - 3:45 p.m.

Target Audience
Trainees, clinicians, researchers, allied health personnel

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

• describe approaches to quantifying SDOH in the context of high income and low income settings
• define how global factors such as climate change influences the relationship between household energy insecurity and SDOH
• define new strategies for changing the SDOH through environmental interventions

Social determinants of health (SDOH) are the conditions where people live, learn, work, and play. SDOH drive disparities in health outcomes, but most studies have focused on documenting the role of the SDOH rather than on identifying interventions that directly influence the SDOH. Environmental factors are both a component of and also a potential target for intervention on the SDOH. This session, which will include examples from both high income and low and middle income countries, will discuss how environmental factors are a core component of the SDOH and show that environmental interventions can change the SDOH and address health disparities.

Chairing:  P.S. Lai, MPH, MD, ATSF, Boston, MA
R. Bascom, MD, MPH, Hershey, PA
O.B. Ozoh, MBBS, ATSF, MSc, Lagos, Nigeria

3:30  Can a Household Energy Intervention Change the Social Determinants of Health? Solar Lighting in Rural Uganda
P.S. Lai, MPH, MD, ATSF, Boston, MA

MYTHS OR TRUTHS: CONTROVERSIES IN RESPIRATORY MEDICINE, THE NEW FRONTIER

Assemblies on Sleep and Respiratory Neurobiology; Allergy, Immunology and Inflammation; Critical Care; Respiratory Cell and Molecular Biology

2:15 p.m. - 3:45 p.m.

Target Audience
Clinicians and researchers working in the fields of critical care, fibrotic and inflammatory lung disease, asthma, allergy and sleep medicine

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

• inform the clinicians and researchers about specific areas of debate in management of common and burdensome respiratory conditions: 1) Asthma; 2) OSA; 3) Fibrotic lung disease and 4) ARDS
• apply state of the science to help the audience decide on appropriate 1) management of severe Asthma with biologics; 2) use of the AHI in OSA patients; 3) therapeutics in lung fibrosis and 4) treatment of ARDS for their patients
• identify key gaps for conditions mentioned in objectives 1 and 2 that should inform future research

The pulmonary, critical care, and sleep communities have made progress toward evidence-based care and developing novel therapies for “incurable” diseases. However, recent data challenge current approaches and create uncertainty about the research and management approaches to highly burdensome respiratory conditions. These controversies include 1) management of severe asthma, 2) apnea-hypopnea index as a prognostic marker in OSA, 3) correcting cellular aging in fibrotic and inflammatory diseases, and 4) targeting oxygenation during ventilation of acute respiratory distress syndrome. This session will address the state of the science and evidence for aspects of managing these conditions to inform clinical decision-making and future research.

Chairing:  A. Zinchuk, MD, MHS, BS, New Haven, CT
A.M. Esper, MD, MS, ATSF, Atlanta, GA
M. Rojas, MD, Columbus, OH
M. Wechsler, MD, Denver, CO
N.A. Shah, MD, MPH, MSci, New York, NY
2:15 Introduction to Debate 1: Biologics Overlap in Asthma
M. Wechsler, MD, Denver, CO

2:18 Truth: Biologics Can Be Combined and Overlapped in Severe Asthma
M. Kraft, MD, ATSF, New York, NY

2:27 Myth: Biologics Can Be Combined and Overlapped in Severe Asthma
P. Akuthota, MD, ATSF, La Jolla, CA

2:36 Summary and Audience Response Results (Debate 1)
M. Wechsler, MD, Denver, CO

2:38 Introduction to Debate 2: Utility of the AHI
N.A. Shah, MD, MPH, MSci, New York, NY

2:40 Truth: The AHI Should Be Used in Prognostication and Treatment of OSA
A. Malhotra, MD, ATSF, La Jolla, CA

2:49 Myth: The AHI Should Be Used in Prognostication and Treatment of OSA
S.S. Redline, MD, MPH, Boston, MA

2:58 Summary and Audience Response Results (Debate 2)
A. Zinchuk, MD, MHS, BS, New Haven, CT

3:00 Introduction to Debate 3: Senolytics in Respiratory Diseases
M. Rojas, MD, Columbus, OH

3:02 Truth: Senolytics Can Be Effective in Fibroproliferative and Other Respiratory Diseases
A.M. Nambiar, MD, MSCR, San Antonio, TX

3:11 Myth: Senolytics Can Be Effective in Fibroproliferative and Other Respiratory Diseases
B. Crestani, MD, PhD, Paris, France

3:20 Summary and Audience Response Results (Debate 3)
M. Rojas, MD, Columbus, OH

3:22 Introduction to Debate 4: PEEP and Oxygenation in ARDS
A.M. Esper, MD, MS, ATSF, Atlanta, GA

3:24 Truth: PEEP Titration in ARDS Should Prioritize Arterial Oxygenation
S. Sahetya, MD, MHS, Baltimore, MD

3:33 Myth: PEEP Titration in ARDS Should Prioritize Arterial Oxygenation
E.C. Goligher, MD, PhD, FRCP(C), Toronto, Canada

3:42 Summary and Audience Response Results (Debate 4 and Overall Session)
A.M. Esper, MD, MS, ATSF, Atlanta, GA

2:15 p.m. - 4:15 p.m.
Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.
Monday Morning, May 22

MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.

$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members

7:00 a.m. - 8:00 a.m.

MTE16 IT TAKES A VILLAGE: INTEGRATING ILD SUPPORT GROUPS INTO COMMUNITY MEDICAL CENTERS
J. Wescoe, EdM, Coopersburg, PA
D. Corwin, MD, Fountain Hill, PA

MTE17 SEVERE CHILDHOOD ASTHMA: WHEN TO USE BIOLOGICS AND WHAT TO DO IF THEY FAIL
C. Rosas-Salazar, MD, MPH, ATSF, Nashville, TN
L.B. Bacharier, MD, Nashville, TN

MTE18 BIOLOGICS AND BEYOND: UNDERSTANDING AND MANAGING SEVERE ASTHMA
G.S. Skloot, MD, ATSF, Cary, NC
M.G. Drake, MD, Portland, OR

10:45 a.m. - 11:45 a.m.

MTE19 DECENTRALIZED CLINICAL TRIALS IN INTERSTITIAL LUNG DISEASE
R. Aggarwal, MD, Pittsburgh, PA
D.I. Sullivan, MD, Pittsburgh, PA

MTE20 DYSPNEA DURING MECHANICAL VENTILATION
R.M. Schwartzstein, MD, Boston, MA

MTE21 NEW APPROACHES FOR NON-INVASIVE ACCESS TO THE LUNG
S.D. Spivack, MD, MPH, Bronx, NY

MTE22 COMMUNICATING SCIENCE TO THE PRESS
V. Gupta, MD, Seattle, WA
P. Silveyra, PhD, MSc, ATSF, Bloomington, IN

K2: KEYNOTE SERIES

8:00 a.m. - 8:45 a.m.

The ATS Keynote Series focuses on timely topics of high relevance to the pulmonary, critical care, and sleep medicine community. Keynote lectures feature leaders who have made major contributions in the important themes programmed at the 2023 conference and are unopposed by any other programming.

Monday’s Keynote Lecture will focus on: Climate Effects on Health, and Environmental Policies that Support and Contribute to Mitigating Existing and Future Effects

Speaker To Be Announced

YEAR IN REVIEW

B1 CLINICAL YEAR IN REVIEW 2

9:00 a.m. - 10:30 a.m.

Target Audience
Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and admini

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

• apply new clinical research knowledge to clinical practice.
• apply new findings about key conditions in pulmonary, critical care and sleep.
• learn new strategies to manage the care of common conditions in pulmonary, critical care, and sleep.

Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

Chairing:
R.J. Shah, MD, MSCE, San Francisco, CA
J.C. Ferreira, MD, PhD, ATSF, Sao Paulo, Brazil
S. Auld, MD, MSc, Atlanta, GA
Assemblies on Clinical Problems; Thoracic Oncology
9:00 a.m. - 10:30 a.m.

Target Audience
Clinicians, nurses, allied health staff and researchers in respiratory diseases, including chest physicians, interventional pulmonologists, thoracic/general surgeons, oncologists, general/emergency physicians, junior staff and scientists

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

• describe new findings on the pathogenesis of mucus dysfunction
• recognize imaging features of mucus dysfunction readily to be applicable
• describe the new therapies targeting mucus dysfunction

Mucus dysfunction plays a significant role in COPD, asthma, and cystic fibrosis. It has been stimulating progress in understanding the pathogenesis and imaging of mucus dysfunction. This progress includes the role of mucus mucins in disease pathogenesis and the use of imaging modalities, such as computed tomography, to evaluate this process. This significant progress has been combined with developing targeted therapeutics for mucus dysfunction in cystic fibrosis, furthering...
studies for therapies for other airway diseases. This session will present the advances in mucus dysfunction from pathogenesis and imaging to therapy.

Chairing: A.A. Diaz, MD, MPH, Boston, MA
A.M. Jaramillo, PhD, Aurora, CO
J.V. Fahy, MD, San Francisco, CA
J.A. Wedzicha, MD, ATSF, London, United Kingdom

9:00 Patient’s Perspective
J. Conroy, MSc, Baltimore, United States

9:10 Mucus, Mucins, and Mucociliary Dysfunction: A Sticky Problem
R.C. Boucher, MD, Chapel Hill, NC

9:26 Mucus Dysfunction in Cystic Fibrosis
S.E. Birket, PharmD, PhD, Birmingham, AL

9:42 Seeing Is Believing: Imaging of Mucus Plugs in Asthma and COPD 1
E. Duncan, BM BCH, Dublin, Ireland

9:50 Seeing Is Believing: Imaging of Mucus Plugs in Asthma and COPD 2
A.A. Diaz, MD, Boston, MA

9:58 The Dawn of a New Era: Therapies Targeting Mucus
R. Jain, MD, MSc, ATSF, Dallas, TX

10:14 Panel Discussion and Q & A

BEHAVIORAL
CRITICAL CARE TRACK

B4 FAIL SMARTER AND LEARN FASTER: MOVING BEYOND BYSTANDER TRAINING TO ORGANIZATIONAL STRATEGIES TO REINFORCE THE DEI PIPELINE IN PULMONARY AND CRITICAL CARE

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

9:00 a.m. - 10:30 a.m.

Target Audience
All levels, all practicing healthcare providers

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

- develop a deeper understanding of the challenges of implementing policies, the unforeseen issues, and how to overcome the challenges

Significant attention has focused on identifying strategies to retain and recruit women and underrepresented minorities in pulmonary and critical care medicine. Despite this, the COVID-19 pandemic resulted in women and underrepresented in medicine (URiM) clinicians leaving pulmonary and critical care medicine not only because of the continued racism and sexism that exist but because of the additional challenges imposed by the pandemic. New solutions beyond bystander trainings and implicit bias tests are needed to address the challenges of the past two years. This session will highlight current system solutions that are being implemented and disseminated in academia at a systems level.

Chairing:
E.M. Viglianti, MD, MPH, MSc, Ann Arbor, MI
D. Colon Hidalgo, MD, MPH, Aurora, CO
J.C. Celedon, MD, DrPH, ATSF, Pittsburgh, PA

9:00 The Diversity Bonus: Not Just a URiM Issue
J. Reede, MD, MS, MPH, MBA, Boston, MA

9:15 You Want Us to Stay in Academics? Here Is How You Keep Us
D. Montoya-Williams, MD, Philadelphia, PA

9:25 “Passing the Harasser”: How to Stop the Game and Change the Culture
K. Spear, MPH, Washington, DC

9:40 Actions Speak Out Louder Than Policies: Institutional Variation in Holding Patients Accountable for Inappropriate Behaviors
E.M. Viglianti, MD, MPH, MSc, Ann Arbor, MI

9:50 Pay to Stay: How Do Funding Agencies Support DEI Faculty?
A. Bernard, MD, Washington, DC

10:05 When Color Blindness Is Not an Option - What Institutions Can Do to Recruit, Promote and Retain URiM
V. Asare, MD, New Haven, CT

10:15 Panel Discussion
J.C. Celedon, MD, DrPH, ATSF, Pittsburgh, PA

BASIC • TRANSLATIONAL
BASIC SCIENCE CORE

B5 BACK TO BASICS: HARNESSING THE POWER OF MOUSE MODELS TO UNDERSTAND HUMAN SEPSIS

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

9:00 a.m. - 10:30 a.m.
Target Audience
Basic, translational, and clinical scientists

Objectives
At the conclusion of this session, the participant will be able to:
• describe new mechanistic insights into human sepsis derived from pre-clinical mouse models
• understand and identify perceived and actual barriers to translating pre-clinical findings to the clinic
• identify new strategies to limit infection-induced inflammation

Sepsis, the dysregulated host response to infection, is a life-threatening clinical syndrome affecting all cells, tissues, and organs. While no pre-clinical model can recapitulate the myriad complexities of organ dysfunction and tissue injury in human sepsis, animal models are essential to developing a mechanistic understanding of sepsis and identifying novel targets for intervention. This symposium will provide attendees with a basic overview of commonly used mouse models of sepsis, with an emphasis on how these models provided new insights directly relevant to human sepsis.

Chairing:
J.A. Bastarache, MD, Nashville, TN
N.S. Mangalmurti, MD, Philadelphia, PA
E.P. Schmidt, MD, ATSF, Boston, MA

9:00 Utilizing Complementary Murine Models of Experimental Sepsis to Determine How Age Increases the Virulence of Gut-Derived Pathogens
J. Colbert, MD, Aurora, CO

9:20 Preserved Alternative Complement Function is Associated with Improved Survival During ARDS: A Translational Perspective
W. Bain, MD, Pittsburgh, PA

9:40 A Clinically Relevant Mouse Model of Sepsis-Induced Delirium
J.A. Bastarache, MD, Nashville, TN

10:00 Red Cell-DNA Delivery Contributes to the Heterogeneous Host Response in Sepsis
N.S. Mangalmurti, MD, Philadelphia, PA

10:20 Cytokine Networks That Limit Infection-Induced Inflammation
C. Hunter, PhD, Philadelphia, PA

Target Audience
Clinicians and researchers interested in Obstructive Sleep Apnea (OSA) therapies

Objectives
At the conclusion of this session, the participant will be able to:
• understand better current and future approaches to optimal patient selection for available OSA therapies
• describe recent progress and challenges in the (pre)clinical development of new drug/device therapies
• describe regulatory requirements to translate interventions into FDA-approved clinical therapies

While CPAP can have transformative effects for some patients with obstructive sleep apnea (OSA), many patients are unable to tolerate PAP therapy long-term and due to limited alternatives remain untreated. Based on recent publications and conference sessions, there is a clear need for novel, personalized treatment options.

Through state-of-the-art reviews and an in-depth panel discussion, we will provide the audience with current best practices for more established therapies (e.g. oral appliances, hypoglossal nerve stimulation) and speak to critical issues including regulatory considerations for the development of novel, personalized alternative therapies (e.g. ansa cervicale stimulation, endotype-targeted drug therapy, DREADD).

Chairing:
N. Ayas, MPH, MD, Vancouver, Canada
F.R. Almeida, PhD, DDSc, Vancouver, Canada
V.Y. Polotsky, MD, PhD, Baltimore, MD
A. Parekh, PhD, New York, NY
S.S. Redline, MD, MPH, Boston, MA

9:00 Introduction
N. Ayas, MPH, MD, Vancouver, Canada

9:02 Patient Perspective
Speaker To Be Announced

9:07 What’s New with Weight Loss, Oral Appliances, and Upper Airway Surgery?
B.A. Edwards, PhD, Melbourne, Australia

9:21 Electrical Stimulation: Hypoglossal Nerve Stimulation, Ansa Cervicale Stimulation, and Transoral Daytime Neurostimulation
D. Kent, MD, Nashville, TN

9:35 Clinical Drug Discovery Based on Endotypes
C.N. Schmickl, MD, PhD, San Diego, CA

9:49 Preclinical Drug Discovery: Cannabimimetics, Intranasal Leptin, DREADD, and Beyond
B. Prasad, MD, ATSF, Chicago, IL

10:03 FDA Perspective: Regulatory Considerations for the Development of New OSA Therapies
L. Kim, MD, Silver Spring, MD
SICKLE CELL LUNG DISEASE ACROSS THE LIFESPAN: WHERE ARE WE NOW?

Assemblies on Pediatrics; Behavioral Science and Health Services Research; Clinical Problems; Critical Care; Nursing; Pulmonary Circulation; Sleep and Respiratory Neurobiology

9:00 a.m. - 10:30 a.m.

Target Audience
Pediatric and adult pulmonary, critical care, and sleep trainees, and clinicians and researchers interested in the pulmonary complications of sickle cell disease (SCD) across the lifespan

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

• define the current state-of-the-art management of the acute and chronic pulmonary complications of sickle cell disease and identify knowledge gaps that exist

• understand the impact of abnormalities throughout the pulmonary system (airway, gas exchange/sleep, and vascular) as disease modifiers on SCD outcomes throughout the lifespan

• gain an understanding of the mechanisms of new SCD disease-modifying therapies including hematopoietic stem cell transplantation and gene therapy on overall disease progression and potential impacts on cardiopulmonary dysfunction

SCD affects approximately 100,000 US individuals, and 300,000 births annually worldwide, largely on the African continent. While it is a genetic hemoglobinopathy, SCD is a systemic disorder. In the lungs, nearly every cell type and structure are affected, and cardiopulmonary complications are a leading cause of morbidity and accelerated mortality. The goal of this scientific symposium is to present recent findings and evidence-based interventions for acute and chronic pulmonary complications of SCD across the lifespan. We will actively engage pediatric and adult clinicians and researchers to promote collaborative investigation and implementation of evidence-based clinical care for patients living with SCD.

Chairing: R.T. Cohen, MD, MPH, Boston, MA
A.P. Ruhl, MD, MHS, Bethesda, MD
E.S. Klings, MD, Boston, MA
S.C. Sadreameli, MD, MHS, Baltimore, MD

B8 BEYOND THE LUNGS: EXTRAPULMONARY MANIFESTATIONS OF PULMONARY VASCULAR DISEASE

Assembly on Pulmonary Circulation
9:00 a.m. - 10:30 a.m.

Target Audience
Providers caring for those with pulmonary vascular disease, and those with clinical or research responsibilities related to pulmonary vascular disease or lung diseases with similar extrapulmonary manifestations

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

• describe new findings about extrapulmonary manifestations in PAH within the CNS, skeletal musculature, gut microbiome and changes in systemic inflammation, endocrine and metabolic function

• define new strategies to manage the care of PAH including the role that pulmonary rehabilitation may play and how novel therapeutic
targets addressing inflammation and metabolism may prove to improve clinical outcomes

- apply new findings toward novel research questions and continue investigation of how these systemic effects of PAH may play a role in disease development and outcomes

This session will provide a comprehensive review of extrapulmonary manifestations of pulmonary arterial hypertension (PAH). Several systems will be reviewed including the central nervous system, skeletal musculature, endocrinological manifestations and the immune system. Presenters will provide a review of the literature from bench to bedside observations and proposed pathophysiological mechanisms. Therapeutic implications and knowledge gaps will also be highlighted. By the conclusion of this session, learners will understand how PAH may affect multiple extrapulmonary systems and how the multi-system interplay in the development of this complex disease may contribute to clinical outcomes.

Chairing: S. Umar, MD, PhD, Los Angeles, CA
A. Hemnes, MD, ATSF, Nashville, TN
N. Singh, MD, MBA, Providence, RI

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<tr>
<th>Time</th>
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<tr>
<td>9:00</td>
<td>Welcome and Introductions</td>
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| 9:05 | Patient Speaker  
Speaker To Be Announced |
| 9:10 | Spinal Cord Neuroinflammation in PAH  
S. Umar, MD, PhD, Los Angeles, CA |
| 9:22 | Questions/Discussion |
| 9:26 | Retinal Involvement in PAH  
T. Lahm, MD, ATSF, Denver, CO |
| 9:38 | Questions/Discussion |
| 9:42 | Gut Microbiome and Systemic Inflammation in PAH  
T. Thenappan, MD, Minneapolis, MN |
| 9:54 | Questions/Discussion |
| 9:58 | Obesity and Metabolic Dysfunction in PAH  
N. Al-Naamani, MD, MS, Philadelphia, PA |
| 10:10 | Questions/Discussion |
| 10:14 | Skeletal Muscle and Exercise in PAH  
E. Brittain, MD, Nashville, TN |
| 10:26 | Questions/Discussion |

**BASIC • TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

**B9 SEX-SPECIFIC MECHANISMS OF LUNG DISEASE PATHOGENESIS THROUGH THE LENS OF SINGLE CELL RNA SEQUENCING**

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

9:00 a.m. - 10:30 a.m.

**Target Audience**
Health professionals and life scientists interested in lung disease pathogenesis, and trainees in biomedical research interested in single cell profiling studies, bioinformatics, and the role of sex on lung disease pathogenesis

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

- describe recent findings from scRNAseq analyses that improved our understanding of sex-based lung disease pathogenesis
- understand the role and limitations of single cell profiling in the future of clinical pulmonary medicine with an emphasis on sexually dimorphic clinical features
- define emerging single-cell technologies and analytic techniques for the study of lung disease and outline a pathway to properly sample, process, and analyze samples for sex-specific studies

There are well-documented examples of sex-specific clinical features of many lung diseases. Yet, our understanding of how a patient’s sex influences lung disease pathogenesis remains limited. This symposium will cover recent breakthroughs in our understanding of lung disease enabled by the application of single-cell profiling technologies. This session reviews the current landscape of ARDS, cystic fibrosis, asthma, and COPD pathophysiology discoveries through the lens of single-cell profiling and the role of sex-specific contributions. As we review these recent breakthroughs, we will highlight the strengths and limitations of this approach and discuss emerging technologies that will shape the future of this field.

Chairing: C.J. Britto-Leon, MD, ATSF, New Haven, CT  
R.L. Zemans, MD, Ann Arbor, MI

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<th>Time</th>
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| 9:00 | Sex-Based Differences in Macrophage Transcriptional Heterogeneity in Acute Lung Injury  
Speaker To Be Announced |
| 9:15 | Using Transcriptome Metanalysis to Uncover Sex-Specific Mechanisms of Asthma Pathogenesis  
S. Kay, MD, MS, New Haven, CT |
9:30 The Sex-Specific Connectome of Airway Immune Cells in Cystic Fibrosis as a Determinant of Its Dimorphic Clinical Course
C.J. Britto-Leon, MD, ATSF, New Haven, CT

9:45 Sex-Specific Pathogenic Cell Populations in the Fibrotic Lung
Speaker To Be Announced

10:00 Lung Spatial Profiling Reveals a Sex-Specific T Cell Signature in COPD Patients with Fatal SARS-CoV-2 Infection
F. Polverino, MD, PhD, Houston, TX

10:15 Using the Human Cell Atlas’ discovAIR Project to Uncover Sex-Based Differences That Drive Lung Disease on a Large-Scale
Speaker To Be Announced

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**CLINICAL • TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

**B10 REIGNITING THE CANCER MOONSHOT: ATS = MISSION CONTROL FOR LUNG CANCER**

Assembly on Thoracic Oncology; Tobacco Action Committee
9:00 a.m. - 10:30 a.m.

**Target Audience**
Providers of lung health, clinicians and researchers

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

- identify the critical role the NCI Moonshot will play in cancer detection and treatment research for years to come
- Recognize research gaps in detecting and treating lung cancer
- identify ongoing efforts in tobacco control and early detection including screening and biomarkers to improve outcomes from lung cancer

The ATS is a vital partner in NCI’s Cancer Moonshot. Lung cancer care and research will focus on efforts to reduce deaths from this deadliest of cancers through early detection and new molecularly driven diagnoses and targeted treatment. Taken directly from Moonshot version 2.0 the overarching themes of this symposium will focus on Expanding Use of Proven Cancer Prevention and Early Detection Strategies and Developing new enabling cancer technologies. Each speaker will discuss LC specific topics related to these themes including reducing disparities, increasing early detection and primary prevention, and the role of biomarkers along the continuum of care.

**Chairing:**
N.T. Tanner, MD, MSCR, Charleston, SC
R.S. Wiener, MD, MPH, ATSF, Boston, MA
M.P. Rivera, MD, ATSF, Rochester, NY

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**B11 GLOBAL INSIGHTS ON THE LONG-TERM SEQUELAE OF INFECTIONS: BEYOND COVID**

Assemblies on Pulmonary Infections and Tuberculosis; Allergy, Immunology and Inflammation
9:00 a.m. - 10:30 a.m.

**Target Audience**
Providers caring for patients with current and/or prior lung infections, and researchers interested in lung immunology, pneumonia, HIV, and/or cognitive impairment

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

- gain understanding of the range and frequency of long-term pulmonary and extra-pulmonary sequelae of bacterial and viral infections
- describe commonalities of mechanisms of impairment from pulmonary infections
- apply knowledge of mechanisms of impairment to improve research into the long-term sequelae of pulmonary infections

Acute pneumonia has long been known to be a significant and persistent etiology of mortality worldwide. Acute bacterial and viral pulmonary infections can also lead to persistent morbidity and long-term pulmonary and extrapulmonary complications. This has recently been highlighted by the emergence of post-acute sequelae of SARS-CoV-2 infection (PASC). In this seminar, we aim to explore the long-term complications of other viral and bacterial pulmonary infections, highlighting the mechanisms of disease, and allowing the audience to understand differences and commonalities among these sequelae.
B12  ATS CLINICAL PRACTICE GUIDELINES: CLINICAL PRACTICE ON THE CUTTING EDGE

Assemblies on Behavioral Science and Health Services Research; Clinical Problems; Pulmonary Infections and Tuberculosis; Sleep and Respiratory Neurobiology; This is jointly sponsored by the PRS and QIIC chairs; Documents Development and Implementation Committee

9:00 a.m. - 10:30 a.m.

Target Audience
Physicians, nurses, respiratory therapists and trainees who care for adults with idiopathic pulmonary fibrosis, post-prematurity respiratory lung disease, asthma, pneumonia and COPD and sarcoidosis

Objectives
At the conclusion of this session, the participant will be able to:
• understand how evidence is used to inform diagnostic and treatment recommendations
• apply clinical recommendations from recently published guidelines in clinical practice, improving patient outcomes
• obtain new strategies to approach: pulmonary fibrosis, pulmonary rehabilitation and measurements of lung volumes as well as late-breaking guidelines

This session is proposed as the 8th annual scientific symposium highlighting ATS Clinical Practice Guidelines (CPGs) as requested by the ATS Executive Committee. We will highlight CPGs published over the last year, including: the updated IPF guidelines, the workshop report defining pulmonary rehabilitation, the technical statement on measurement of lung volumes as well as late approved guidelines.
raising them. In this workshop, we seek to allay some of the fears and empower attendees to feel comfortable discussing and teaching about health disparities, race, and racism. We will provide an overview of important terminology used in the field of healthcare disparities and strategies to encourage and stimulate discussions among medical teams with learners in different clinical environments.

Faculty:  
A. Kannappan, MD, Denver, CO  
G.B. Tatem, MD, Detroit, MI  
E.K. Batchelor, MD, MEd, Phoenix, AZ  
R. Adamson, MBBS, ATSF, Seattle, WA

Monday Mid-day, May 22

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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker</th>
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<tr>
<td>11:30</td>
<td>Bacterial Pneumonia in the ICU: From Guidelines to Practice</td>
<td>Y. Odeyemi, MD, MSc, Rochester, MN</td>
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<td>11:55</td>
<td>Reviving the &quot;Other&quot; Respiratory Viruses: Moving Beyond COVID-19</td>
<td>C. Sriaroon, MD, Tampa, FL</td>
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<td>12:20</td>
<td>CAUTI and CLABSI and HAPI Oh MY!: Prevention and Management of Hospital-Acquired Infections</td>
<td>S. Giovanni, MD, MSCE, Portland, OR</td>
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<td>12:45</td>
<td>Questions and Answers</td>
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11:45 a.m. - 1:15 p.m.

ATS WOMEN’S FORUM

The annual ATS Women’s Forum recognizes the achievements and supports the advancement of women in pulmonary, critical care, and sleep medicine and research. The forum provides a valuable opportunity for women to find value in the inspirational messages and career insights the speakers share.

We will also recognize and hear remarks from the 2023 recipient of the Elizabeth A. Rich Award. The Elizabeth Rich Award is presented to an outstanding woman in ATS who has made significant contributions in the fields of pulmonary, critical care and sleep medicine.

The forum is organized and presented by the ATS Membership Committee and will be hosted by its Chair Meshell Johnson, MD and Vice Chair Alexandra Noel, PhD. The Minority Trainee Development Scholarships are supported by the American Thoracic Society.

Pre-registration and an additional fee are required. $30 members/non-members

ATS ADVANCING ADULT IMMUNIZATION INITIATIVE: IMMUNE BOOST! ADDRESSING VACCINE HESITANCY AND THE LANDSCAPE OF VACCINE-PREVENTABLE DISEASES

12:00 p.m.-1:00 p.m.

TARGET AUDIENCE: Clinicians, Interprofessionals, Interventional Pulmonologists, Medical Educators, Nurses, Respiratory Therapists, Sleep Technologists, Researchers in infectious diseases and vaccines and vaccine hesitancy, and those interested in scientific communication

Objectives
At the conclusion of this session, the participant will be able to:
• learn new strategies used by clinicians to improve adult vaccination in their own communities
• gain an understanding of emerging strategies to support vaccine uptake and knowledge about new respiratory infectious disease prevention products.
• apply strategies to enhance patient uptake of vaccines in one’s home institution or practice environment

The COVID-19 pandemic has highlighted the multiple different challenges that limit adult vaccination rates, and there is an evolving literature documenting this issue. In 2021 ATS was awarded a CDC/CMSS grant specifically to work with a number of diversely populated health systems to study immunization practices, identify best practices, and share key learnings. This session will build upon the existing literature and learnings from the CDC/CMSS grant to provide real-world examples about how clinicians and patients from diverse communities approach vaccine confidence, hesitancy, and misinformation. Session attendees will have access to this new information and hear hands-on strategies that they may be able to apply to their home institutions and practices. This novel session will provide conceptual and real-world recommendations about addressing vaccine hesitancy and misinformation to meet the needs of clinicians seeking tools to help their patients feel more confident about vaccines and provide cutting edge information on emerging vaccines for chronic lung disease.

PCC1  PEDIATRIC CLINICAL CORE CURRICULUM

Education Committee

12:00 p.m. - 1:00 p.m.

Target Audience
Clinicians who are engaged in maintenance of certification activities

Objectives
At the conclusion of this session, the participant will be able to:
• describe diagnosis and management of central and obstructive sleep disorders in infants
• identify best practices for management and treatment of pulmonary hypertension in infants
• describe best practices and standards of care for management of bronchopulmonary dysplasia in the neonatal intensive care unit and the post NICU period

Chairing: J. Gross, MD, PhD, Denver, CO
C. Okorie, MD, Paulo Alto, CA
M. McCown, MD, Bethesda, MD

12:00 Bronchopulmonary Dysplasia in the NICU
D. Chhabra, MD, Rochester, NY

12:25 Post NICU Management of BPD
M. Bansal, MD, Los Angeles, CA

12:50 Questions and Answers
L7  CIRCADIAN RHYTHMS IN PULMONARY AND CRITICAL CARE: IMPLICATIONS FOR HEALTH AND DISEASE

12:00 p.m. - 1:00 p.m.

Target Audience
providers of lung health, pulmonologist, sleep medicine and critical care physicians and clinician-scientist, nurses, basic, translational, and clinical lung researchers

Objectives
At the conclusion of this session, the participant will be able to:
• to educate the audience about the connections between circadian rhythms and lung health and disease.
• to better understand how the consideration of circadian rhythms is relevant to critical care clinical practice.
• to identify research opportunities in chronomedicine.

Circadian rhythms help regulate many biological processes, including metabolism, immunity, and sleep. A growing body of evidence has linked circadian misalignment to several disease states, including clock-gene-related lung diseases (i.e., asthma, COPD, pulmonary fibrosis), renewing scientific interest in this space. In the ICU, where continuous patient monitoring, constant light exposure, and 24-hour feeding schedules are standard practice, circadian disruption may impact patient outcomes and even exacerbate disease. During this session, speakers will highlight recent findings, and describe the scientific gaps and opportunities for circadian research in the context of ICU management, and overall lung health and disease.

Chairing:
R. Mehra, MD, MSCR, ATSF, Cleveland, United States
M.K. Brown, PhD, Bethesda, United States
A.D. Laposky, PhD, Bethesda, United States

12:00 ATS-SRN Perspective
R. Mehra, MD, MSCR, ATSF, Cleveland, United States

12:02 Circadian Rhythms in Health and Disease
J. Hogenesch, PhD, Cincinnati, United States

12:12 Circadian Rhythms in Development and Pediatric Pulmonary function
S. Sengupta, MPH, Philadelphia, PA

12:24 Circadian Rhythms and Immune Function in the Lung
J.A. Haspel, MD, PhD, St. Louis, MO

12:36 Sleep and Circadian Rhythms in the ICU Environment
M.P. Knauert, PhD, MD, New Haven, CT

12:48 Circadian Disruption in Pediatric OSA
D.F. Smith, MD, PhD, Cincinnati, OH

L8  PURSuing the Right Funding Source: Institutes, Organizations and Foundations Share Their Funding Priorities

12:00 p.m. - 1:00 p.m.

Target Audience
Researchers whose work focuses on pulmonary, critical care, and sleep health as well as health services and quality. Information provided could also enhance career development strategies for students and early career professionals.

Objectives
At the conclusion of this session, the participant will be able to:
• describe the research priorities and mechanisms of each funding agency represented on the panel.
• identify specific criteria required for various mechanisms presented by each agency on the panel
• identify a funding agency whose priorities and mechanisms are most closely aligned with the attendee’s interest and program of research.

This session will introduce programs and research funding opportunities offered through various government and non-government agencies. Speakers will present current research priorities and mechanisms of funding available within their respective agencies. Time will be provided for audience members to ask questions of the panel of speakers.

Chairing:
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN
J.B. Seaman, PhD, RN, CHPN, Pittsburgh, PA

12:00 Introductions
J.B. Seaman, PhD, RN, CHPN, Pittsburgh, PA

12:05 National Institute of Nursing Research
K. Huss, PhD, Bethesda, MD

12:13 National Heart Lung Blood Institute
S. Shenoy, PhD, Bethesda, MD

12:21 ATS Research Program
E.M. Nebel, MS, New York, NY

12:29 Agency for Healthcare Research and Quality
M.A. Miller, MD, MS, Rockville, MD

12:37 American Lung Association
A.E. Dixon, MA, BM BCH, ATSF, Burlington, VT

12:45 Questions and Answers
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN
U.S. FOOD AND DRUG ADMINISTRATION/FDA/CENTER FOR DRUG EVALUATION & RESEARCH (FDA/CDER)

OUTSIDE ORGANIZATION SESSION

L9  GENERIC DRUG DEVELOPMENT FOR RESPIRATORY PRODUCTS, US FOOD AND DRUG ADMINISTRATION UPDATE

12:00 p.m. - 1:00 p.m.

Target Audience
Clinicians in practice, researchers, pharmaceutical industry representatives, international drug regulators

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

• recognize key aspects of the generic drug regulatory approval process, and how the Office of Generic Drugs (OGD) evaluates comparative clinical information to support bioequivalence for complex inhaled generic drug products.

• describe product-specific guidances for generic drug products recently posted by the Office of Generic Drugs (OGD), with a focus on how these can inform complex orally inhaled and nasal generic drug development.

• articulate how emerging technologies and innovative approaches are being utilized for FDA-funded research, FDA guidance development, and regulatory decision-making.

This session will describe respiratory product development of generic drugs within the US, focusing on paths forward to bring safe and effective generic respiratory products to the American public. A general overview will summarize the generic drug approval process, including demonstration of bioequivalence and therapeutic equivalence utilizing comparative clinical information. Discussion of recent generic product approvals and posted regulatory guidance will provide the audience a greater understanding of the generic approval process, and how the use of emerging technologies and outcomes of research projects contribute to scientific understanding for these complex orally inhaled and nasal drug products to inform regulatory actions.

Chairing:  K. Witzmann, MD, Silver Spring, MD

12:00  Update for Generic Orally Inhaled and Nasal Drug Products
K. Witzmann, MD, Silver Spring, MD

12:20  Comparative Clinical Considerations in the Determination of Bioequivalence
D. Santos Conti, PhD, Silver Spring, MD

12:37  Emerging Concepts and New Technologies for Bioequivalence of Orally Inhaled and Nasal Drug Products
E. Bielski, PhD, Silver Spring, MD

12:54  Question and Answer
K. Witzmann, MD, Silver Spring, MD

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES, NIH

OUTSIDE ORGANIZATION SESSION

L10  NEW FINDINGS ON ASTHMA AND ALLERGIC DISEASE IN URBAN ENVIRONMENTS

12:00 p.m. - 1:00 p.m.

Target Audience
Healthcare providers, clinical researchers, individuals working with disadvantaged populations

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

• be able to describe early life lung function interacts with allergic sensitization to influence the risk for recurrent wheezing episodes in children and be able to apply this knowledge to improve his/her practice.

• describe the utility of airway transcriptome profiling in defining inflammatory pathways driving alterations in lung function at baseline and during respiratory illnesses in exacerbation-prone urban children.

• understand the role of DNA methylation in mediating environmental effects of risk for asthma and allergic sensitization in children.

This session will provide the listener insights into mechanisms of lung function development, lung function trajectories over childhood, and responses to respiratory infections among urban inner-city children and adolescents. The first talk will utilize the repeated pulmonary function measurements taken during the longitudinal follow-up of the URECA birth cohort to demonstrate how atopy and environmental factors influence lung function trajectories and the development of asthma. The second talk will elucidate transcriptomic pathways which are activate or suppressed during a viral respiratory infection and the impact on lung function. The third talk will present data on epigenetics role in asthma and allergic sensitizations.

Chairing:  A. Coleman, MD, Bethesda, MD

12:00  Interactions Between Allergic Sensitization and Lung Function on Wheezing Illnesses in Urban Children
J.E. Gern, MD, Madison, WI

12:20  Airway Transcriptome Patterns Relate to Lung Function in Urban Children with Exacerbation-Prone Asthma
M.C. Altman, MD, MPhil, Seattle, WA

12:40  Epigenetic Contributions to Understanding Asthma and Allergic Sensitization in Urban Children
C. Ober, PhD, Chicago, IL
**OUTSIDE ORGANIZATION SESSION**

**L11 DISPARITIES IN WORK-RELATED RESPIRATORY DISEASE**

12:00 p.m. - 1:00 p.m.

**Target Audience**
Providers of lung health; those interested in prevention of occupational respiratory disease.

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

- better identify common pitfalls in race and ethnicity reporting in the occupational respiratory health literature and describe approaches to race and ethnicity data collection and analysis that can improve understanding of health disparities.
- learn updated findings about work-related disparities in COVID-19.
- understand considerations in selecting the appropriate sex to use in spirometry reference equations for interpreting results from transgender and gender-diverse people.

The session will provide an update on current issues in work-related respiratory disease disparities. It will address the status of race and ethnicity reporting in occupational respiratory health and considerations for approaches to data collection and reporting to improve our understanding of racial or ethnic disparities and to better contextualize findings. It will also address disparities in occupations at risk for work-related COVID-19 and considerations in selecting appropriate spirometry test reference sex for transgender and gender-diverse people.

**Chairing:** D.N. Weissman, MD, ATSF, Morgantown, WV

12:00 Introduction to Session
D.N. Weissman, MD, ATSF, Morgantown, WV

12:03 Status of Race and Ethnicity Reporting in Occupational Respiratory Health
A.M. Foreman, PhD, Morgantown, WV

12:22 Work-Related COVID-19 Disparities
J.M. Cox-Ganser, PhD, Morgantown, WV

12:41 Selecting Appropriate Spirometry Reference Sex for Gender-Diverse People
E. Fechter-Leggett, DVM, MPVM, Morgantown, WV

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**OUTSIDE ORGANIZATION SESSION**

**L12 THE MOLECULAR ATLAS OF LUNG DEVELOPMENT (LUNGMAP), PHASE 2**

12:00 p.m. - 1:00 p.m.

**Target Audience**
Providers of lung health, medical fellows in training, and basic and clinical researchers interested in lung biology, developmental biology, pediatric lung disease pathogenesis, bioinformatics, and systems biology.

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

- learn the newest datasets of LungMAP that could inform lung research
- learn the innovative technologies for molecular profiling, imaging, and data analysis of the developing lung.
- learn how to access and use the LungMAP resources

Molecular Atlas of Lung Development (LungMAP) is an NHLBI-sponsored program. The overall goal of this program is to establish an open-access reference resource by creating a comprehensive molecular atlas of the late-stage developing human lung with data and reagents available to the research community. Speakers will demonstrate how systems biology and bioinformatic approaches can be used to inform processes in development that are recapitulated in disease and repair. The session will illustrate the LungMAP data pipeline which integrates high resolution multi-omics and imaging data.

**Chairing:** S. Lin, PhD, Bethesda, MD
N. Salomonis, PhD, Cincinnati, United States

12:00 Post-Natal Development of Human Lung Cell Niches
M.C. Basil, MD, PhD, Philadelphia, PA

12:12 Applying Single Nuclear Transcriptomics for Study of Rare Pulmonary Disorders in Infants and Children
K.A. Wikenheiser-Brokamp, MD, PhD, Cincinnati, OH

12:24 Single Cell Profiling of Human Bronchopulmonary Dysplasia
X. Sun, PhD, San Diego, CA

12:36 Multi-Omics Spatial Molecular Profiling of the Human Lung
G.C.D. Clair, PhD, Richland, WA

12:48 LungMAP Consortium Assay Breadth in Coordinated Use of Human Tissue Core Biorepository Samples
R. Misra, PhD, Rochester, NY
L13  GENOMICS ANALYSES FROM MILLION VETERAN PROGRAM IMPROVE LUNG CANCER DETECTION AND CARE

12:00 p.m. - 1:00 p.m.

Target Audience
Those interested in lung cancer research and care, in VA’s Million Veteran Program, in lung cancer screening, or in treatment of those with advanced stage lung cancer with immune checkpoint inhibitors.

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

• describe new findings from the Million Veteran Program and the ways that research in this large cohort could benefit the quality of life for patients with, or at risk for, lung cancer.
• describe new findings about how the generation of new knowledge at the population level may be used to benefit individual patients.
• describe new findings about how patients can be selected more efficiently for lung cancer screening through integrating genomics, clinical, and imaging data from individual patients.

In its Million Veteran Program (MVP), VA has collected blood for genomic analysis from over 900,000 Veterans integrated with associated longitudinal clinical data. Within MVP, VA now also has conducted the largest genome-wide association study of lung cancer, identifying novel risk loci, tumor-specific signals previously masked by smoking, and polygenic risk scores for risk stratification. This work will be described along with two related applications: (1) a multiomics dashboard integrating clinical, genetic, and imaging data to improve the efficiency of selecting high-risk Veterans for screening; (2) use of genomic and phenotypic characterization to stratify those with advanced lung cancer for immunotherapy.

Chairing: J.K. Brown, MD, San Francisco, CA

12:00  Update on the Million Veteran Program
S. Muralidhar, PhD, Washington, DC

12:15  Genome-Wide Association Study of Lung Cancer in MV
S. Pyarajan, PhD, Jamaica Plains, MA

12:30  Multiomic Predictive Model of Lung Cancer Risk
S. Aguayo, MD, Phoenix, AZ

12:45  Predictive Model for Lung Cancer Treatment with Immune Checkpoint Inhibitors
M. Green, MD, PhD, Ann Arbor, MI

L14  UPDATE ON PRECLINICAL MODELS OF IPF - AN NHLBI CONSORTIUM

12:00 p.m. - 1:00 p.m.

Target Audience
Those with research interests involving the study of idiopathic pulmonary fibrosis and other fibrotic lung diseases.

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

• learn new findings regarding the pathogenesis of IPF from its onset through disease progression.
• increase awareness among the broader IPF research community of the availability of new and improved model systems to study IPF.
• to inform the design of research studies involving IPF by leveraging model systems uniquely suited to uncover specific types of disease mechanisms, as well as improve model selection for screening and testing new drugs/biologics that target IPF.

This session highlights the recent scientific advances and collaborative research achievements of an NHLBI-sponsored U01 consortium funded through RFA-HL-20-007: Advancing Novel Research Models to Study Idiopathic Pulmonary Fibrosis. The goal of this initiative is to establish a set of complementary model systems that reproduce essential disease-defining features of human idiopathic pulmonary fibrosis (IPF) in order to develop more effective therapies.

Chairing: M. Craig, PhD, Bethesda, MD

12:00  From Mice to iPSC-AT2 and Back
M.F. Beers, MD, Philadelphia, PA

12:20  Team Mesenchyme: Integrating iPSC, Matrix Biology, PCLS, and Organoids
B. Gomperts, MD, Los Angeles, CA

12:40  A Novel Ferret Model of Idiopathic Pulmonary Fibrosis
S.M. Rowe, MD, Birmingham, AL
Pre-registration and additional fees required. Attendance is limited.

$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members.

12:15 p.m. - 1:15 p.m.

MTE24 LOCAL THERAPEUTICS APPROACHES IN MALIGNANT PLEURAL MESOTHELIOMA: RATIONALE, CLINICAL DEVELOPMENT AND FUTURE STRATEGIES
G. Stella, MD, PhD, Pavia, Italy

MTE25 MISINFORMATION AND DISINFORMATION ON COVID-19: HOW TO IMPROVE DISPARITIES AND INEQUITIES?
M. Mirsaeidi, MD, MPH, Jacksonville, FL

MTE26 HOW TO ASSESS THE OUTCOME OF A PULMONARY REHABILITATION PROGRAMME?
M.A. Spruit, PT, PhD, Horn, Netherlands

MTE27 SMART THERAPY AND ALLERGIC IMMUNOTHERAPY IN NEW ASTHMA GUIDELINES: PROS AND CONS
M. Cataletto, MD, Brookville, NY
R. Ramonell, MD, Pittsburgh, PA

MTE28 PROGRESS IN PROGRESSIVE PULMONARY FIBROSIS: AN UPDATE IN DEFINITION AND MANAGEMENT
J.V. Pugashetti, MD, Ann Arbor, MI
T. Kulkarni, MD, MPH, Birmingham, AL

MTE29 BEYOND THE LUNG: TAKING A MULTI-DISCIPLINARY APPROACH TO SARCOIDOSIS
M. Sharp, MD, MHS, Baltimore, MD
N. Gilotra, MD, Baltimore, MD
B. Stern, MD, Baltimore, MD

MTE30 OBESITY HYPOVENTILATION SYNDROME: CLINICAL APPROACH
B.Y. Sunwoo, MBBS, San Diego, CA

CLINICAL
ADULT CLINICAL CORE CURRICULUM

CC3 SLEEP CLINICAL CORE CURRICULUM

Education Committee

Target Audience
Clinicians who are engaged in maintenance of certification activities

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

• describe the nuts and bolts of positive airway pressure and when and how to use it for patients with heart failure and patients with different types of sleep disordered breathing
• identify best practices for diagnosis and management of sleep disorders in patients with long COVID
• characterize common manifestations of sleep disordered breathing in patients with neuromuscular disease

Chairing:  S. Shafazand, MD, Miami, FL
K. Dudley, MD, Boston, MA

2:15 The Nuts and Bolts of Non-Invasive Ventilation: An Update for Providers in 2023
M. Soffler, MD, Valhalla, NY

2:40 To PAP or not to PAP: Heart Failure and Sleep Disordered Breathing
V. Kundel, NYC, NY

3:05 Long Haul COVID and Sleep Disorders
O. Rojanapairat, MD, Los Angeles, CA

3:30 Questions and Answers

Monday Afternoon, May 22
NURSING YEAR IN REVIEW - WE CAN'T WAIT: ASSURING A PULMONARY, CRITICAL CARE, AND SLEEP NURSING WORKFORCE

Assembly on Nursing
2:15 p.m. - 3:45 p.m.

Target Audience
Conference participants with concerns about the availability of pulmonary, critical care, and sleep clinicians, faculty, and researchers

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

• apply new clinical research knowledge to clinical practice and nursing workforce

• gain new findings about strategies to address nursing staffing through health policies; use of innovative models for well-being, burnout, safety; and recruitment and retention of nurses

• identify effective approaches to recruit and retain nurses at various stages of the career including early, mid, and senior stages

The current nursing shortage influences the availability of healthcare and research conducted in ATS specialties of pulmonary, clinical care, and sleep. To increase audience awareness of the current status, speakers will provide overviews and review the literature about policies related to nurse staffing, interprofessional models for nurses’ well-being and safety, and recruitment and retention of the nursing workforce at various stages of careers. The audience will benefit from a panel discussion of staffing policies, innovative models to address professional role issues, and approaches that positively influence the recruitment and retention of nurses. The panel will focus on these issues through the lens of the early, mid, and senior career nursing workforce.

Chairing: S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN
J.B. Seaman, PhD, RN, CHPN, Pittsburgh, PA

2:15 Introduction
J.B. Seaman, PhD, RN, CHPN, Pittsburgh, PA

2:20 Supporting Nurse Staffing Through Policy Initiatives
D.K. Costa, PhD, RN, Orange, CT

2:35 Well-Being, Safety, and Burnout: Interprofessional Teams and the Roles They Play
T.L. Eaton, PhD, RN, FNP-BC, ACHPN, Ann Arbor, MI

2:50 Models and Strategies for the Recruitment and Retention of Nurses
E.G. Collins, PhD, ATSF, Chicago, IL

3:05 Brief Applicable Highlights from the Future of Nursing 2020-2030 Report
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN

Panel Discussion
D.K. Costa, PhD, RN, Orange, CT

Panel Discussion
T.L. Eaton, PhD, MSc, RN, FNP-BC, ACHPN, Ann Arbor, MI

Panel Discussion
E.G. Collins, PhD, ATSF, Chicago, IL

Panel Discussion
L.L. Chlan, PhD, RN, ATSF, Rochester, MN

Panel Discussion
K.O. Lindell, PhD, RN, ATSF, Charleston, SC

Panel Discussion
M.M. Lyons, PhD, MSN, ACNP-BC, Columbus, OH

Panel Discussion
L.L. Chlan, PhD, RN, ATSF, Rochester, MN

Panel Discussion
K.O. Lindell, PhD, RN, ATSF, Charleston, SC

Panel Discussion
M.M. Lyons, PhD, MSN, ACNP-BC, Columbus, OH

Panel Discussion
L.L. Chlan, PhD, RN, ATSF, Rochester, MN

Q & A
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN

THE GENETICS OF INTERSTITIAL LUNG DISEASE: CURRENT STATE AND FUTURE PROMISE

Assembly on Clinical Problems
2:15 p.m. - 3:45 p.m.

Target Audience
ILD clinicians, geneticists, physician-scientists

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

• understand how rare genetic variants and telomere length relate to interstitial lung disease risk, progression, and survival

• describe the current approaches to genetic testing and telomere length testing in ILD and how to counsel patients

• define future strategies for applying clinical genetics in the diagnosis and management of ILD

Significant progress has been made in our understanding of the genetic susceptibility underlying pulmonary fibrosis, including elucidating the associations of rare variants in more than 12 genes including genes involved with surfactant metabolism and telomere maintenance. Researchers are beginning to understand how the presence of such variants informs clinical management and are incorporating genetic testing into their practice. This includes informing prognosis and treatment strategies for patients affected with ILD and characterizing risk for unaffected relatives. This session will review the state of research related to genetic variants and telomere length in ILD and provide a roadmap for how future clinical genetics will advance us towards precision medicine in ILD.
Chairing: E.D. Farrand, MD, San Francisco, CA
P.J. Wolters, MD, San Francisco, CA
L.V. Wain, PhD, Leicester, United Kingdom

2:15 Overview
P.J. Wolters, MD, San Francisco, CA

2:20 Genetic Variants and ILD
B. Crestani, MD, PhD, Paris, France

2:30 Question and Answer

2:35 Telomere Length and ILD
C. Newton, MD, Dallas, TX

2:45 Question and Answer

2:50 The Here and Now of ILD Genetics
Speaker To Be Announced

3:00 Question and Answer

3:05 The Future of Genetics in ILD: Diagnostic Applications
C.K. Garcia, MD, PhD, New York, NY

3:20 Question and Answer

3:25 The Future of Genetics in ILD: Therapeutic Applications
J. Morisset, MD, Montreal, Canada

3:40 Question and Answer

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**CLINICAL TOPICS IN PULMONARY MEDICINE**

**B83 WHY YES, YOU CAN SKI WITH YOUR VENTILATOR! USING TECHNOLOGY TO KEEP NIV/IMV VENTILATOR DEPENDENT PATIENTS ACTIVE AND ENGAGED IN THEIR COMMUNITIES**

Assemblies on Clinical Problems; Pediatrics; Sleep and Respiratory Neurobiology

2:15 p.m. - 3:45 p.m.

**Target Audience**
Adult pulmonologists, pediatric pulmonologists, respiratory therapists, mid-level providers, and nurses who care for patients with ventilator (NIV or invasive) dependent respiratory failure

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

- develop competency in guideline based implementation of assisted NIV and IMV in advanced lung disease
- develop competency in airway clearance modalities in advanced lung disease
- adapt above competencies to multiple different community engagement models (school participation, sports, travel and camping). Review of environment specific needs/adaptations for effective device function

Session will provide state of the art, evidence based guidance on the optimal management of patients with ventilator dependent respiratory disorders. Objectives are to ensure understanding of the evidence based use of NIV, IMV, cough augmentation and sputum mobilization options in advanced lung disease to maintain quality of life, with a focus on maintaining community participation. Optimizing evidence based respiratory assistive device adaptations to continue appropriate ventilation and airway clearance while out of the home. Specific situations that will be addressed will be sports participation (skiing, hockey), camping and day and multi-day travel. Patient and family panelists will provide expert experiential guidance.

Chairing: K.A. Provost, DO, PhD, FCCP, Buffalo, NY
M. Cao, DO, STANFORD, CA
J.H. Hansen-Flaschen, MD, ATSF, Wynnewood, PA

2:15 Why Am I Carrying All of This STUFF?
K.A. Provost, DO, PhD, FCCP, Buffalo, NY

2:30 You Are Going to School Today!
R. Amin, MD, Toronto, Canada

2:45 Ventilators in the Wild! Skiing, Camping and Other Sports
J.P. Brown, MD, PhD, Salt Lake City, UT

3:00 London/Disneyworld/Laguna Beach Here We Come!
L.F. Wolfe, MD, Chicago, IL

3:15 No Really, You Really Can Do All This!

3:25 Speaker Panel

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**CLINICAL CRITICAL CARE TRACK**

**B84 NEXT GENERATION CRITICAL CARE TRIALS: FROM PRAGMATIC TRIALS TO PRECISION MEDICINE**

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

2:15 p.m. - 3:45 p.m.

**Target Audience**
Clinicians of any discipline who care for critically ill adults or children, and clinical and translational critical care researchers

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

- researchers who attend the session will be able to apply knowledge acquired about novel trial designs to interpret and critique the results of future platform, adaptive, pragmatic, and personalized clinical trials
• clinicians will be able to assess the strengths and limitations of novel trial designs in order to facilitate the implementation of results from future trials into clinical practice to improve patient outcomes
• learners will be able to apply an understanding of “individual treatment effect” and “personalized medicine” to the manner in which they implement the results of clinical trials into clinical practice

Critical care has historically relied on explanatory, parallel-group randomized trials to generate evidence to inform practice. Such designs can be inefficient and expensive. COVID-19 has changed the landscape of critical care trials by advancing alternative, innovative, and efficient approaches to trial design, conduct, and analysis. This session will review these new methods, including platform trials, adaptive trials, Bayesian methods, pragmatic trials, and trials informing personalized treatment choices. Clinicians will learn how to interpret and apply results of these trials to practice. Researchers will learn how to use these methods to generate real-world, personalized evidence, improving care for critically ill patients.

Chairing: M.W. Semler, MD, MSc, Nashville, TN
C.S. Calfee, MD, MSCR, San Francisco, CA
M.M. Churpek, MD, MPH, PhD, ATSF, Madison, WI

2:15 Introduction: ABCs of Next-Gen RCTs
M.W. Semler, MD, MSc, Nashville, TN

2:20 Platform Trials
M.N. Gong, MS, MD, Bronx, NY

2:35 Adaptive Trials and Bayesian Methods
E. Goligher, MD, PhD, Toronto, Canada

2:50 Pragmatic Trials
J.D. Casey, MD, MSCR, Nashville, TN

3:05 Using Biomarkers for Precision Medicine in Clinical Trials
C.S. Calfee, MD, MSCR, San Francisco, CA

3:20 Using Machine Learning for Precision Medicine in Clinical Trials
M.M. Churpek, MD, MPH, PhD, ATSF, Madison, WI

3:35 Roundtable Discussion
M.W. Semler, MD, MSc, Nashville, TN

Objectives
At the conclusion of this session, the participant will be able to:
• to learn new findings on lymphatics structure and function in the lung and how this is related to disease
• to be able to apply knowledge on lymphatics and follicles in management of patients treated with steroids and other immune modulators
• to be able to apply knowledge on lymphatics and follicles in management of patients who had undergone lung transplantation

Lymphatics and lymphoid follicles are integral to the lung immune response and for processing antigens from the environment. This session will review the biology of the lymphatic and associated lymphoid follicle and immune responses in the lung, discuss how changes in these structures are associated with different disease phenotypes. The learner will better understand how lymphatics are linked to the immune response and appreciate these understudied structures in the lung.

Chairing: J.E. McDonough, PhD, New Haven, CT
H. Outtz Reed, MD, PhD, New York, NY

2:15 The Role of Lymphatic Function in the Pathogenesis of Lung Disease
H. Outtz Reed, MD, PhD, New York, NY

2:30 Lymphoid Follicles: A Good Intention Turned Bad
Ali Oender Yildirim, PhD, Neuherberg, Germany

2:45 Lymphoid Follicles in COPD: An Unanswered Question
F. Polverino, MD, PhD, Houston, TX

3:00 Pulmonary Lymphatic Diseases: Novel Imaging and Interventional Treatment
Speaker To Be Announced

3:15 Multiomics Approaches to Understand Lung Lymphatics and Its Role in Lymphangioleiomyomatosis
M. Guo, PhD, Cincinnati, OH

3:30 Harnessing Lymphatic Transport for Drug Delivery
K. Maisel, PhD, Maryland, MD

Lung health providers, trainees, and those involved in research or clinical care related to lung disease and immune response

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M. Guo, PhD, Cincinnati, OH

3:30 Harnessing Lymphatic Transport for Drug Delivery
K. Maisel, PhD, Maryland, MD

Lung health providers, trainees, and those involved in research or clinical care related to lung disease and immune response
clinical researchers with an interest in pneumonia, critical care, phenotypes and endotypes

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

• improve precision in the diagnosis and management of patients with pneumonia utilizing clinically available resources like guidelines and culture-independent diagnostic tools
• understand the existing phenotypes and endotypes in pneumonia and methods to evaluate their trajectory over time
• define and implement research strategies to characterize patients with pneumonia

Pneumonia is a leading cause of death globally. With the current approach to pneumonia, which includes diagnosis by symptoms and chest radiograph and management with antibiotics, morbidity and mortality remain high. Precision medicine calls for multidimensional characterization of a patient to identify factors that may indicate favorable responses to an intervention. The identification of phenotypes and endotypes are crucial for the development of targeted therapies in pneumonia. In this session, experts will introduce the audience to emerging research that supports the presence of phenotypes in pneumonia and discuss clinical tools that can enhance precision medicine in pneumonia.

Chairing:
C. Pickens, MD, Chicago, IL
B.G. Wu, MD, MSc, New York, NY
R.P. Dickson, MD, Ann Arbor, MI

2:15 Matching Solutions to Complexity: The Role for Pneumonia Guidelines in Precision Medicine
B.E. Jones, MD, MSc, Salt Lake City, UT

2:33 Multiplex PCR to Enhance Precision in Diagnosing Pneumonia 2
D. Stolz, MD, Basel, Switzerland

2:51 Multi-Omics Approaches to Endotyping Pneumonia 3
C. Dela Cruz, MD, PhD, ATSF, New Haven, CT

3:09 Immunologic Phenotypes in Community Acquired Pneumonia 4
M.R. Menendez Villanueva, MD, Valencia, Spain

3:27 Mapping the Trajectory of Pneumonia Phenotypes Using Novel Clinical Endpoints 5
R.G. Wunderink, MD, Chicago, IL
**TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

**B88 LEAPS AND BOUNDS: REDUCING HEALTHCARE’S CARBON FOOTPRINT**

Assemblies on Environmental, Occupational and Population Health; Critical Care; Nursing; Health Policy Committee

Target Audience
Researchers focused on healthcare delivery and/or environmental/occupational exposures, those with clinical, research or administrative responsibilities, and policy makers who focus on environmental regulations and healthcare delivery

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

- define the healthcare industry’s contribution to emissions and climate change
- understand and apply interventions at the individual and system levels to reduce, eliminate, or reverse healthcare’s environmental impact and emissions

Climate change threatens human health with a disproportionate burden on vulnerable populations. Human activities contributing to climate change include burning of biomass fuels and resultant emission of greenhouse gasses. A ‘carbon footprint’ reflects the effect that a person, group of people, or industry has on emissions. Healthcare providers and systems directly contribute to and treat climate change’s negative effects on health. Thus we are both responsible for and uniquely poised to take a leadership role in individual and industry response to the climate crisis. Presented are multiple potential points of healthcare system intervention to reduce the pace of global warming.

Chairing:
- E. Brigham, MD, MHS, Vancouver, Canada
- J.M. Radbel, MD, New Brunswick, NJ
- J.P. Castner, PhD, RN, Grand Island, NY
- M.B. Rice, MD, MPH, Boston, MA

**B89 TRANSCRIPTOMIC PROFILING OF PULMONARY VASCULAR LESIONS UNRAVEL MECHANISMS OF PULMONARY ARTERIAL HYPERTENSION**

Assemblies on Pulmonary Circulation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

Target Audience
Investigators and physician scientists interested in advanced techniques used to explore molecular mechanisms of pulmonary vascular remodeling, as well as clinicians, pharmacists and other caregivers engaged in treating patients with pulmonary hypertension.
Objectives
At the conclusion of this session, the participant will be able to:

• describe new technologies that allow assessment of gene expression at the cellular and lesional level from animals and patients with pulmonary vascular disease
• apply new technologies for assessing cell specific gene expression to advance basic science research in pulmonary vascular biology
• apply new knowledge competence to better understand the pathophysiology of pulmonary vascular disease to help guide the diagnosis and treatment of pulmonary arterial hypertension

New techniques in RNA sequencing, spatial transcriptomics and proteomics have rapidly developed and allow for assessment of near complete gene expression at a microscopic lesional, and cellular level, focused on a precise area of interest making it possible to compare gene expression between different types of pulmonary vascular cells under baseline and disease conditions. This symposium will present novel findings from multiple laboratories demonstrating how these techniques are moving the field of pulmonary vascular biology forward, with a focus on methodology development, the required expertise to carry out such an analyses, bioinformatics, and interpretation of the data.

Chairing: J.R. Klinger, MD, ATSF, Providence, RI
J. Leopold, MD, Boston, MA
M.W. Geraci, MD, Pittsburgh, PA

2:15 Integrated Analysis of scRNAseq Data Sets to Develop a Comprehensive Atlas of Endothelial Gene Expression in the Normal Lung
N. Kaminski, MD, ATSF, New Haven, CT

2:35 Reactivation of Transcriptional Programs That Orchestrate Fetal Lung Development in Human Pulmonary Hypertension
S.S. Pullamsetti, PhD, Bad Nauheim, Germany

2:50 The Use of Single-Cell Transcriptomics in Animal Models of Pulmonary Hypertension to Identify Genetic Changes Relevant to Human Pulmonary Hypertension
J. Hong, MD, PhD, Los Angeles, CA

3:10 Combining Spatial Transcriptomics and Single Cell RNAseq to Examine Gene Expression in Pulmonary Vasculature Endothelial Cells
A. Brodsky, PhD, Providence, RI

3:30 Use of Spatial Transcriptomics to Examine Lesion-Specific Gene Expression in Human Pulmonary Arterial Hypertension
K.R. Stenmark, MD, Aurora, CO

B90 IMPROVING THE DIAGNOSIS AND MANAGEMENT OF PEDIATRIC ACUTE RESPIRATORY DISTRESS SYNDROME

Assemblies on Critical Care; Pediatrics
2:15 p.m. - 3:45 p.m.

Target Audience
Clinicians and researchers who care for patients with ARDS

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

• improve the diagnosis of pediatric ARDS
• integrate new guidelines for the management of PARDS into current practice
• use informatics and data science techniques appropriately in the care of children with PARDS

Acute Respiratory Distress Syndrome (ARDS) occurs in both children and adults, but the management and diagnosis of Pediatric Acute Respiratory Distress Syndrome (PARDS) must consider factors which are unique to children and pediatric ICU practice. In 2015, the Pediatric Acute Lung Injury Consensus Conference (PALICC) published a definition of PARDS, along with clinical practice guidelines. Since then, there has been a wealth of new research focused on PARDS, which has prompted an update to PALICC, termed PALICC-2. This session focuses on important concepts and themes from PALICC-2 which are crucial for the clinical care of children with PARDS.

Chairing: R.G. Khemani, MD, MSCR, Los Angeles, CA
Y. Lopez-Ferandez, MD, PhD, Bizkaia, Spain

2:15 Introduction and Overview of PALICC-2
G. Emeriaud, MD, PhD, Montreal, Canada

2:20 Patient Speaker
Speaker To Be Announced

2:25 How Do We Account for Changing Practice with HFNC and NIV in Defining PARDS?
S. Shein, MD, Cleveland, OH

2:40 Lung Protective Bundles and Monitoring in PARDS
A. Bhalla, MD, MSc, Los Angeles, CA

2:55 What Are the Most Important Outcomes to Follow in PARDS Patients, and Can We Modulate Them with our Therapies?
E. Killien, MD, Seattle, WA

3:10 Understanding Phenotypic Heterogeneity: Can We Get to Precision-Based Care in PARDS?
J.R. Grunwell, MD, PhD, Atlanta, GA
3:25 PARDS in the Digital Era: Leveraging Informatics and Data Science  
N. Sanchez-Pinto, MD, MCI, Chicago, IL

3:40 Question and Answer  
R.G. Khemani, MD, MSCR, Los Angeles, CA

BASIC • CLINICAL • TRANSLATIONAL SCIENTIFIC SYMPOSIUM

B91 LUNG AGING: WHY YOUR FEV1 IS FALLING AND PNEUMONIA IS YOUR FINAL FRIEND
Assemblies on Respiratory Cell and Molecular Biology; Respiratory Structure and Function
2:15 p.m. - 3:45 p.m.

Target Audience  
Clinicians, physiologists, molecular biologists, epidemiologists, and all points in between

Objectives  
At the conclusion of this session, the participant will be able to:
• describe new findings about the major pathophysiologic elements of the aging lung
• apply the pathophysiology of lung aging to better manage the common clinical scenarios of ILD, COPD, Th1 asthma, lung carcinogenesis
• improve the healthspan of individuals at risk for age-related lung disorders, including the consideration of “senolytic” prevention maneuvers

We are all aging. Yet the machinery of aging is not well understood. Many disorders with which clinicians struggle are strongly age-associated (UIP/IPF, COPD, Th1 ASTHMA, Lung Cancer, others). Some central dysfunctions of aging include stochastic deterioration of biologic programs; senescence programming, oxidative damage, telomeric maintenance failure, immunologic exhaustion, and other processes. This symposium will review some of the known processes of aging as they relate to the lung, review some of the most salient studies, and reach for a unified theme for normal as well as accelerated lung aging that may be addressable with preventatives and therapeutics.

Chairing:  
S.D. Spivack, MD, MPH, Bronx, NY  
J.L. Schneider, BA, Chicago, IL  
I. Rahman, PhD, ATSF, Rochester, NY

2:15 Overview of Lung Aging  
J.L. Schneider, MD, PhD, Boston, MA

2:30 Oxidative Shifts in the Aging Lung  
I. Rahman, PhD, ATSF, Rochester, NY

2:40 Signalling and Senescence in Lung Aging  
A.L. Mora, MD, Columbus, OH

2:50 Mutation and Epimutation Changes with Age  
S.D. Spivack, MD, MPH, Bronx, NY

3:00 Extracellular Matrix and Aging in the Lung  
J.K. Burgess, BSc, PhD, ATSF, Groningen, Netherlands

3:10 Distal Bronchoalveolar Region Changes in Aging and COPD  
R. Shaykhiev, MD, PhD, NEW YORK, NY

3:20 Immunologic Signaling and Exhaustion in the Aging Lung  
B. Ural, PhD, New York, NY

3:30 Multiomic Revelations in Lung Aging and IPF  
N. Kaminski, MD, ATSF, New Haven, CT

3:40 Panel Discussion  
S.D. Spivack, MD, MPH, Bronx, NY

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL SCIENTIFIC SYMPOSIUM

B92 INNOVATIVE APPROACHES TO PERSONALIZED SEVERE ASTHMA MANAGEMENT
Assemblies on Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Clinical Problems; Pediatrics; Respiratory Cell and Molecular Biology
2:15 p.m. - 3:45 p.m.

Target Audience  
Adult and pediatric asthma providers, including pulmonologists, allergists and APPs, as well as basic scientists interested in airway immunology, epithelial and airway smooth muscle biology and new companies in the severe asthma space

Objectives  
At the conclusion of this session, the participant will be able to:
• apply home assessments to longitudinal asthma management
• describe new findings regarding androgens and other sex steroids in asthma
• describe new insights regarding the use of imaging in asthma

Biologic treatments have been beneficial for many severe asthma patients, but many others continue to have debilitating chronic dyspnea, exacerbations and/or medication side effects. Recent advances in asthma biology and in technology have provided exciting opportunities to improve personalized severe asthma management. Leveraging insights from the NHLBI Precise network and ICAN meeting, we will provide an update on the latest insights in this field.
Chairing: H. Durrington, PhD, MA, MBChB, Manchester, United Kingdom
A.A. Zeki, MD, Davis, CA
B. Gaston, MD, Indianapolis, IN

2:15 Application of an Adaptive Trial Design to Severe Asthma Research
A. Ivanova, PhD, Chapel Hill, NC

2:28 Questions and Answers

2:33 Androgens and Other Sex Hormones in Severe Asthma
D.C. Newcomb, PhD, Nashville, TN

3:46 Questions and Answers

2:51 Potential Use of Genetics and Biomarkers to Personalize Severe Asthma Management
V.E. Ortega, MD, PhD, ATSF, Scottsdale, AZ

3:04 Questions and Answers

3:09 Asthma Imaging: Novel Insights
E. Dunican, BM BCH, Dublin, Ireland

3:22 Questions and Answers

3:27 Recent Advances in At-Home Assessments of Asthma Control
P. Akuthota, MD, ATSF, La Jolla, CA

3:46 Questions and Answers
Tuesday Morning, May 23

MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.
$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members

10:15 a.m. - 11:15 a.m.

MTE31 DETECTION OF ALPHA-1 ANTITRYPSIN DEFICIENCY - AN UNDERRECOGNIZED POPULATION
J. Lascano, MD, Gainesville, FL
L. Riley, MD, Kansas City, MO

MTE32 MANAGEMENT OF IMMUNE MEDIATED MYOSITIS RELATED LUNG DISEASE IN 2023
S.K. Danoff, MD, PhD, ATSF, Baltimore, MD
S. Sehgal, MBBS, CLEVELAND, OH

MTE33 LUNG MOLECULAR ATLAS PROGRAM HUMAN TISSUE CORE (LUNGMAP HTC)
G.S. Pryhuber, MD, Rochester, NY

MTE34 EEG FOR THE GENERAL INTENSIVIST
D. Anderson, PhD, MD, Edmonton, Canada
K. Rosenblatt, MD, MHS, Baltimore, MD

MTE35 ENGAGING PARTNERS TO PROMOTE ADHERENCE TO CPAP TREATMENT
L. Ye, PhD, RN, Boston, MA

MTE36 REMOTE PHYSICAL ACTIVITY MONITORING IN PULMONARY VASCULAR DISEASE
R.T. Zamanian, MD, FCCP, Stanford, CA
J. Minhas, MD, MS, MBBS, Philadelphia, PA

K3: KEYNOTE SERIES

8:00 a.m. - 8:45 a.m.

The ATS Keynote Series focuses on timely topics of high relevance to the pulmonary, critical care, and sleep medicine community. Keynote lectures feature leaders who have made major contributions in the important themes programmed at the 2023 conference and are unopposed by any other programming.

Tuesday's Keynote Lecture will focus on:
Reducing Gun Violence through Advocacy and Action by Physicians and Policymakers

Speakers:
Emmy Betz, MD, MPH
Joseph Victor Sakran, MD, MPA, MP

YEAR IN REVIEW

C1 CLINICAL YEAR IN REVIEW 3

9:00 a.m. - 10:30 a.m.

Target Audience
Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators

Objectives
At the conclusion of this session, the participant will be able to:
• apply new clinical research knowledge to clinical practice.
• apply new findings about key conditions in pulmonary, critical care and sleep.
• learn new strategies to manage the care of common conditions in pulmonary, critical care, and sleep.

Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators

Chairing:
R.J. Shah, MD, MSCE, San Francisco, CA
J.C. Ferreira, MD, PhD, ATSF, Sao Paulo, Brazil
S. Auld, MD, MSc, Atlanta, GA

9:00 Asthma
V.M. McDonald, PhD, New Lambton Heights, Australia

9:23 Sarcoïd
M. Sharp, MD, MHS, Baltimore, MD
C2  ENDPOINTS FOR THERAPEUTIC TRIALS IN ILD

Assemblies on Clinical Problems; Behavioral Science and Health Services Research
9:00 a.m. - 10:30 a.m.

Target Audience
Providers of lung health; those with clinical and/or research responsibilities; those designing or conducting trials of therapies for patients with ILD; approval agency representatives; pharmaceutical company representatives

Objectives
At the conclusion of this session, the participant will be able to:
• more fully appreciate the need for patient-centric outcomes in trials of therapies for patients with ILD.
• consider the use of specific, supplemental oxygen-related outcomes in their studies and trials.
• implement patient-centric outcomes that assess how patients with ILD feel and function in their daily lives.

Identifying endpoints that meet requirements for patient centrivity, applicability given the known or likely mechanisms of the therapeutic intervention and achievability within the constraints of therapeutic trials is key to the design of therapeutic trials for patients with ILD.

Chairing:  J. Swigris, DO, MS, Denver, CO
M. Kalluri, MD, Edmonton, Canada

9:00  Introduction
J.J. Swigris, DO, MS, Denver, CO
M. Kalluri, MD, Edmonton, Canada

9:10  Patient reported outcomes as endpoints in trial
J.J. Swigris, DO, MS, Denver, CO

9:30  Supplemental Oxygen Needs as a Trial Endpoint
K.I. Aronson, MD, MSci, New York, NY

9:50  Improving Home Spirometry to Make It a Viable Trial Endpoint
A.O. Adegunsoye, MD, MS, Chicago, IL

10:10  Data from Wearables as Trial Endpoints
K. A. M. Johannson, MD, MPH, ATSF, Calgary, Canada
• identify areas of early sepsis management for which high-quality evidence is lacking
• learn about trials currently in the field that will bring more data to inform practice for resuscitation and early sepsis management

Hemodynamic resuscitation is a core element of sepsis management and a focus of guidelines and care bundles, yet the optimal approach to IV fluid administration and vasopressor use remains controversial. With growing concern about the harms of fluid overload, long-standing dogma is being challenged and practice is evolving towards fluid-sparing, early vasopressor strategies. This symposium will provide a comprehensive update on current controversies in hemodynamic resuscitation for sepsis, including discussion of brand new evidence addressing the timing and selection of fluids and vasopressors and strategies for real-world implementation.

Chairing: E. Munroe, MD, Ann Arbor, MI
I.D. Peltan, MD, MSc, Murray, UT
I.S. Douglas, MD, FRCP, Denver, CO

9:00 Too Much of a Bad Thing? Pathophysiology of Harm from IV Fluids and Vasopressors in Sepsis
I.S. Douglas, MD, FRCP, Denver, CO

T. Meyhoff, MD, Copenhagen, Denmark

9:26 Selecting and Adding Vasopressors in Septic Shock
E. Munroe, MD, Ann Arbor, MI

9:39 Making it Personal: Individualizing Resuscitation Targets
P. Bhatraju, MD, Seattle, WA

9:52 Unintended Consequences: Understanding Effects of New Resuscitation Strategies on Patient Care Processes
C. Permpikul, MD, Bangkok, Thailand

10:05 Evidence to Practice: Teamwork Makes Resuscitation Work
T. Hiller, BSN, RN, Denver, CO

10:18 Panel Discussion and Questions: What’s Next for Sepsis Resuscitation?

**Target Audience**
Practicing clinicians and other health care providers, health disparities researchers, quality improvement specialists or policy makers

**Objectives**
At the conclusion of this session, the participant will be able to:
• describe new findings about current biases in care delivery relevant to pulmonary/critical care medicine
• identify the limitations of current approaches to clinical decision-making tools and treatment recommendations and evidence derived from machine learning approaches
• apply expert-consensus mitigation strategies for bias to improve the quality of clinical care

Risk and disease prediction tools are common in clinical practice. They are vital to high-quality care—simplifying complexity in evidence-based fashion. Yet, despite being used everyday use, many tools are now recognized to be racially biased, skewing clinical judgments, to contribute to worse outcomes for minoritized populations. This session brings together experts in health equity and clinical/prediction testing to discuss this manifestation of structural racism in pulmonary and critical care medicine. Attendees will learn about real world examples of biased tools used every day in our field, build a framework for understanding how biased tools emerge, and review mitigation strategies.

Chairing: A.D. Baugh, MD, San Francisco, CA
D.C. Ashana, MD, MBA, MS, Durham, NC
T.S. Valley, MD, MSc, Ann Arbor, MI

9:00 Introduction
A.D. Baugh, MD, San Francisco, CA

9:05 Color-Blind or Context Blind? Understanding Race in Pulmonary Function Testing
A.D. Baugh, MD, San Francisco, CA

9:16 Hold Your Breath: The Journey to an Equitable Pulse Oximeter
T.S. Valley, MD, MSc, Ann Arbor, MI

9:27 When Technology Imitates Life: How Bias Manifests in Risk Prediction and Artificial Intelligence
D.C. Ashana, MD, MBA, MS, Durham, NC

9:38 Shortcomings of Standard Cystic Fibrosis Screening Tests Among Individuals of African Ancestry
J.L. Taylor-Cousar, MD, MSc, ATSF, Denver, CO

9:49 Unequal Risk: Modifying Lung Cancer Screening Guidelines

10:00 The Bias of Machines
L.A. Perine, MBA, College Park, MD

10:11 Summary
D.C. Ashana, MD, MBA, MS, Durham, NC

10:16 Discussion
T.S. Valley, MD, MSc, Ann Arbor, MI
C6 DISPARITIES IN RESPIRATORY GENOMICS RESEARCH: STRATEGIES TO ADVANCE SCIENCE AND CLINICAL CARE

Assemblies on Allergy, Immunology and Inflammation; Environmental, Occupational and Population Health; Section on Genetics and Genomics

9:00 a.m. - 10:30 a.m.

Target Audience
Everyone in medicine and science has a sphere of influence that could contribute to mitigating health disparities - trainees, clinical faculty, research faculty, healthcare staff, research staff, and administration.

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

• gain awareness of current race- and sex-specific health inequities in complex lung diseases, the importance of addressing underrepresentation in genomic studies, and implications on the development of polygenic risk scores for disease and traits

• awareness of common misconceptions as it relates to minorities and Mendelian orphan lung diseases, with a focus on cystic fibrosis, how this can impair diagnosis, prognosis, and access to precision modulator therapies, and next best steps forward

• address scientific & clinical issues in genomics as they relate to health disparities in the context of genetic epidemiology, development of predictive genomic profiles, multi-omics approaches, gene-by-environment interactions, & clinical translation

Advances in genomic technologies have primarily applied to European descent whites with one-to-two percent of African descent minorities and Hispanics included in genetic studies of disease. These underrepresented groups experience a disproportionate burden of respiratory disease and have an underappreciated risk for orphan diseases traditionally considered to be white-only, such as cystic fibrosis. In addition, a minority of genomic studies address differences of respiratory disease risk and severity specific to sex. This workshop will address scientifically and clinically relevant issues in genomics as they relate to health disparities from the context of genetic epidemiology, the development of predictive genomic profiles, multi-omics approaches, geno-by-environment interactions, and clinical translation.

Chairs:
A. Souquette, PhD, Memphis, TN
V.E. Ortega, MD, PhD, ATSF, Scottsdale, AZ
J. Pantaleón García, BS, MD, Houston, TX
D.L. Demeo, MD, Boston, MA

9:00 Introduction
A. Souquette, PhD, Memphis, TN

9:07 Patient Speaker
Speaker To Be Announced

9:12 The Causes and Implication of the Under Recognition of Cystic Fibrosis as a Genetic Disease in Minority Groups
J.L. Taylor-Cousar, MD, MSc, ATSF, Denver, CO

9:25 Intersectionality of Sex and Gender in Lung Disease Omics
D.L. Demeo, MD, Boston, MA

9:38 Genomic and Social Determinants of Racial Inequality in Asthma
J.G. Zein, MD, PhD, MBA, Cleveland, OH

9:51 “Omics” of Asthma and Disease Disparities
E. Forno, MD, MPH, ATSF, Pittsburgh, PA

10:04 Ancestral Diversity is Important When Evaluating Respiratory Traits and Disease in Genetic Studies
V.E. Ortega, MD, PhD, ATSF, Scottsdale, AZ

10:17 Insights into Ensuring Diversity in Recruitment and Representation in Science, a Take from the Immediate Past-Chair of the HDEC
N. Thakur, MD, MPH, San Francisco, CA

C7 CANCER IN THOSE WHO HAVE NEVER SMOKED: NEW INSIGHTS FROM BENCH TO BEDSIDE

Assemblies on Thoracic Oncology; Environmental, Occupational and Population Health

9:00 a.m. - 10:30 a.m.

Target Audience

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

• describe new findings on the genetic and epidemiologic underpinnings of cancer in those with no tobacco history

• define new strategies for early detection of cancer in those with no tobacco smoking history

• better counsel patients about risk factors for lung cancer beyond tobacco smoking

Lung cancer is a common cause of cancer mortality even in those who have never used tobacco. Taken alone, lung cancer in those who have never smoked (LCNS) is the seventh leading cause of cancer death in the United States. This seminar will explore how LCNS differs epidemiologically and molecularly from lung cancer associated with
tobacco use. Speakers will unique risk factors, strategies to identify those at risk, and novel treatment approaches.

Chairing: E. Ostrin, MD, PhD, Houston, TX  
Q. Lan, MD, PhD, MPH, Bethesda, MD  
J.J. Tsay, MD, MSc, New York, NY

9:00 Genomic Risks Behind Lung Adenocarcinoma in Those Who Have Never Smoked  
Q. Lan, MD, PhD, MPH, Bethesda, MD

9:18 Calculating Risk for Lung Cancer in Those Who Have Never Smoked  
M.C. Tammemagi, PhD, DVM, MSc, St. Catharines, Canada

9:36 The TALENT Trial: Lung Cancer Screening in a Population with Very Low Rates of Tobacco Use  
P.-C. Yang, MD, Taipei, Taiwan

9:54 Air Pollution and Lung Cancer  
J. Schiller, MD, Vienna, VA

10:12 New Directions in Treating Lung Cancer in Those Who Have Never Smoked  
E. Shum, MD, New York, NY

This session will review recent translational and clinical data, including recent clinical trials results, to provide state of the art clinical perspective of new developments in prevention strategies, diagnostics and management of M. avium complex (MAC) and M. abscessus complex (MAbsC) lung disease, as well as of latent, incipient and subclinical TB infections, and multidrug-resistant TB in various groups of patients and settings.

Chairing: P. Escalante, MD, MSc, Rochester, MN  
S.H. Kasperbauer, MD, Denver, CO  
A. Cattamanchi, MD, San Francisco, CA

9:00 MAC Pulmonary Disease: Evolving Concepts and Best Individualized Management  
C.L. Daley, MD, Denver, CO

9:20 M. Abscessus Complex Pulmonary Disease: Novel Treatment Interventions and Individualized Approach  
M.P. Dalcolmo, MD, PhD, Rio De Janeiro, Brazil

9:40 Diagnostics and Therapeutic Interventions in Latent, Incipient, and Subclinical TB Infections  
P. Escalante, MD, MSc, Rochester, MN

10:00 TB and MDR-TB: Evolving Concepts and Recent Guidelines-Based Therapies  
C.A. Haley, MD, MPH, Gainesville, FL

10:20 Questions and Answers

**C8** NEW CONCEPTS AND UPDATE IN THE DIAGNOSIS AND MANAGEMENT OF NTM AND TB INFECTIONS

Assemblies on Pulmonary Infections and Tuberculosis; Clinical Problems

9:00 a.m. - 10:30 a.m.

Target Audience  
Clinicians caring for patients with non-tuberculous mycobacteria (NTM) pulmonary disease and tuberculosis (TB), and/or working in the field of NTM and/or TB

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

- participants will be able to learn new diagnostic and therapeutic strategies, for the best management of patients with complex MAC- and MAbSC-lung disease, including novel and emergent treatment interventions in the United States and abroad
- participants will be able to learn new concepts from recent studies to optimally diagnose and manage latent, incipient, and subclinical TB infection in special settings in TB endemic areas and non-endemic areas
- participants will be able to learn new concepts from recent studies to optimally diagnose and manage patients with TB and MDR-TB/pre-XDR-TB (and their contacts) based on recent WHO guidelines, ATS/IDSA guidelines, and recent clinical trials data

**C9** REHABILITATION FOR THE POST-COVID POPULATION

Assemblies on Pulmonary Rehabilitation; Behavioral Science and Health Services Research; Critical Care

9:00 a.m. - 10:30 a.m.

Target Audience  
Clinicians and researchers working in the field of pulmonary rehabilitation who have extended or wish to extend their scope to include those with COVID-19, and clinicians caring for patients with COVID-19/ long COVID/ post-COVID syndrome

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

- define the rationale for COVID-rehabilitation in terms of ongoing patient symptoms
- better understanding of the evidence underpinning rehabilitation in the post-COVID population and other treatment approaches available in order to better advise patients on treatment options
• utilize the most appropriate outcome measures in this field

Attendees can expect to learn about the rationale and evidence underpinning the inclusion of patients recovering from COVID-19 in pulmonary rehabilitation (PR). This session will also debate if PR is the best intervention for this population or if other forms of rehabilitation/other treatments are better placed.

Chairing: R.A. Evans, MBChB, FRCP, PhD, Leicester, United Kingdom
F. Franssen, MD, PhD, Horn, Netherlands

9:00 Rationale for Rehabilitation in the Post-COVID-19 Population (Long COVID Symptoms)
M. Beauchamp, PT, PhD, Hamilton, Canada

9:15 Evidence for Post-COVID Exercise-Based Rehabilitation Programs
S.J. Singh, PhD, Leicester, United Kingdom

9:30 Evidence for Fatigue Management in Long COVID
T. Chalder, PhD, London, United Kingdom

9:45 Core Outcome Set for Long COVID
D.M. Needham, MD, PhD, Baltimore, MD

10:00 Argument 1: Patients Recovering from COVID Should Be Integrated into Existing Pulmonary Rehabilitation Services
R. Gloeckl, PhD, Schoenau am Koenigssee, Germany

10:10 Argument 2: There Is a Better Alternative to Integrating Patients with Long COVID into Pulmonary Rehabilitation
D. Wade, MD, Oxford, United Kingdom

10:20 Discussion Session

**BEHAVIORAL • CLINICAL • TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

**C10 OPIOID USE DISORDER, SLEEP DEFICIENCY, AND VENTILATORY CONTROL: BIDIRECTIONAL MECHANISMS AND THERAPEUTIC TARGETS**

Assembly on Sleep and Respiratory Neurobiology
9:00 a.m. - 10:30 a.m.

Target Audience
Sleep providers, patients with sleep deficiency, opioid use disorder, Those who take care of patients on opioids, those interested in sleep phenotypes and control of breathing

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

• at the end of this session, the participants will have an improved understanding of the bidirectional mechanisms between opioid use disorder (OUD) and sleep deficiency.

• describe efforts to target sleep deficiency and control of breathing with therapeutic interventions to promote long-term healthy recovery among patients with OUD.

• outline an actionable research agenda to evaluate the basic mechanisms of the relationship between sleep deficiency and OUD and the potential for behavioral, pharmacologic, and positive airway pressure treatments to improve OUD treatment outcomes.

This session will highlight the bidirectional mechanisms between opioid use disorder (OUD) and sleep deficiency. It will discuss how targeting sleep deficiency and control of breathing with therapeutic interventions can promote long-term, healthy recovery among patients in OUD treatment. Current knowledge on the effects of opioids on sleep architecture, sleep-disordered breathing, sleep apnea endotypes, ventilatory control, and clinical practice are highlighted. Finally, an actionable research agenda is provided to evaluate the basic mechanisms of the relationship between sleep deficiency and OUD and the potential for behavioral, pharmacologic, and positive airway pressure treatments targeting sleep deficiency to improve OUD outcomes.

Chairing: J.E. Orr, MD, La Jolla, CA
T. Kendzerska, MD, PhD, Ottawa, Canada

9:00 Current Knowledge on the Effects of Opioids on Sleep Quality, Sleep Architecture, Sleep-Disordered Breathing, Sleep Apnea Endotypes
D.J. Eckert, PhD, Bedford Park, Australia

9:15 Sleep Deficiency Across the Trajectory of OUD: Neuro-Biologic, Neuro-Psychiatric, and Social-Ecologic Mechanisms
H.K. Yaggi, MD, New Haven, CT

9:30 Targeting Insomnia in OUD: CBTi and Leveraging the Orexin System
K. Sharkey, MD, PhD, Providence, RI

9:45 PAP Therapies for Sleep-Disordered Breathing OUD
S. Chowdhuri, MD, MS, ATSF, Detroit, MI

10:00 Novel Pharmacologic Treatments Targeting Control of Breathing in Opioid Use: Intranasal Leptin, Ampakines, and Other Potential Targets
V.Y. Polotsky, MD, PhD, Baltimore, MD

10:15 Sleep Deficiency as a Core Feature of OUD and Recovery: A Research Agenda
A. Laposky, PhD, Bethesda, MD
C11  ADVANCING CLINICAL ISSUES TO ATS AND CAPITOL HILL: THE OXYGEN THERAPY EXEMPLAR

Assemblies on Clinical Problems; Environmental, Occupational and Population Health; Nursing; Pediatrics; Pulmonary Rehabilitation; International Health Committee; Health Policy Committee

9:00 a.m. - 10:30 a.m.

Target Audience
All ATS Members (This session is beneficial for all members as it provides a framework for taking a clinical issue, addressing it through ATS clinical, research and health policy groups, then engaging members in advocating for legislative changes.

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

• describe two challenges or barriers to patients’ oxygen therapy as related to CMS regulations and/or DME Companies.
• incorporate approaches from ATS Clinical Oxygen Guidelines to address patients’ oxygen therapy concerns.
• describe two strategies ATS members can use to effectively advocate for legislation related to oxygen therapy.

Chairing:
N.A. Kolaitis, MD, MS, San Francisco, CA
S.S. Jacobs, RN, MS, Stanford, CA

9:00 Introduction of the Session
N.A. Kolaitis, MD, MS, San Francisco, CA

9:02 Setting the Tone: Capturing the Patient’s Perspective 1
N.A. Kolaitis, MD, MS, San Francisco, CA

9:04 Setting the Tone: Capturing the Patient’s Perspective 2
J.M. Rommes, PhD, West Des Moines, IA

9:10 Listening to the Demands for Improvements: Innovations in Oxygen Delivery
D. Hayes, MD, MS, MEd, ATSF, Cincinnati, OH

9:25 It’s Reality for Our Patients: Challenges/Barriers Related to CMS Regulations and DME Companies
J.A. Krishnan, MD, PhD, ATSF, Chicago, IL

9:40 ATS Means Family and Family Means Nobody Gets Left Behind: ATS Responses to Oxygen issues
S.S. Jacobs, RN, MS, Stanford, CA

9:50 To Capitol Hill and Beyond: ATS Government Relations and Your Advocacy on Capitol Hill
G. Ewart, MHS, Washington, DC

10:00 Access, Recall and Care, Oh My!: The Next Frontier in Advocacy
H. Schotland, MD, ATSF, New York, NY

10:15 Questions and Answers
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN

C12  IMMUNOLOGY IN CONTEXT: MECHANISMS AND BIOMARKERS THAT DETERMINE VIRAL DISEASE SEVERITY

Assemblies on Allergy, Immunology and Inflammation; Pediatrics; Pulmonary Infections and Tuberculosis; Respiratory Cell and Molecular Biology; Section of Genetics and Genomics

9:00 a.m. - 10:30 a.m.

Target Audience
Adult and pediatric pulmonologists, critical care providers, immunologists, cell biologists

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

• better understand and incorporate current and novel biomarkers for respiratory infection correlates of protection or severity, including SARS-CoV-2, into current practice
• gain knowledge of novel techniques for tracking pathogen-host interactions over the course of infection, including single cell approaches and cell-free analyses
• discuss comprehensive cohort study design that includes molecular, genetic, environmental, and epidemiological variables as components of immune modeling for host pathogenesis

Findings presented will highlight novel correlates of severity and protection during respiratory illness, including SARS-CoV-2 infection, that could be useful as biomarkers for viral illness outcome. The session will explore new aspects of the host pathogen interface that could be harnessed as a clinical tool and lead to host-targeted therapeutics. What biomarkers can be used to determine individuals at higher risk of severe illness outcome from respiratory viral infection?
Chairing:
- A. Rogers, MD, MPH, ATSF, Stanford, CA
- T. Flerlage, MD, Memphis, TN
- E.K. Allen, PhD, Memphis, TN

9:00 Immunology in Context
E.K. Allen, PhD, Memphis, TN

9:05 Host-Microbiome Interactions in Early in Life - Key to Respiratory Infections?
Speaker To Be Announced

9:20 Q&A

9:25 SARS-CoV-2 Repeat Infections and Breakthroughs: Correlates of Immunity and Determinants of Severity
A. Gordon, PhD, Ann Arbor, MI

9:40 Q&A

9:45 Severe Respiratory Viral Infection Results in Persistent Immune Activation of Lung Fibroblasts Associated with Prolonged Respiratory Distress
D.F. Boyd, PhD, Santa Cruz, CA

10:00 Q&A

10:05 Profiling the Mucosal TCR Repertoire Landscape During Severe Pneumonia
L. Morales-Nebreda, MD, Chicago, IL

10:20 Q&A

MEDICAL EDUCATION SEMINAR

ME103 GAME ON!: GAMIFICATION OF MEDICAL EDUCATION IN PCCM

Assembly on Behavioral Science and Health Services Research
10:15 a.m. - 11:15 a.m.

Target Audience
The intended target audience is clinician educators with experience or interest in medical education for all levels of learners. Although this session will cover the utility of gamification in education, no prerequisites are required.

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

- review the available literature for the benefits of using gamified training platforms for medical education (both preclinical and clinical) and training.
- identify available platforms suitable for the purpose of gamification with links to multimedia content.
- outline the challenges in the implementation of gamification and the strategies available to counteract them.

Technology is increasingly being used in medical education to supplement the delivery of learning resources. Gamification is defined as the use of game design elements in non-game contexts. Studies have shown that gamification may improve learning outcomes in health professionals, especially when employing game attributes that improve learning behaviors and attitudes towards learning. Our session will present the evidence behind the use of gamification in medical education for learners in Pulmonary and Critical Care Medicine. We will illustrate strategies for gamifying traditional didactic approaches to learning by using gamification methods within our session. Lastly, we will explore challenges behind the implementation of gamification as well as the strategies to overcome them.

Faculty:
- N. Sawal, MD, Rochester, MN
- E.R. Camac, DO, Lexington, KY
- J.B. Richards, MD, MA, ATSF, FACP, Cambridge, MA
- S.M. Kassutto, MD, Philadelphia, PA
Tuesday Mid-day, May 23

11:30 a.m. - 1:00 p.m.
PLENARY SESSION

The Plenary Session will feature a keynote address by Timothy Caulfield, professor of Health Law and Science Policy and best-selling author.

Timothy Caulfield is a Canada Research Chair in Health Law and Policy, a Professor in the Faculty of Law and the School of Public Health, and Research Director of the Health Law Institute at the University of Alberta. His interdisciplinary research on topics like stem cells, genetics, research ethics, the public representations of science, and public health policy has allowed him to publish over 350 academic articles. He has won numerous academic, science communication, and writing awards, and is a Fellow of the Royal Society of Canada and the Canadian Academy of Health Sciences.


Professor Caulfield is also the co-founder of the science engagement initiative #ScienceUpFirst and the host and co-producer of the award-winning documentary TV show, A User’s Guide to Cheating Death, which has been shown in over 60 countries, including streaming on Netflix in North America.

The Plenary Session also will include the ratification of the 2023-2024 slate of officers as well as remarks from outgoing president Greg Downey, MD, ATSF, and incoming president M. Patricia Rivera, MD, ATSF.

In addition, three Respiratory Health Awards will be presented, including:
• Outstanding Educator Award
• Research Innovation & Translation Award

Tuesday • May 23
RESEARCH INTEGRITY IN MEDICAL EDUCATION: LESSONS FROM THE TUSKEGEE EXPERIMENT

12:00 p.m.-1:00 p.m.

TARGET AUDIENCE: Anyone with clinical, research, or administrative responsibilities. This session is of particular interest to trainees and individuals that oversee or participate in clinical and/or medical education and research.

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

• recognize the historical lessons from the Tuskegee Syphilis Study and how they apply to modern scientific investigation practice
• examine their own research participation to explore areas of potential unethical practice
• criticize unethical practice in clinical and research settings

This interactive session and facilitated panel discussion is a follow up to the ATS webinar on Research Integrity in Medical Education: Lessons from the Tuskegee Experiment. Prior attendance is not required. Together we will review the important lessons learned from the unethical practices of the Tuskegee Experiments and discuss how we can combat systematic racism collectively. We will discuss the risk of vulnerable populations both in research participants and investigators, the role that junior trainees play as both research participants and as future investigators, and the need for good leadership and mentorship to avoid future tragedies as experienced in Tuskegee.

ENVIRONMENTAL INFLUENCES ON CHILD HEALTH OUTCOMES (ECHO)/NIH

OUTSIDE ORGANIZATION SESSION

L15 NIH ENVIRONMENTAL INFLUENCES ON CHILD HEALTH OUTCOMES (ECHO): NATIONAL LONGITUDINAL RESOURCE FOR CHILD LUNG HEALTH RESEARCHERS

2:00 p.m. - 1:00 p.m.

Target Audience
Providers of maternal and child health; Providers of lung health; Researchers of Developmental Origins of Health and Development, Pediatric Pulmonologists; Environmental researchers and physicians

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

• learn ECHO’s design to support developmental origins of health and disease research.
• learn how ECHO data has supported innovative epidemiologic studies of the origins of asthma and early onset of health disparities.
• learn the breadth and depth of available ECHO data from diverse participants across the nation spanning decades of data collection and how to access ECHO data from DASH for airways research.

The NIH-supported Environmental Influences on Child Health Outcomes (ECHO) program supports multiple synergistic, longitudinal cohort studies across the U.S. to investigate how early environmental exposures—including physical, chemical, social, behavioral, biological, natural, and built environments—affect genetic susceptibility, child health and development. The multiple cohorts share protocol-specified data elements from ~100,000 participants and ~50,000 children, including bioassay data analyzed by the NIH Human Health Exposure Analysis Resource (HHEAR). A de-identified near anonymized data set is now available as a national resource for research. This session will focus on how the ECHO data repository can support child health research particularly relevant to the development of airway diseases and health.

Chairs:
C.J. Blaisdell, MD, North Bethesda, MD
C.L.M. Joseph, PhD, Detroit, MI

12:00 ECHO as a National Resource for Lung Research: What Have We Learned?
M. Gillman, MD, SM, North Bethesda, MD

12:15 What is in ECHO’s Controlled Access Public Use Data Set, Now Available in the NICHD Data and Specimen Hub (DASH)?
D. Catellier, PhD, Research Triangle, NC

12:30 How Can Researchers Use ECHO’s Controlled Access Public Use Data Set in DASH?
R. Rosen, PhD, Bethesda, MD

12:45 Panel Discussion
C.J. Blaisdell, MD, North Bethesda, MD

L16 IMPACT OF SEX AND GENDER ON AUTOIMMUNE LUNG DISEASE

OUTSIDE ORGANIZATION SESSION

DIVISION OF LUNG DISEASES, NHLBI/DLD

L16 IMPACT OF SEX AND GENDER ON AUTOIMMUNE LUNG DISEASE

12:00 p.m. - 1:00 p.m.

Target Audience
Basic scientists, physician-scientists, and healthcare providers with research interests related to the influence of sex and gender on autoimmune-associated lung diseases.

Objectives
At the conclusion of this session, the participant will be able to:
• create awareness, interest, and increase knowledge of the influence of sex and gender on autoimmune lung disease research.
• learn about innovative methods to eliminate gaps in the design, conduct, and analysis of sex and gender-related aspects of autoimmune lung disease research
• clinical Phenotyping of autoimmune ILD and diagnose, predict and improve clinical outcomes by re-purposing existing drugs

This session will highlight recent research advances involving the role of sex and gender in a number of autoimmune-related lung diseases, including systemic sclerosis-associated interstitial lung disease (SSc-ILD), rheumatoid arthritis-associated ILD (RA-ILD), systemic lupus erythematosus (SLE) pneumonitis/pleuritis, and interstitial pneumonia with autoimmune features (IPAF).

Chairing: L.J. Vuga, MD, MPH, PhD, Bethesda, MD
M.E. Lachowicz-Scroggins, PhD, Bethesda, MD

12:00 Influence of Sex/Gender on Scleroderma-Associated ILD
E. Volkmann, MD, MSci, Los Angeles, CA

12:15 Sex/Gender Differences in Lung Inflammation and Rheumatoid Arthritis
J.A. Sparks, MD, Boston, United States

12:30 Role of B Cells Pulmonary Fibrosis Resulting from STING Gain-of-Function Autoinflammation
A. Marshak-Rothstein, PhD, Worcester, United States

12:45 The Influence of Sex/Gender on Treatment Effect in Interstitial Pneumonia with Autoimmune Features
A.O. Adegunsoye, MD, MS, Chicago, IL

NATIONAL CENTER FOR ENVIRONMENTAL HEALTH/CDC
OUTSIDE ORGANIZATION SESSION

L17 ENVIRONMENTAL HEALTH EQUITY UNDER THE RUBRIC OF VITAL CONDITIONS

12:00 p.m. - 1:00 p.m.

Target Audience
Clinicians who seek to understand how environmental health equity affects a patient’s risk to exposures that result in adverse respiratory health.

Objectives
At the conclusion of this session, the participant will be able to:
• improve ATS member’s knowledge about environmental conditions related to lung health in vulnerable populations.
• learn new findings about environmental health conditions that can inform ATS members about underlying factors (e.g., vital conditions) that may influence their patients’ risk.
• raise awareness about diversity and health equity issues related to respiratory health.

This workshop provides a multidisciplinary perspective on how applied knowledge of environmental health exposure can be used to support the achievement of respiratory health equality. Attendees will receive updates on new trends in radon, asthma, Legionnaires’ disease, wildfires, volatile organic compounds (VOC) exposure in homes, respiratory health quality improvement initiatives, and patient education for communities with greater vulnerability to harmful environmental exposures and lower access to resources. Presenters will highlight how the interaction of social determinants contributes to disparities in care quality and health outcomes, such as respiratory health using the Vital Conditions Framework, a nationally recognized health equity framework.

Chairing: A. Perkins, BPH, Atlanta, GA

12:00 Introduction of the Division of Environmental Health Science and Practice’s Vital Conditions Health Equity Plan
A. Perkins, PhD, Atlanta, GA

12:10 Adverse Health Impacts Associated with Wildland Fire Smoke Exposure.
A. Vaidyanathan, PhD, Atlanta, GA

12:20 Trends in Risk for Legionnaires’ Disease Based on Access to Economic Resources
N. Clemmons, MPH, Atlanta, GA

12:30 Radon: Reducing a Lung Cancer Risk Factor by Protecting Communities and Buildings
A. Salame-alfie, PhD, Atlanta, GA

12:40 Exploring Asthma Health Care Utilization Data to Reduce the Elevated Risk During the Pandemic
O. Idubor, MD, Atlanta, GA

12:50 Volatile Organic Compounds (VOCs) in Low-Income Housing in a Multi-Site Study
G. Chew, ScD, Atlanta, GA

VETERANS HEALTH ADMINISTRATION (VA)
OUTSIDE ORGANIZATION SESSION

L18 VA’S APPROACH TO POST-DEPLOYMENT RESPIRATORY HEALTH: RESEARCH, CLINICAL CARE AND EDUCATION

12:00 p.m. - 1:00 p.m.

Target Audience
Target audience includes: VA and non-VA providers of lung health; VA and non-VA pulmonary researchers; clinicians/scientists interest in environmental and occupational health; military Veterans and service members

Objectives
At the conclusion of this session, the participant will be able to:
• define new strategies to manage the care of Veterans with deployment-related exposures
• describe new findings about VA research on military exposures and respiratory health.
• integrate/incorporate new guidelines and requirements from the PACT Act of 2022 into current practice.

Respiratory health of U.S. Veterans, in particular adverse effects related to military deployment, is a priority area for the Department of Veterans Affairs (VA). Major research, clinical, and educational efforts are underway – many of which impact the ATS membership, both within and outside of the VA, who provide care to Veterans and servicemembers and/or conduct research on inhalational exposures. This session will provide updates on ongoing research and clinical programs, as well as inform all stakeholders on the implications of the new Congressional Honoring our Promise to Address Comprehensive Toxics Act of 2022 (PACT Act).

Chairing: M.J. Falvo, PhD, East Orange, NJ
E. Garshick, MD, West Roxbury, MA
P.D. Blanc, MD, San Francisco, CA

12:00 Military Occupational and Environmental Exposures
E. Garshick, MD, West Roxbury, MA

12:12 Best Practices for the Evaluation the Dyspneic Veteran
A.M. Sotolongo, MD, East Orange, NJ

12:24 The Airborne Hazards and Open Burn Pit Registry
M.J. Falvo, PhD, East Orange, NJ

12:36 Impact of the PACT Act for VA and non-VA Providers
P. Hastings, DO, Washington, DC

12:50 Summary and Question/Answer Session
P.D. Blanc, MD, San Francisco, CA

This session will provide an update on the NHLBI Prevention and Early Treatment of Acute Lung Injury (PETAL) clinical trials network. The session will describe the structure and goals of the PETAL network, an overview of progress in ongoing studies, opportunities for additional studies using PETAL data and biospecimens, and results of studies to date.

Chairing: J.P. Kiley, Ph.D., Bethesda, MD
R.G. Brower, MD, Baltimore, MD

12:00 PETAL Overview
R.G. Brower, MD, Baltimore, MD

12:12 Update on the CLOVERS trial
I.S. Douglas, MD, FRCP, Denver, CO

12:24 Update on the ASTER trial
M.A. Matthay, MD, San Francisco, CA

12:36 Update on the CORAL Studies
C.T. Hough, MD, MSc, Portland, OR

12:48 Accessing PETAL Data, Images, and Specimens
I.D. Peltan, MD, MSc, Murray, UT

The NIH/NIAID uses a variety of mechanisms to support research on respiratory infections, including influenza, SARS-CoV-2, fungi, and antibiotic resistant bacterial pathogens. A systems biology approach to these pathogens, resultant host response, and diseases relevant to the pulmonary and critical care community will be illustrated.

Chairing: L. Brown, PhD, Rockville, MD

12:00 NAID’s Systems Biology Program in Infectious Diseases
R. Shabman, PhD, Rockville, MD
12:00 p.m. - 1:00 p.m.

L21 NEW FINDINGS FROM THE SUBPOPULATIONS AND INTERMEDIATE OUTCOME MEASURES IN COPD II (SPIROMICS II) STUDY

Target Audience
Researchers, medical trainees, those with an interest in COPD pathogenesis

Objectives
At the conclusion of this session, the participant will be able to:
• learn about natural history of smokers with respiratory symptoms
• learn about biomarkers of COPD
• learn about social determinants influence on respiratory outcomes

SPIROMICS II is an NHLBI-sponsored study that supports the prospective collection and analysis of phenotypic, biomarker, genetic, genomic, and clinical data from subjects with COPD for the purpose of identifying subpopulations and the biological underpinnings of clinical phenotypes in COPD. Participants in this session will learn about the progress in SPIROMICS II including results and analyses of data.

Chairing:  L. Postow, PhD, Bethesda, MD
P. Woodruff, MD, MPH, San Francisco, CA

12:00 Redefining Therapy in Early COPD (RETHINC)
M.K. Han, MD, MS, ATSF, Ann Arbor, MI

12:12 Bronchodilator Responsiveness in Smoked Tobacco-Exposed Persons with or without COPD
S. Fortis, MD, Iowa City, IA

12:24 Variation in Mendelian Genes and Risk for COPD
V.E. Ortega, MD, PhD, ATSF, Scottsdale, AZ

12:36 Clinical Relevance of Airway Mucin (MUC5AC and MUC5B) Concentrations in COPD
J. Kim, MD, MS, Charlottesville, VA

12:48 SPIROMICS Review and Summary
P. Woodruff, MD, MPH, San Francisco, CA

MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.
$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members

12:00 p.m. - 1:00 p.m.

MTE37 EXERCISE TEST IN NEW ERA: UPDATED QUALITY IN PULMONARY REHABILITATION AFTER COVID-19
A.E. Holland, PT, PhD, Melbourne, Australia

MTE38 REFRACTORY SARCOIDOSIS: WHEN AND HOW TO USE TNF-INHIBITORS
W.E. James, MD, Charleston, SC

MTE39 NAVIGATING SOCIAL MEDIA FOR HEALTHCARE PROFESSIONALS
L. Santhosh, MD, MEd, San Francisco, CA
N. Seam, MD, ATSF, FACP, Bethesda, MD
C. Gao-Howard, MD, Chicago, IL

MTE40 CYSTIC FIBROSIS: CLINICAL CHALLENGES IN THE ERA OF HIGHLY EFFECTIVE MODULATOR THERAPY
C.M. Bojanowski, MD, MSCR, New Orleans, LA

MTE41 PLAYING AT AN AWAY FIELD: REAL LIFE LESSONS FOR INTERNATIONAL MEDICAL GRADUATES WHO ARE PURSUING CLINICIAN SCIENTIST TRACK
N. Al Nasrallah, MD, Indianapolis, IN
R.F. Machado, MD, Indianapolis, IN
T. Lahm, MD, ATSF, Denver, CO
C.A. Hage, MD, ATSF, Pittsburgh, PA

MTE42 SMOKING RELATED INTERSTITIAL LUNG DISEASES
M. Porteous, MD, MSCE, Philadelphia, PA

MTE43 ORGANS-ON-CHIPS FOR THE LUNGS: PAST, CURRENT AND FUTURE
K. Hajipouran Benam, PhD, Pittsburgh, PA

MTE44 VIRTUAL PULMONARY REHABILITATION: IDENTIFYING KEY STRATEGIES AND CONQUERING THE CHALLENGES TO ESTABLISHING A SUCCESSFUL PROGRAM
S.K. Huang, MD, Ann Arbor, MI

MTE45 CENTRAL SLEEP APNEA, PATHOPHYSIOLOGICAL CLASSIFICATION AND RELATED MANAGEMENT
S. Javaheri, MD, Cincinnati, OH
CLINICAL
ADULT CLINICAL CORE CURRICULUM

CC4 CRITICAL CARE CLINICAL CORE CURRICULUM

Education Committee
2:15 p.m. - 3:45 p.m.

Target Audience
Clinicians who are engaged in maintenance of certification activities

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

• describe updates in the diagnosis and management of bacterial and viral respiratory infections
• identify best practices for treating infections in critically ill immunosuppressed patients
• describe diagnosis and management of hospital acquired infections in the intensive care unit

Chairing:  S. Ahmed, MD, Albuquerque, NM
D. Kelm, MD, Rochester, MN
E. Kilb, MD, Charleston, SC

2:15 Rejecting Infection: Treatment of Patients After Transplantation
A. Lawrence, MD, Dallas, TX

2:40 HAART-less: Fighting Opportunistic Infections in HIV
S. Sellers, MD, MSCR, Chapel Hill, NC

3:05 Gut with the Program: What Every Intensivist Needs to Know About Abdominal Infections
J. Davis, MD, Ithaca, NY

3:30 Questions and Answers

CLINICAL TOPICS IN PULMONARY MEDICINE

C82 BEYOND THE LUNG: ADDRESSING COMORBIDITIES IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Assembly on Clinical Problems
2:15 p.m. - 3:45 p.m.

Target Audience
Providers of lung health serving patients with COPD, Individuals involved in clinical or research activities related to COPD

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

• describe the burden and clinical implications of comorbidities in patients with COPD
• integrate comorbidity screening into the current management of COPD patients
• recognize research gaps in the management of COPD comorbidities

This session will focus on the prevalence, impact, and burden of comorbidities in chronic obstructive pulmonary disease, including a discussion of challenges and opportunities related to comorbidity screening in patients with COPD. This session also includes a more in-depth discussion of the more common COPD comorbidities, specifically depression, cardiovascular disease, and muscle dysfunction.

Chairing:  A. Agusti, MD, Barcelona, Spain
N. Putcha, BA, MD, Baltimore, MD
J.K. Krishnan, MD, MBA, MSc, New York, NY

2:15 Introduction
A. Agusti, MD, Barcelona, Spain

2:18 Patient Perspective
Speaker To Be Announced

2:23 The Burden and Impact of Comorbidities in COPD
M.J. Divo, MD, MPH, Boston, MA

2:37 Anxiety and Depression in COPD: Prevalence, Risk Factors, and Clinical Implications
V. Kim, MD, ATSF, FAASM, Philadelphia, PA

2:51 Cardiovascular Disease in COPD: Burden, Mechanisms, and Implications for Clinical Practice
J.K. Quint, FRCP, MSc, PhD, London, United Kingdom

3:05 Skeletal Muscle Dysfunction in COPD: Mechanisms and Implications
H.B. Rossiter, PhD, Torrance, CA

3:19 Comorbidity Screening in COPD: Challenges and Opportunities
J. Bon, MD, MS, ATSF, Pittsburgh, PA
C83  PRO/CON: HOT TOPICS IN INTERSTITIAL LUNG DISEASE

Assemblies on Clinical Problems; Behavioral Science and Health Services Research

2:15 p.m. - 3:45 p.m.

Target Audience
Clinicians, researchers, trainees and industry stake-holders interested in interstitial lung disease

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

• analyze and understand IPF clinical trial results and endpoints and how these affect clinical practice and future research efforts

• integrate available data on formal testing and treatment of gastroesophageal reflux in progressive fibrotic lung disease in to clinical practice

• gauge the risks and potential benefits of bronchoalveolar lavage for patients with fibrotic lung disease

This session will feature PRO/CON debates on 4 topics in ILD that are relevant to cutting edge clinical practice and research. These will include the utility of bronchoalveolar lavage in fibrotic lung disease, change in FVC over 3 months as a clinical trial endpoint in IPF, formal testing for acid reflux in progressive pulmonary fibrosis, and whether IPF is an entity of the past.

Chairing:
S. Montesi, MD, Boston, MA
G. Raghu, MD, Seattle, WA

2:15 PRO: Formal Testing for Abnormal Acid Reflux Should Be Performed in All Patients with IPF to Determine the Need for Anti-Reflux Therapy
M.B. Scholand, MD, Salt Lake City, UT

2:25 CON: Formal Testing for Abnormal Acid Reflux Should Be Performed in All Patients with IPF to Determine the Need for Anti-Reflux Therapy
Speaker To Be Announced

2:35 PRO: Change in FVC at 3 Months is an Acceptable Primary Endpoint for IPF Clinical Trials
Speaker To Be Announced

2:45 CON: Change in FVC at 3 Months is an Acceptable Primary Endpoint for IPF Clinical Trials
R.G. Jenkins, BM, MD, MRCP(UK), PhD, London, United Kingdom

2:55 PRO: BAL for Lymphocytosis Should Be Performed in Patients with New Onset Fibrotic ILD
T. Kulkarni, MD, MPH, Birmingham, AL

3:05 CON: 3. BAL for Lymphocytosis Should Be Performed in Patients with New Onset Fibrotic ILD
N. Chaudhuri, MBChB, PhD, Ulster, Ireland

3:15 PRO: IPF is a Disease of the Recent Past
G. Raghu, MD, Seattle, WA

3:25 CON: IPF is a Disease of the Recent Past
J. Behr, MD, Munchen, Germany

3:35 Question and Answer

C84  CARDIAC ARREST: NEW SCIENCE AND CHANGING GUIDELINES

Assembly on Critical Care

2:15 p.m. - 3:45 p.m.

Target Audience
Clinicians who treat patients experiencing in-hospital or out-of-hospital cardiac arrest or who are interested in the latest evidence and clinical practice standards on this topic

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

• understand the evidence (or in some cases lack thereof) behind current cardiac arrest and post-arrest treatment guidelines

• gain knowledge about long term outcomes of cardiac arrest and treatments that may improve these

• learn about cardiac arrest survivorship and the needs of individuals recovering after cardiac arrest

Randomized trials in cardiac arrest and post-arrest care have increased dramatically in recent years. Critical care personnel are commonly involved in cardiac arrest resuscitation and the ICU care that most patients who achieve return of spontaneous circulation require. The latest on cardiac arrest management and care of the post-arrest patient will be discussed, with a focus on topics where new evidence is available or where significant controversy remains, and a survivor’s perspective will be presented.

Chairing:
K.M. Berg, MD, Boston, MA
R.E. Sell, MD, Seattle, WA
A. Moskowitz, MD, Bronx, NY

2:15 Medications During Cardiac Arrest: Do They Really Help?
L.W. Andersen, MD, PhD, Arhus, Denmark

2:35 E-CPR: Is It Ready for the Mainstream?
J. Bartos, MD, PhD, Minneapolis, MN
A PATH TOWARDS A MORE DIVERSE AND INCLUSIVE WORKFORCE

Assemblies on Pediatrics; Behavioral Science and Health Services Research

Target Audience
Any provider of lung health (both adult and pediatrics); any multidisciplinary team member; trainees; ancillary support staff

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

• define the current demographic breakdown of the pediatric pulmonology workforce in the United States (trainees and faculty) and why diversity matters

• present barriers and opportunities for recruitment (student and resident level), training (fellow and junior faculty level) and career development (faculty level) of URiM in the field of pediatric pulmonology

• identify strategies and resources that have been or can be used to improve the recruitment of URiM residents to the field, the mentorship of trainees and junior faculty, and the career development of URiM faculty in academic centers

In response to the critical need to improve diversity, equity and inclusion (DEI) in academic medicine, the Pediatric Assembly developed a DEI Advisory Group in Spring 2020 with the overarching goal to increase workforce diversity in the pediatric pulmonology community and ultimately provide a framework for other medical specialties to follow.

An ATS Pediatric Assembly Project Grant was funded in 2022, “ATS Workshop on DEI and the Pediatric Pulmonology Workforce,” which included a needs assessment survey administered to the Pediatric Assembly in May 2022 and a virtual workshop. This symposium will present key findings from the survey and workshop.

Chairing:
T.A. Laguna, MD, MSci, Chicago, IL
R.T. Cohen, MD, MPH, Boston, MA
N. Stephenson, MD, Chapel Hill, NC

2:15 Introduction - Brief Review of DEI in Pediatric Pulmonology Workforce
T.A. Laguna, MD, MSci, Chicago, IL

BEYOND THE TRANSCRIPTOME: HOW THE MULTI-“OMIC” UNIVERSE PROVIDES NOVEL INSIGHTS INTO IPF/ILD PATHOGENESIS

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Clinical Problems

Target Audience
Basic scientists, clinicians, translational researchers in pulmonary fibrosis

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

• to understand and recognize how different biologic processes, including genomic, epigenomic, metabolomic, and microbiome changes contribute to the development and pathogenesis of IPF/ILD

• to learn how some of these diverse layers of biologic data can be integrated to derive new insights into IPF pathogenesis
To identify challenges to integrating -omics data and identify areas for future research need in IPF/ILD

Studies utilizing RNA sequencing and single-cell approaches have identified new cell types, genes, and pathways that contribute to the pathogenesis of lung fibrosis. However, layers of biologic data beyond the transcriptome, including genomic, epigenomic, proteomic, and metabolomic studies have also enhanced our understanding of fibrotic mechanisms. Understanding these multi-omic “universes” and how they interact with the environment and microbiome can help address fundamental questions regarding etiology, prognosis, and strategies for personalized treatment. This session will highlight the current state of knowledge in these other areas and attempt to integrate these data into a cohesive understanding of IPF pathogenesis.

Chairing: S.K. Huang, MD, Ann Arbor, MI
M.N. Ballinger, PhD, ATSF, Columbus, OH
J. Kropski, MD, Nashville, TN

2:15 Into the Genomics and Epigenomics Universe of IPF
I.V. Yang, BS, PhD, Aurora, CO

2:28 “ATAC”-ing IPF: how Understanding Chromatin Biology Sheds Light on Fibrosis
G. Ligresti, PhD, Boston, MA

2:41 The next frontier: Proteomics of posttranslational modifications in IPF Pathogenesis
O. Eickelberg, MD, ATSF, Pittsburgh, PA

2:54 Importance of Metabolomic Changes in IPF Pathogenesis
Speaker To Be Announced

3:06 How Pharmacogenomics and Drug Discovery can Provide New Insights into ILD Pathogenesis
Speaker To Be Announced

3:19 Understanding the systemic microbiome in IPF
D.N. O’Dwyer, BM BCH, BMedSci, PhD, Ann Arbor, MI

3:32 The Multi-Omic Universe: How Do We Integrate These Datasets to Better Understand and Eventually Cure IPF
N. Kaminski, MD, ATSF, New Haven, CT

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

• describe the strengths and weaknesses of currently employed outcome measures in pulmonary hypertension clinical trials
• describe novel outcome measures that focus on “feels, functions, and survives” and how these may be applied in PH clinical trials
• more appropriately interpret and integrate results from clinical trials into clinical practice

Multiple outcome measures are currently employed in the evaluation and management of patients with pulmonary hypertension (PH), creating confusion about which measure is most appropriate. In this session, we will discuss the state of the art approach to outcomes assessment in PH through in-depth analyses of the current and future measures of therapeutic response.

Chairing: S.C. Mathai, MD, MHS, Baltimore, MD
C.E. Ventetuolo, MD, MSCR, Providence, RI

2:15 Patient Speaker
Speaker To Be Announced

2:20 The Emperor Has No Clothes: Current Outcome Measures in PH
S.C. Mathai, MD, MHS, Baltimore, MD

2:35 Patient Reported Outcomes: The Missing Piece in Assessment of PH Outcomes
H.M. Dubrock, MD, Rochester, MN

2:55 Walking in Circles: Functional Assessment as an Outcome Measure in PH
J. Minhas, MD, MS, MBBS, Philadelphia, PA

3:15 Risk Scores and Survival as Outcome Measures in PH
S.M. Kawut, MD, MS, ATSF, Philadelphia, PA

3:35 Panel Discussion
Objectives
At the conclusion of this session, the participant will be able to:

- to better understand the role and durability of passive immunity against COVID-19 and other infections in newborns
- understand immune responses in the airway in in circulation in response to acute SARS-CoV-2 infection
- to ascertain the clinical phenotype of long COVID-19 in kids and adults and review the latest research on pathogenicity

Despite very early assumptions, children are not spared from COVID-19. However, biological and clinical responses vary considerably across the age spectrum. In this session, we will assess biologic responses to SARS-CoV-2, which will serve as a foundation for comparisons with other common respiratory viruses. We will discuss the passive transfer of maternal antibodies to infants and their clinical protection; airway signals in the upper airway in response to infection in children as compared to adults; hematologic biomarkers of severe infection in children and adults infected with SARS-CoV-2; and clinical and molecular findings in long COVID-19.

Chairing:
L. Yonker, MD, Boston, MA
M.A. Mall, MD, Berlin, Germany

2:15 Passive Immunity in Neonates
A. Edlow, MD, MSc, Boston, MA

2:35 Airway Responses to SARS-CoV-2
M.A. Mall, MD, Berlin, Germany

2:55 Hematologic Markers of Severe COVID-19 and MISC
O. Badaki-Makun, MD CM, PhD, Baltimore, MD

3:15 Long COVID-19
S.A. Mcgrath-Morrow, MD, Philadelphia, PA

3:35 Tying it Together
L. Yonker, MD, Boston, MA
occupational health fields, as well as PhD scientists, and those working in global health

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

• raise awareness about the emerging epidemiologic and mechanistic evidence that suggests a causal relationship between air pollution exposures, tuberculosis development and worsened treatment outcomes
• review the state of the science for air pollution exposure assessment approaches, technologies and optimal measurement strategies
• explore translation of scientific discovery into actionable health preventative steps

This session reviews the current epidemiologic and mechanistic knowledge on associations between exposures to air pollution, tobacco smoke and risk for tuberculosis, three eminent health challenges of global importance, and how exposure risks relate to social determinants of health. Addressing the need for continued research on exposure dose response relationships as well as for translation of findings into regulatory policies, the session also discusses pitfalls and state of the art of exposure assessments as well as the translation of scientific findings into advocacy for policy change.

Chairing: C.M. North, MD, MPH, Boston, MA
S. Schwander, MD, PhD, Piscataway, NJ

2:15 The Global State of Air Pollution and Tuberculosis: What Does the Epidemiology Show?
S. Carroll, BSc, Montreal, Canada

2:30 The State of the Art for Characterizing Air Pollution Exposure Among People at Risk for Tuberculosis
Q. Meng, PhD, Reno, NV

2:45 The Influence of Social Determinants of Health on Air Pollution Exposure and Tuberculosis Risk - Triple Trouble in Resource-Limited Settings
L. Atuyambe, PhD, Kampala, Uganda

3:00 Mechanistic Evidence - Air Pollutant Effects on Immune Responses to Mycobacterium Tuberculosis: Is the Sum Greater Than the Parts?
S. Sarkar, PhD, Piscataway, NJ

3:15 Vaping and Smoking - the “Other Air Pollutants”
R.N. Van Zyl Smit, MBChB, PhD, ATSF, Cape Town, South Africa

3:30 So, Air Pollutants Are Making Tuberculosis Worse - Now What? Activism and Policy Change
N. Mistry, MD, Mumbai, India

2:15 p.m. - 4:15 p.m.
Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.
MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.
$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members.

9:15 a.m. - 10:15 a.m.

MTE47 THE POWER OF TWITTER
Speaker To Be Announced

MTE48 ADVOCACY IN LUNG HEALTH
N. Solanki, MD, Cleveland, OH

MTE49 PHENOTYPING SYSTEMIC SCLEROSIS ASSOCIATED PULMONARY HYPERTENSION
R.G. Argula, MBBS, MPH, Charleston, SC

MTE50 CONTROVERSIES IN THE MANAGEMENT OF PATIENTS WITH CCHS: UPDATES IN MANAGEMENT
I.A. Perez, MD, ATSF, Los Angeles, CA
A.S. Kasi, MD, Atlanta, GA

MTE51 FAMILIAL PULMONARY FIBROSIS
D. Zhang, MD, MS, New York, NY
C. Newton, MD, MS, Dallas, TX

MTE52 LEVERAGING BIG DATA TO BRIDGE THE KNOWLEDGE-OUTCOME GAPS IN RARE LUNG DISEASE
B. Kaul, MD, San Francisco, CA
H.R. Collard, MD, MS, San Francisco, CA

11:00 a.m. - 12:00 p.m.

MTE53 WHAT ARE THE REASONS FOR THE NEGATIVE RESULTS OF RCTS IN OSA
S. Javaheri, MD, Cincinnati, OH

MTE54 UNDERSTANDING SEVERE AND STEROID-REFRACTORY IMMUNE CHECKPOINT INHIBITOR PNEUMONITIS
K. Ho, MD, Columbus, OH
J.D. Possick, MD, New Haven, CT

MTE55 RUNNING AN EFFECTIVE INTERSTITIAL LUNG DISEASE MULTIDISCIPLINARY MEETING: REACHING THE GOLD STANDARD
E. Valenzi, MD, Pittsburgh, PA
C.T. Lee, MD, Chicago, IL

MTE56 COMPLEX IN VITRO MODELS OF THE LUNG: BRIDGING THE GAP BETWEEN DISEASE COMPLEXITY AND THERAPEUTICS
E.T. Osei, PhD, Kelowna, Canada
J.K. Burgess, BSc, PhD, ATSF, Groningen, Netherlands
M. Koenigshoff, MD, PhD, ATSF, Pittsburgh, PA

MTE57 GO TEAM! APPLYING TEAM SCIENCE PRINCIPLES FOR EFFECTIVE INTERPROFESSIONAL LEADERSHIP
S. Cotton, BSN, RN, CCRN, San Diego, CA
J.B. Scott, PhD, RRT, RRT-ACCS, Chicago, IL
W.C. McGuire, MD, MPH, La Jolla, CA
M.M. Lee, MD, ATSF, FCCP, FACP, Los Angeles, CA

MTE58 OVERVIEW OF BRONCHIOlar DISORDERS
D.C. Gomez Manjarres, MD, Gainesville, FL
D.C. Patel, DO, MBA, Gainesville, FL

MTE59 MOLECULAR DIAGNOSTICS IN SEVERE PNEUMONIA: THE EVIDENCE AND CASE-BASED DISCUSSION OF CLINICAL IMPLEMENTATION
C. Pickens, MD, Chicago, IL
R. Wunderink, MD, Chicago, IL

MTE60 EXTRACorporeal MEMBRANE OXYGENATION FOR CARDIAC ARREST: WHEN, WHY, AND HOW
J. Tonna, MD, MS, Salt Lake City, UT

MTE61 FROM FEATHERS TO ANTIFIBROTICS: EXPOSURES, DIAGNOSIS, AND TREATMENT IN HYPERSENSITIVITY PNEUMONITIS
B. Flashner, MD, Boston, MA
**YEAR IN REVIEW**

**D1  CLINICAL YEAR IN REVIEW 4**

8:00 a.m. - 9:30 a.m.

**Target Audience**

Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

**Objectives**

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

- apply new clinical research knowledge to clinical practice.
- apply new findings about key conditions in pulmonary, critical care and sleep.
- learn new strategies to manage the care of common conditions in pulmonary, critical care, and sleep.

Pulmonary, critical care and sleep providers. The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

**Chairing:**

R.J. Shah, MD, MSCE, San Francisco, CA
J.C. Ferreira, MD, PhD, ATSF, Sao Paulo, Brazil
S. Auld, MD, MSc, Atlanta, GA

**8:00** Lung Transplant
S. Agbor, MD, PhD, Bethesda, MD

**8:23** Medical Education
J.C. Ferreira, MD, PhD, ATSF, Sao Paulo, Brazil

**8:45** Health Disparities
D.C. Ashana, MD, MBA, MS, Durham, NC

**9:08** CF/non-CF bronchiectasis
S. Visser, Camperdown, Netherlands

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**CLINICAL • TRANSLATIONAL**

**D2  CLINICAL TOPICS IN PULMONARY MEDICINE**

**D2  COUGH IN PULMONARY FIBROSIS - ANNOYING SYMPTOM OR DRIVER/MARKER OF DISEASE PROGRESSION?**

Assembly on Clinical Problems
8:00 a.m. - 9:30 a.m.

**Target Audience**

Healthcare providers that care for patients with fibrotic lung diseases, researchers studying cough in patients with pulmonary fibrosis, patients with pulmonary fibrosis and caregivers of patients with pulmonary fibrosis.

**Objectives**

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

- describe the mechanisms of cough and treat cough in patients with pulmonary fibrosis
- to refer patients with pulmonary fibrosis to ongoing clinical trials
- measure cough in a standardized manner

This session will focus on the pathobiology, approach to treatment, the role of cough as a potential biomarker of disease activity/progression and current landscape of recent on ongoing research on cough in patients with pulmonary fibrosis.

**Chairing:**

K.R. Flaherty, MD, Ann Arbor, MI
L.H. Lancaster, MD, Nashville, TN
K.K. Brown, MD, Denver, CO

**8:00** Understanding the Pathobiology of Cough in Patients with Pulmonary Fibrosis
S.S. Birring, MD, London SE5 9RS, United Kingdom

**8:20** Approach to Patient with Pulmonary Fibrosis and Cough, What Can We Learn from the Chronic Cough Field?
M. Wijsenbeek, MD, PhD, Rotterdam, Netherlands

**8:40** Cough as a Prognostic Biomarker, Should We Be Formally Measuring in Clinical Practice?
T.M. Maher, MD, MSc, PhD, FRCP, Los Angeles, CA

**9:00** Cough in Pulmonary Fibrosis Clinical Trials: Nothing to Sneeze At
S.D. Nathan, MD, Falls Church, VA

**9:20** Wrap up - Q & A with All Faculty and Audience
K.K. Brown, MD, Denver, CO

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**D3  IMAGING BIOMARKERS OF DISEASE MODIFICATION IN COPD**

Assemblies on Clinical Problems; Respiratory Structure and Function
8:00 a.m. - 9:30 a.m.

**Target Audience**

Providers of lung health, clinical researchers, those designing and/or conducting clinical trials, those designing and evaluating therapies for COPD, industry executives, government and granting administrators

**Objectives**

At the conclusion of this session, the participant will be able to:
• define new applications of quantitative imaging for the management of COPD in clinical practice
• apply quantitative imaging approaches to guide pharmacotherapy and lung volume reduction for individuals with COPD
• incorporate quantitative CT in shared decision making for COPD management with patients and families

Disease progression and outcomes in COPD have been classically measured by assessing lung function and clinical symptoms. Advanced quantitative imaging is increasingly used to quantify the features of COPD, specifically emphysema, air trapping, and airway abnormality. Attendees of this session will understand how imaging biomarkers are currently related to disease modification framework in COPD related to prevention and treatments, such as: early diagnosis, inhaled therapies, surgical and bronchoscopic interventions, and pulmonary rehabilitation.

Furthermore, this session will discuss the advanced methodologies for functional lung imaging in contrast and combination with physiological assessment of disease biomarkers.

Chairing:  
S.P. Bhatt, MD, MSPH, Birmingham, AL
T. Siddharthan, MD, Miami, FL

8:00 Ventilation Heterogeneity in COPD Patients
T. Siddharthan, MD, Miami, FL

8:10 Screening and Detection of COPD
R. Vliegenthart, MD, EBCR, FNASCI, FICIS, Groningen, Netherlands

8:30 Heterogeneity of Ventilation in COPD
I. Barjaktarevic, MD, PhD, Los Angeles, CA

8:50 Imaging for Bronchoscopic Lung Volume Reduction Valve Targeting
M.G. Lester, MD, Nashville, TN

9:10 Panel Discussion and Closing Remarks
S.P. Bhatt, MD, MSPH, Birmingham, AL

We aim to provide an update on the latest evidence and persistent challenges surrounding the field of improving long-term outcomes in critically ill patients. In recent years, trials aimed at improving long-term outcomes have largely been unsuccessful, suggesting that it may be time for a critical re-examination and “reboot” of our current conceptual models. In this session, speakers will discuss the current evidence base, lessons learned, implications for current practice, and crucial next steps to advance the field forward.

Chairing:  
M. Hua, MD, MS, New York, NY
C.L. Auriemma, MD, Philadelphia, PA
N. Khandelwal, MD, MS, Seattle, WA

8:00 Is It the Forest or the Trees: Prioritizing Short Versus Long-Term Outcomes After Critical Illness
C.E. Cox, MD, MPH, MHA, Durham, NC

8:13 “She Just Needs More Rehab:” When and Why Aggressive Rehabilitation May Not Be Enough
J. Falvey, PhD, DPT, PT, Baltimore, MD

8:26 Money Matters: Is Financial Hardship a Missing Key Outcome in Post-Critical Illness Studies?
N. Khandelwal, MD, MS, Seattle, WA

8:39 Psychological Outcomes After Critical Illness: Is the Die Already Cast?
H. Prigerson, PhD, New York, NY

8:52 To Consult or Not to Consult?: Why Palliative Care May or May Not Change Outcomes in Critically Ill Patients
D.B. White, MD, Pittsburgh, PA

9:05 The Glass is Half?: Prognosticating Long-Term Outcomes
A. Law, MD, MSci, Boston, MA

9:18 A Bump or a Fork in the Road: the Broader Impact of Critical Illness
T.J. Iwashyna, MD, PhD, Baltimore, MD

Target Audience
Early Career Professionals, Clinicians, Interprofessionals, Nurses

Objectives
At the conclusion of this session, the participant will be able to:
• to summarize the latest research on long-term outcomes after critical illness, including describing newly recognized key domains of survivorship
• to examine the evidence for interventions aimed at improving long-term outcomes in ICU patients and explore barriers to their success
• to understand the strengths and limitations of commonly used measures to assess the long-term impact of ICU interventions
Assemblies on Clinical Problems; International Health Committee
8:00 a.m. - 9:30 a.m.

Target Audience
Pulmonary medicine researchers, Clinicians in low- and middle-income countries.

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

• review evidence and prioritize key risk factors for chronic respiratory diseases across a diverse range of LMICs.

• identify chronic disease management strategies with greatest potential impact, feasibility, and sustainability in LMICs, i.e., best buy interventions.

• develop a comprehensive framework of best buy interventions that mitigate risk factors and reduce risk for the development of chronic respiratory diseases or aid in

Chronic respiratory diseases are a significant but neglected public health problem in low- and middle-income countries. Moreover, current best buy interventions recommended by the World Health Organization are limited: they principally consist of inhaled bronchodilator therapy for symptom management and mitigation of household air pollution. Yet there are opportunities for primary and secondary prevention that could help both reduce the development of chronic respiratory diseases and improve management. This session aims to identify current unmet needs for chronic respiratory diseases in low- and middle-income countries and identify other potential best buy interventions that can improve diagnosis and management of chronic respiratory diseases.

Chairing: J. Hurst, MD, London, United Kingdom
W. Checkley, MD, PhD, Baltimore, MD
O.B. Ozoh, MBBS, ATSF, MSc, Lagos, Nigeria

8:00 The Burden of Chronic Respiratory Diseases in Low- and Middle-Income Countries and Unmet Needs for their Diagnosis and Management
A.S. Buist, MD, MB, BCh, Portland, OR

8:20 An Overview of Best Buy Interventions Recommended by the World Health Organization for the Diagnosis and Management of Chronic Respiratory Diseases.
S. Rylance, BMedSci, MBBS, PhD, Blantyre, Malawi

8:40 The Role of Multicomponent Interventions for Chronic Respiratory Disease Prevention and Management in Low- and Middle-Income Countries.
C. Jenkins, MD, Sydney, Australia

9:00 Infections and Lung Development: the Link Between Communicable and Non-Communicable Lung Disease
H. Zar, MD, PhD, ATSF, Cape Town, South Africa

9:20 Panel Discussion
W. Checkley, MD, PhD, Baltimore, MD
8:18 Are Immune Perturbations Associated With Obesity-Related Asthma Ready for Prime Time Therapeutics?
D. Rastogi, MBBS, MS, ATSF, Washington, DC

8:33 Discussion

8:36 Is Obesity-Related Asthma a Bystander to Benefit From Treatment Strategies for Obesity-Mediated Metabolic Perturbations
A.E. Dixon, MA, BM BCH, ATSF, Burlington, VT

8:51 Discussion

8:54 Can Dietary Supplements Be Repurposed to Address the Contribution of Oxidative Stress to Obesity-Related Asthma
F. Holguin, MD, MPH, Aurora, CO

9:09 Discussion

9:12 The Role of Nitrosative Stress in Obesity-Related Asthma: A New Arena for Therapeutic Development
L.G. Que, MD, Durham, NC

9:27 Discussion

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**CLINICAL SCIENTIFIC SYMPOSIUM**

**D7 WANT TO BE AN ADVOCATE FOR LUNG HEALTH? LEARN FROM SUCCESS!**

Assemblies on Pediatrics; Behavioral Science and Health Services Research; Clinical Problems; Environmental, Occupational and Population Health; Nursing; Pediatric Advocacy Subcommittee

8:00 a.m. - 9:30 a.m.

**Target Audience**
Pulmonary, critical care, and sleep providers as well as trainees, researchers, and public health professionals

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

- identify a framework for approaching advocacy
- compare and distinguish the uses of various approaches to advocate for issues of importance in the field of lung health
- understand how to leverage advocacy activities as part of teaching and to support a promotion portfolio

The American Medical Association endorses advocacy, stating that physicians must “advocate for the social, economic, educational and political changes that ameliorate suffering and contribute to human well-being.” While physicians are well acquainted with their role as advocates for the individual patient, most have limited knowledge or experience with broad advocacy for public health. The literature and professional organizations also identify gaps in such advocacy among other health care professionals. This session will describe various routes for advocacy, provide training on advocating for public health issues, address interprofessional advocacy, and share exemplars of incorporating advocacy activities into teaching and promotion portfolios.

**Chairing:**
A. Volerman, MD, Chicago, IL
V. Balasubramaniam, MD, Madison, WI
L.B. Gerald, PhD, MSPH, Tucson, AZ

8:00 Framework for Advocacy in Medicine
L.B. Gerald, PhD, MSPH, Tucson, AZ

8:10 Legislative Advocacy: Stock Albuterol in Schools
A. Volerman, MD, Chicago, IL

8:22 Regulatory Advocacy: Ozone and Particulate Matter standards
M.B. Rice, MD, MPH, Boston, MA

8:34 Advocacy Through the Courts: Clean Air and Climate
S. Colangelo, JD, Washington, DC

8:46 Fostering Advocacy Among Students, Trainees, Faculty, and Clinicians: A 3-Prong Approach
S.J. Crowder, PhD, RN, ATSF, Indianapolis, IN

8:58 Academic Advocacy and Promotion: How to Climb a Ladder Not Yet Built
V. Balasubramaniam, MD, Madison, WI

9:10 Question and Answer Panel
G. Ewart, MHS, Washington, DC

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**BASIC • TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

**D8 UNDER THE MAGNIFYING GLASS: OMICS AND DEEP PHENOTYPING IN PULMONARY VASCULAR DISEASES**

Assemblies on Pulmonary Circulation; Respiratory Cell and Molecular Biology

8:00 a.m. - 9:30 a.m.

**Target Audience**
Researchers from undergraduate student to postdoc and faculty, and PI Medical professionals from undergraduate to faculty

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

- define the novel unbiased and large scale Omics and phenotyping methods available to pulmonary vascular researchers
- increase understanding of pulmonary vascular cell phenotype and function through Omics, visualization and deep phenotyping
- acquire knowledge on how Omics and deep phenotyping can influence the clinical-translational understanding of patients with
The last years have seen a remarkable growth in methods that allow large scale insight into cell phenotypes, gene and protein changes. These methods become increasingly common in the field of pulmonary vascular research and carry great promise not only for a better understanding of the pathophysiology, but also for a phenotyping of subtypes of patients as a prerequisite for precision medicine. The session will demonstrate to the attendee how these methodologies can be used to receive a holistic view on pulmonary vascular diseases and thus lead to a better stratification of patients and a more targeted treatment.

Chairing: L. Farkas, MD, Columbus, OH
G. Kwapiszewska, PhD, Graz, Austria
S.Y. Chan, MD, PhD, Pittsburgh, PA

8:00 Single Cell RNAseq Redefines Vascular Cell Heterogeneity in the Lung
N. Kaminski, MD, ATSF, New Haven, CT

8:15 Beyond RNA - Multi-Dimensional -Oomics in the Pulmonary Circulation
S.Y. Chan, MD, PhD, Pittsburgh, PA

8:30 Advancing the Understanding of the Immune Response and Inflammation in the Lung Through Omics
C. Dela Cruz, MD, PhD, ATSF, New Haven, CT

8:45 PVDOMICs - Molecular-Based Phenotyping of Pulmonary Vascular Diseases
A. Hemnes, MD, ATSF, Nashville, TN

9:00 From Omics to Targeted Treatment Options in Pulmonary Vascular Disease
M. Rabinovitch, MD, Stanford, CA

9:15 Panel Discussion

This exciting Scientific Symposium explores the role of the circadian clock in the development of chronic lung disease. This session is fully translational, providing a bench-to-bedside view of clock biology, basic mechanisms of circadian clock dysregulation in development of OSA, COPD, and IPF, and clinical translation drawing on results of chronotherapy trials in asthma, showing the role of environmental influences on circadian biology and learning from individuals with sleep disorders. We have assembled an impressive and diverse group of speakers from across the globe and this promises to be an exceptional session.

Chairing: H. Durrington, PhD, MA, MBChB, Manchester, United Kingdom
I.K. Sundar, BSc, MSc, PhD, Kansas City, KS
N.N. Jarjour, MD, ATSF, CPE, Madison, WI
M.P. Knauert, PhD, MD, New Haven, CT

8:00 Sleep and Circadian Rhythms: Considerations for Diagnosis, Monitoring and Treatment
V. Revell, PhD, Guildford, United Kingdom

8:15 Impact of Intermittent Hypoxia on Circadian Dysregulation of Gene Expression and Physiology
D.F. Smith, MD, PhD, Cincinnati, OH

8:30 Asthma… It's a Matter of Time!
H. Durrington, PhD, MA, MBChB, Manchester, United Kingdom

8:45 Clock in the Lung: How Environmental Cues Tik Tok
I. Rahman, PhD, ATSF, Rochester, NY

9:00 Tik Tok of Pulmonary Fibrosis Using In Vitro and In Vivo models
I.K. Sundar, BSc, MSc, PhD, Kansas City, KS

9:15 Bringing Circadian Biology to Medicine
J.B. Hogenesch, PhD, Cincinnati, OH
D10  AN AGE-FRIENDLY FRAMEWORK FOR CARING FOR OLDER ADULTS WITH CHRONIC LUNG DISEASE

Assemblies on Behavioral Science and Health Services Research; Pulmonary Rehabilitation

8:00 a.m. - 9:30 a.m.

Target Audience
Pulmonary providers, pharmacists, pulmonary rehabilitation providers, and health policy makers who care for older adults with chronic lung diseases

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

• define the components of age-friendly healthcare (4Ms) in chronic lung disease
• apply the 4M framework and understanding of the physiology of aging to adapt diagnostic testing algorithms and treatment protocols for older adults with and without geriatric syndromes
• identify geriatrics assessments that should be routinely performed by pulmonologists or assessed by these experts prior to making diagnosis or treatment decisions for chronic lung diseases

Older adults are disproportionately affected by many chronic lung diseases (e.g. COPD, asthma, bronchiectasis). Developing diagnostic and treatment strategies for older adults in an age-friendly health system must consider diagnostic accuracy, likelihood of benefit, and the unique needs of this population. The John A. Hartford Foundation and the Institute for Healthcare Improvement have outlined a conceptual framework for age-friendly healthcare delivery called the 4Ms – Medication, Mobility, Mentation, and What Matters. The proposed symposium includes a diverse group of interprofessional and international experts in aging who will highlight the impact this framework has on caring for patients with chronic lung disease.

Chairing:  M.F. Griffith, MD, MPH, Aurora, CO
L.J. Witt, MD, San Francisco, CA
A.S. Iyer, MD, MSPH, Birmingham, AL
S. Jain, MD, New Haven, CT

8:00 Public Advisory Roundtable Presentation

8:10 Overview of The Age-Friendly Health System (4M) Framework
M. Bellantoni, MD, Baltimore, MD

8:22 Biology of Lung Aging
S. Krick, MD, PhD, Birmingham, AL

8:34 Diagnostic Dilemmas in Chronic Lung Disease for the Older Adult
J. Hurst, MD, London, United Kingdom

8:46 Pharmacotherapy in the Older Adult with Chronic Lung Disease
A.L. Martirosov, PharmD, Detroit, MI

8:58 Frailty, Falls and Chronic Lung Disease
A.M. Yohannes, PhD, ATSF, Azusa, CA

9:10 Caring for Chronic Lung Disease Patients in Nursing Homes
M.F. Griffith, MD, MPH, Aurora, CO

9:22 Moderated Q&A by Chairs
8:22  Adoptive T Cell Transfer and CAR T Cell Therapy for Lung Cancer  
S.M. Albelda, MD, Philadelphia, PA

8:39  Neoadjuvant Checkpoint Blockade for Lung Cancer Immunotherapy  
P. Forde, MBBCh, Baltimore, MD

8:56  Immune Escape and Contribution of Neutrophils to Immune Checkpoint Inhibitor Treatment Failures  
A.M. Houghton, MD, Seattle, WA

9:13  The Diagnosis and Management of Immune Checkpoint Inhibitor-Related Pneumonitis  
C.R. Sears, MD, ATSF, Indianapolis, IN

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**CLINICAL**

**ADULT CLINICAL CORE CURRICULUM**

**CC5  PULMONARY CLINICAL CORE CURRICULUM**

**Education Committee**

**Target Audience**
Clinicians who are engaged in maintenance of certification activities

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

- describe updates in the diagnosis and management of mild, moderate, and severe asthma in 2023
- identify the local and global impact of one’s environment on asthma management
- describe best practices for asthma management in the pregnant and post-partum woman

**Chairing:**  
G. Garrison, MD, Burlington, VT  
J. Cho, MD, Iowa City, IA

**10:00 a.m. - 11:30 a.m.**

**10:00  Everyday Asthma: Updates to the Diagnosis, Classification, and Management of Mild to Moderate Asthma**  
J. Barry, MD, MPH, San Diego, CA

**10:25  Stepping on the Pedal: Approaches to the Management of Severe and Uncontrolled Asthma**  
L. Eggert, MD, Stanford, CA

**10:50  Exasperating Exacerbations: Management of Severe Asthma Exacerbations**  
M.C. McGregor, MD, St. Louis, MO

**11:15  Questions and Answers**

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**DIVISION OF LUNG DISEASES, NHLBI/NIH**

**OUTSIDE ORGANIZATION SESSION**

**L22  THE NHLBI LUNG TRANSPLANT CONSORTIUM**

**10:30 a.m. - 11:30 a.m.**

**Target Audience**
Those with research interests involving the study of lung transplant donors or recipients.

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

- learn about the impact of certain clinical practices on, and the value of collecting particular data elements to inform, donor lung utilization and early post-transplant outcomes in lung transplant recipients.
- increase awareness among the broader lung transplant research community of the availability of the consortium’s resources to support ancillary studies.
- be able to more appropriately design and control for clinical variables during the conduct of multi-site research studies involving lung transplant donors or recipients.

This session will review recent research findings generated by investigators within the NHLBI Lung Transplant Consortium, which encompasses a series of observational cohort studies that aim to understand the impact of site-specific lung transplant selection criteria and clinical management strategies on donor lung utilization and/or early post-transplant outcomes in recipients.

**Chairing:**  
M. Craig, PhD, Bethesda, MD  
J.D. Christie, MD, MS, ATSF, Philadelphia, PA
10:30 The NHLBI Lung Transplant Consortium Data Coordinating Center
S.M. Palmer, MD, MHS, Durham, NC

10:42 Clinical and Biological Factors Predicting Lung Transplant Textbook Outcomes
L.D. Snyder, MD, Durham, NC

10:54 Peri-operative Factors That Drive Cell-Free Hemoglobin-mediated Primary Graft Dysfunction
L.B. Ware, MD, ATSF, Nashville, TN

11:06 The Impact of Body Composition on Peri-Operative and Patient-Centered Outcomes in Lung Transplantation
J.P. Singer, MD, MSci, san francisco, CA

11:18 The Clinical and Molecular Impacts of Lung Primary Graft Dysfunction
J.F. Mcdyer, MD, Pittsburgh, PA

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES, NIH

OUTSIDE ORGANIZATION SESSION

L23 INFLAMMATION RESOLUTION PATHWAYS IN ENVIRONMENTAL PULMONARY HEALTH AND MORBIDITY
10:30 a.m. - 11:30 a.m.

Target Audience
Clinicians, clinician scientists, basic research scientists, fellows and residents

Objectives
At the conclusion of this session, the participant will be able to:
• gain knowledge on how exposure to environmental agents/chemicals may initiate and exacerbate preexisting inflammatory status
• role of chronic exposure to environmental agents in chronic lung diseases
• understanding of emerging and novel pathways involved in inflammation resolution

The emerging interplay between unresolved inflammation and environmentally induced perturbations to inflammation resolution suggests exposure and inflammatory activation or exacerbation contributes to chronic lung disease progression. This session will provide an overview on the current state-of-science on inflammation resolution biology, and how chronic exposure to air pollutants, ozone, and fine particulate matter impact these processes. It will also provide an overview on how NIEHS and other NIH Institutes encourage research in this area to support potential therapeutic and interventional strategies aimed at promoting inflammation resolution to reduce environmental contributions to pulmonary morbidity and mortality.

Chairing: S.S. Nadadur, PhD, Research Triangle Park, NC
B.D. Levy, MD, ATSF, Boston, MA

10:30 Introduction
S.S. Nadadur, PhD, Research Triangle Park, NC

10:36 SPM Pathway Responses to Lung Environmental Challenge
B.D. Levy, MD, ATSF, Boston, MA

10:52 Role of Pro-Resolution Macrophages in Chronic Ozone Exposure Pulmonary Effects
D.L. Laskin, PhD, Piscataway, NJ

11:08 Arachidonic Acid Metabolic Pathways and Resolution Versus Progression of the Cardiometabolic Toxicity Induced by Particulate Matter.
J.A. Araujo, MD, PhD, Los Angeles, CA

11:24 Discussion
S.S. Nadadur, PhD, Research Triangle Park, NC

AMERICAN LUNG ASSOCIATION AIRWAYS CLINICAL RESEARCH CENTERS

OUTSIDE ORGANIZATION SESSION

L24 STUDY UPDATES FROM THE AMERICAN LUNG ASSOCIATION’S AIRWAY CLINICAL RESEARCH CENTERS NETWORK
10:30 a.m. - 11:30 a.m.

Target Audience
Physicians, clinical scientists, nurses, paraprofessionals, educators, health care providers

Objectives
At the conclusion of this session, the participant will be able to:
• better counsel patients about the approach to management of asthma in obese patients.
• describe the use of biomarkers for assessing the progression of emphysema.
• incorporate home spirometry testing in management of patients with lung disease.

The purpose of the session is to discuss ongoing research initiatives within the American Lung Association Airways Clinical Research Centers network.

Chairing: L.J. Smith, MD, Chicago, IL
R.A. Wise, MD, Baltimore, MD

10:30 Introduction
L.J. Smith, MD, Chicago, IL

10:35 Relationship Between Cystic Fibrosis Transmembrane Conductance Regulator Function, Ventilation
DIVISION OF LUNG DISEASES, NHLBI/NIH

OUTSIDE ORGANIZATION SESSION

L25  ELAFIN: FROM TRANSLATIONAL PPG TO CLINICAL TRIAL

10:30 a.m. - 11:30 a.m.

Target Audience
Clinicians, basic scientists, nurses, technologists and trainees interested in pulmonary vascular disease trials

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

• learn about ways to successfully translate preclinical laboratory findings into IND-enabling work for the development of therapeutics to treat PAH
• learn about Phase I and II clinical trial design for pulmonary arterial hypertension
• learn about the importance of biomarker design and inclusion in clinical studies to monitor disease progression and treatment effects

This session will discuss results derived from an NHLBI-funded Translational Program Project Grant (TPPG) that supported pre-clinical studies of elafin in chronic lung disease of infancy, lung transplant rejection, and pulmonary arterial hypertension, and successfully translated those findings into follow-on IND-enabling safety pharmacology and toxicology studies and a subsequent Phase I clinical trial of Elafin use in healthy subjects. Plans for a Phase II clinical trial in PAH patients will also be discussed, with a description of relevant biomarkers and planned endpoints.

Chairing: L. Xiao, MD, PhD, Bethesda, MD
A. Hemnes, MD, ATSF, Nashville, TN

10:30 The Role of Elastase and Elafin in PAH and Other Respiratory Diseases
M. Rabinovitch, MD, Stanford, CA

10:45 High-Dimensional Single-Cell Imaging Maps Distinct Inflammatory Cell Subsets to PAH Vasculopathy
S. Ferrian, PhD, Stanford, United States

11:00 Phase I and Phase II Clinical Trial Design and Implementation in PAH
R.T. Zamanian, MD, FCCP, Stanford, CA

11:15 Identifying Novel Biomarkers for Elafin and other PAH Therapies
A. Sweatt, MD, Stanford, CA

U.S. FOOD AND DRUG ADMINISTRATION

OUTSIDE ORGANIZATION SESSION

L26  PULMONARY UPDATE FROM THE US FOOD AND DRUG ADMINISTRATION

10:30 a.m. - 11:30 a.m.

Target Audience
Clinicians in practice, academic researchers, pharmaceutical industry representatives, international regulators

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

• to provide a better understanding of the regulatory considerations and lessons learned in review of immunomodulators for COVID-19
• to provide a better understanding of regulatory considerations regarding potential changes in asthma management and treatment paradigms
• to provide an overview of recent approval actions, safety issues, and hot topics which arose over the past year in the pulmonary division at FDA.

The most recent FDA actions, including recent drug approvals for pulmonary diseases will be discussed, recent research endeavors, safety issues, and other hot topics that we have navigated over the past year in the Division of Pulmonology, Allergy, and Critical Care in the Office of New Drugs at FDA.

Chairing: B. Karimi-Shah, MD, Silver Spring, MD
S. Seymour, MD, Silver Spring, MD

10:30 Regulatory Considerations in COVID-19 Development Programs: Lessons Learned
A. Clerman, MD, PhD, Silver Spring, MD

10:55 FDA Updates: Highlights From Recent Asthma Approvals
E. Boulos, MD, MPhil, Silver Spring, MD

11:20 Question and Answers
B. Karimi-Shah, MD, Silver Spring, United States
L27  AIRWAY OMICS FOR DISEASE ENDOPTYPING AND MANAGEMENT

10:30 a.m. - 11:30 a.m.

Target Audience
Clinical researchers and clinicians

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

• describe new findings relating nasal airway transcriptomic signatures with disease outcomes in data obtained as part of a randomized placebo-controlled trial of mepolizumab in urban children with exacerbation prone asthma.

• describe the lower airway immune response in patients with severe COVID-19, compare transcriptomic signatures from upper and lower airways in these patients, and identify airway immune signatures associated with disease severity.

• describe approaches to integrate nasal transcriptomic and microbiome data in infants with respiratory bronchiolitis to identify endotypes associated with asthma development.

This session will describe results from 3 NIAID-funded programs that utilize omics data collected from the upper and/or lower airway to define disease endotypes, to potentially inform personalized medicine approaches to disease prognosis and/or management.

Chairing:  P.M. Becker, MD, Bethesda, MD

10:30  Using Airway Transcriptomics to Identify Pathways Associated with Exacerbation and Responsiveness to Mepolizumab Therapy in Children
M.C. Altman, MD, MPhil, Seattle, WA

10:50  Integrated Analysis of Airway Immune Responses in Severe COVID-19: Results from the IMPACC Cohort
R.R. Montgomery, PhD, New Haven, CT

11:10  Integrated Omics Investigation into the Mechanisms Linking Severe Bronchiolitis During Infancy and the Development of Asthma
K. Hasegawa, MD, MPH, PhD, Boston, MA

L28  COPDGENE: ADVANCES IN COPD HETEROGENEITY AND PROGRESSION

10:30 a.m. - 11:30 a.m.

Target Audience
Researchers, medical trainees, those with an interest in COPD pathogenesis

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

• learn about aging and mortality in the COPDGene study.

• learn about COPD progression in the COPD study.

• learn about reclassification of COPD in the COPDGene study.

Chronic obstructive pulmonary disease (COPD), the fourth leading cause of death in the United States in 2019, is a heterologous syndrome. The COPDGene study has created the largest cohort of well-characterized current and former smokers for respiratory disease research. The primary goals of COPDGene are: 1) to identify new genetic loci that influence the development of COPD and COPD-related phenotypes and 2) to reclassify COPD into subtypes that can ultimately be used to develop effective therapies. In this session, presenters will discuss new results from the COPDGene study, including new ways to diagnose the disease, deep learning approaches to imaging data, genetics, epigenetics, transcriptomics, proteomics, and an integrative Omics approach.

Chairing:  L. Postow, PhD, Bethesda, MD

J.D. Crapo, MD, Denver, CO

10:30  Progression of COPD by Chest CT
S. Ash, MD, Boston, United States

10:42  Mortality in COPDGene
W.W. Labaki, MD, MS, Ann Arbor, MI

10:54  Cognitive Decline and Aging
K.F. Hoth, PhD, Iowa City, IA

11:06  Metabolomics and COPD Progression
S. Godbole, PhD, Denver, United States

11:18  Reclassifying COPD
G.L. Kinney, MPH, PhD, Aurora, CO
PCC3  PEDIATRIC CLINICAL CORE CURRICULUM

Education Committee
11:00 a.m. - 12:00 p.m.

Target Audience:
Clinicians who are engaged in maintenance of certification activities

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

• describe diagnosis and management of central and obstructive sleep disorders in infants

• identify best practices for management and treatment of pulmonary hypertension in infants

• describe best practices and standards of care for management of bronchopulmonary dysplasia in the neonatal intensive care unit and the post NICU period

Chairing:  J. Gross, MD, PhD, Denver, CO
C. Okorie, MD, Paulo Alto, CA
M. McCown, MD, Bethesda, MD

11:00. Interstitial Lung Disease in Infants
M. Selleck, MD, Los Angeles, CA

11:25 Pulmonary Hypertension in Infants
D. Bush, MD, NYC, NY

11:50 Questions and Answers

CC6  PULMONARY CLINICAL CORE CURRICULUM

Education Committee
12:00 p.m. - 1:30 p.m.

Target Audience
Clinicians who are engaged in maintenance of certification activities

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

• describe updates in the diagnosis and management of mild, moderate, and severe asthma in 2023

• identify the local and global impact of one's environment on asthma management

• describe best practices for asthma management in the pregnant and post-partum woman

Chairing:  G. Garrison, MD, Burlington, VT
J. Cho, MD, Iowa City, IA

12:00 Asthma Where We Live and Work: The Impact of Environmental Change on Asthma Control
N. Nassikas, MD, Cambridge, MA

12:25 Inequities in Asthma Care: Addressing Social Determinants of Health and Disparities in Asthma Management
A.Rusk, MD, Rochester, MN

12:50 An ICS for Two: Treating Asthma in the Prenatal and Perinatal Settings
E. Batchelor, MD, Med, Phoenix, AZ

1:15 Questions and Answers
D82 REPURPOSING EXISTING MEDICATIONS FOR TREATMENT OF COPD

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology
12:00 p.m. - 1:30 p.m.

Target Audience
Providers who care for patients with COPD and individuals interested in COPD research

Objectives
At the conclusion of this session, the participant will be able to:
• describe findings from experimental and observational studies supporting the potential efficacy of angiotensin receptor blockers, metformin, and antiplatelet therapy in COPD
• understand the reason for discrepancies between experimental/observational studies and clinical trial results in COPD
• evaluate emerging research that investigates repurposing existing medications for the treatment of COPD

Researchers have struggled to identify effective systemic pharmacologic therapies for COPD. Current COPD management consists of inhaled bronchodilators with few add on therapies for certain patient populations. Recently, researchers have focused on whether systemic medications commonly prescribed for non-respiratory indications may be effective in the treatment of COPD. In this session we discuss the scientific and clinical evidence for repurposing angiotensin receptor blockers (ARBs), metformin, and antiplatelet therapy as disease-modifying agents in COPD. We will also review the disconnect between murine models and human observational studies compared to clinical trial results for statins and beta-blockers. A panel discussion will follow.

Chairing:
I.M. Adcock, PhD, London, United Kingdom
S. Christenson, MD, MS, San Francisco, CA
C.L. Pistenmaa, MD, MS, Boston, MA
A. Fawzy, MD, MPH, Baltimore, MD

12:00 Introduction
M.T. Dransfield, MD, Birmingham, AL

12:09 Murine Models to Study ARB in Emphysema
E.R. Neptune, MD, ATSF, Baltimore, MD

12:18 Current Evidence for ARBs and Angiotensin II Pathway in COPD
V. Tejwani, MD, Cleveland, OH

12:27 Mechanisms of Metformin in COPD
F. Polverino, MD, PhD, Houston, TX

12:36 Epidemiologic Evidence for Metformin in COPD
T.D. Wu, MD, MHS, Houston, TX

12:45 Antiplatelet Therapy in COPD
A. Fawzy, MD, MPH, Baltimore, MD

12:54 Clinical Trial Considerations
F.J. Martinez, MD, MS, New York, NY

1:03 Panel Discussion

1:26 Concluding Remarks
I.M. Adcock, PhD, London, United Kingdom

D83 ESTABLISHING A PARADIGM FOR MULTIDISCIPLINARY CARE IN SARCOIDOSIS

Assemblies on Clinical Problems; Environmental, Occupational and Population Health
12:00 p.m. - 1:30 p.m.

Target Audience
Healthcare providers and trainees from across disciplines that care for patients with sarcoidosis or other chronic/systemic conditions.

Objectives
At the conclusion of this session, the participant will be able to:
• understand our current systems of practice, how they limit access and the specific concerns patient with sarcoidosis have
• learn about ways to improve multidisciplinary care and access to care
• discuss ways to improve our structure/practices/systems to reduce disparities

Sarcoidosis is an inflammatory multi-organ disease with a wide variety of clinical manifestations that requires a team approach to address the needs of patients. Oftentimes patients lack the resources to navigate the complex health care systems. The challenges are exacerbated by the fact that sarcoidosis disproportionately impacts Black patients and these patients are also impacted by entrenched institutional biases in medicine. This session will propose to improve our current models of care to meet the needs of the patients, and will propose the concept of “primary sarcoidosis specialist” as an alternative to current models of care.

Chairing:
D.C. Patel, DO, MBA, Gainesville, FL
O.N. Obi, MD, MPH, MSc, Greenville, NC

12:00 My Experience with Getting a Diagnosis and Treatment for Sarcoidosis
Speaker To Be Announced

12:08 The State of Sarcoidosis Care
D.C. Patel, DO, MBA, Gainesville, FL
12:12  The “Primary Sarcoidosis Specialist”
P.H.S. Sporn, MD, ATSF, FCCP, Chicago, IL

12:22  The Burden of Sarcoidosis on Patients
Speaker To Be Announced

12:31  Non-Organ Related Manifestations of Sarcoidosis
V. Kahlmann, MD, Rotterdam, Netherlands

12:41  Social Determinants and How They Impact Sarcoidosis Care
Y. Cozier, DSc, MPH, Boston, MA

12:50  Measuring Outcomes to Improve Care in Sarcoidosis
M. Sharp, MD, MHS, Baltimore, MD

1:00  Discussions
C. Bonham, MD, Charlottesville, VA

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**CRITICAL CARE TRACK**

**D84**  FROM GENES TO CLINICAL TRIALS: STATE-OF-THE-ART APPROACHES TO HETEROGENEITY IN THE ICU

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

12:00 p.m. - 1:30 p.m.

**Target Audience**
Clinicians (RN, NP, MD) who care for critically ill patients and researchers who wish to improve the rigor with which they understand clinical trial data.

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

- describe novel approaches to phenotyping in acute critical care syndromes
- describe new findings concerning the complexity of critical care syndromes
- define new strategies to manage the care of ARDS and septic shock

Heterogeneity is increasingly recognized as a central challenge in critical care research. Sub-phenotyping and endotyping efforts designed to reduce heterogeneity in clinical trial populations and individualize treatment protocols are central to efforts to improve outcomes. In this session we discuss both established and novel techniques for phenotyping critically ill patients with the aim of familiarizing clinicians, clinical researchers and basic researchers with the latest in the field.

**Chairing:**  C.C. Hardin, MD, PhD, ATSF, Boston, MA  
P. Sinha, MB BCh, PhD, ST LOUIS, MO  
T.K. Jones, MD, MPH, MSCE, Philadelphia, PA

12:00  Untangling Complexity in Critical Illness
C.C. Hardin, MD, PhD, ATSF, Boston, MA

12:15  It's Written in the Genes: Understanding the Susceptibilities to Critical Illness
T.K. Jones, MD, MPH, MSCE, Philadelphia, PA

12:30  Polygenic Risk Scores in Critical Care: A Tale of Two Post-Operative Complications
L. Bastarache, MS, Nashville, TN

12:45  Phenotypes in ICU Acquired Weakness
C.C. Dos Santos, MD, Toronto, Canada

1:00  Phenotypes Over Clinical Syndromes: A More Logical Lumping Paradigm
P. Sinha, MB BCh, PhD, ST LOUIS, MO

1:15  Clinical Trials and Treatment Effects: Don’t be Average, Be an Individual
M.M. Churpek, MD, MPH, PhD, ATSF, Madison, WI

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**SCIENTIFIC SYMPOSIUM**

**D85**  EARLY LIFE ENVIRONMENTAL EXPOSURES, EPIGENETICS, AND ASTHMA DEVELOPMENT

Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Environmental, Occupational and Population Health; Respiratory Cell and Molecular Biology

12:00 p.m. - 1:30 p.m.

**Target Audience**
Researchers in asthma/allergy, genetics, epigenetics, virology, and bioinformatics, as well as clinicians/nurses/RTs/advanced practice providers who treat asthma

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

- understand the potential and limitations of genetics, epigenetics, and integrated omics approaches in examining asthma pathogenesis
- gain an understanding of the link between early-life exposures and asthma development
- understand the integrated role of environmental exposures and multi-omics in incident asthma

Growing evidence suggests that early-life environmental exposures (e.g., airway infection, nutrition, air pollution) contribute to the risk of developing asthma in childhood and beyond. During early-life development, environmental exposures interact with both the expression and function of human genetic/epigenetic factors and lead to differential disease risks. This session will highlight examples of recent studies from the NIH-supported Environmental Influences on Child Health Outcomes (ECHO) Program that offer deeper insights into the integrated roles of early-life environmental exposures, genetics, and...
epigenetics in incident asthma and the development of primary prevention strategies for asthma providers.

Chairing: C.J. Blaisdell, MD, MEd, North Bethesda, MD
          K. Hasegawa, MD, MPH, PhD, Boston, MA

12:00 DNA Methylation Signatures of Early Life Exposures and Genetic Variation as Mediators of Asthma and Allergies in Childhood
       C. Ober, PhD, Chicago, IL

12:21 Vitamin C Supplementation to Maternal Smokers During Pregnancy: Stable Effects on Offspring Wheeze and Buccal DNA Methylation Through 5 Years of Age
       L. Shorey-Kendrick, PhD, BA, Beaverton, OR

12:42 Viral Bronchiolitis, Nasal Airway MicroRNA, and Risk for Developing Asthma
       Z. Zhu, ScD, Boston, MA

1:03 Integrative Metabolomics and the Early Life Origins of Asthma
       R.S. Kelly, MPH, PhD, Boston, MA

1:24 Patient Speaker
       Speaker To Be Announced

As the COVID-19 pandemic continues, researchers have observed the possible links and relationships between diseases and the environment. The One Health concept represents a holistic approach that encompasses the interactions between all living beings with their environments. These interactions are crucial to recognize this interconnectedness, which provides insight into where interventions can be implemented to mitigate disease risk and enhance preparedness efforts on emerging concerns. This session will focus on how living beings interact with the ecosystem that may lead to adverse impact on human health. Leading scientists will discuss the scale of the problem, evidence, vulnerability, and policy development.

Chairing: M. Akpinar-Elci, MD, MPH, ATSF, Reno, NV
          H. Chapman, MD, PhD, Washington, DC
          M. Rice, MD, MPH, Boston, MA
          S. Singh, MD, PhD, New York, NY

12:00 Overview of One Health, Using Innovative Data
       H. Chapman, MD, PhD, Washington, DC

12:10 Environmental Pulmonary Pathology from a One Health Perspective
       J. Harkema, DVM, PhD, DACVP, ATSF, East Lansing, MI

12:24 A One Health Approach to Addressing Vector-borne and Zoonotic Diseases
       C. Beard, PhD, Fort Collins, CO

12:38 Climate Change Through the Lens of a One Health Approach
       M. Akpinar-Elci, MD, MPH, ATSF, Reno, NV

12:48 Health Impacts of Air Pollution; the One Health Concept
       H. Bayram, MD, PhD, ATSF, Istanbul, Turkey

1:02 Pneumonia, TB, Health Disparities, and One Health
       A. Videla, MD, Pilar, Argentina

1:16 One Health Collaboration
       B. Dunham, DVM, PhD, Washington, DC

As the COVID-19 pandemic continues, researchers have observed the possible links and relationships between diseases and the environment. The One Health concept represents a holistic approach that encompasses the interactions between all living beings with their environments. These interactions are crucial to recognize this interconnectedness, which provides insight into where interventions can be implemented to mitigate disease risk and enhance preparedness efforts on emerging concerns. This session will focus on how living beings interact with the ecosystem that may lead to adverse impact on human health. Leading scientists will discuss the scale of the problem, evidence, vulnerability, and policy development.

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       B. Dunham, DVM, PhD, Washington, DC
Better understand that improving global health is everyone’s business and involves reducing health disparities

To appreciate the long-term consequences of TB disease and so improve detection and its management

How to enable people with TB’s voice to be heard

The second UN General Assembly High Level Meeting on tuberculosis (TB) is due to take place in September 2023. If we are to eliminate TB, we must engage our political leaders. This symposium will discuss priorities from the perspective of TB survivors, academics and clinicians. What are our policy demands? Where do we anticipate sticking points? How do we ensure our voices are heard?

Chairing: D.M. Lewinsohn, MD, PhD, ATSF, Portland, OR
D. Garcia, MA, Austin, TX

12:00 Living with TB
K. O’Brien, BA, Rumson, NJ

12:22 Beyond Cure - Living With the Long-Term Effects of TB Disease
J. Potter, PhD, London, United Kingdom

12:45 The United Nations High-Level Meeting - the Last Chance for the Sustainable Development Goal on TB?
M. Oliver, BA, Cambridge, United Kingdom

1:08 Turning Policy into Practice to Make a Difference to People with TB
P. Vera Bejarano, BA, Asuncion, Paraguay

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SCIENTIFIC SYMPOSIUM

D88 BEYOND BIOENERGETICS: CELLULAR METABOLISM IN LUNG HEALTH AND DISEASE

Assemblies on Respiratory Cell and Molecular Biology; Critical Care; Pulmonary Circulation; Pulmonary Infections and Tuberculosis; Respiratory Structure and Function; Thoracic Oncology

12:00 p.m. - 1:30 p.m.

Target Audience
Basic and translational researchers, and clinicians who are interested in the mechanisms behind lung diseases

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

• describe metabolic changes that occur in various cell populations in lung diseases and lung cancer

• describe the role of mitochondria as signaling organelles in lung cancer

• recognize disease specific metabolic changes in lungs cell and describe how metabolic pathways may potentially be targeted for treatment

Cellular metabolism is the fundamental step of bioenergetic process. Growing evidence demonstrates the importance of cellular metabolism in disease pathogenesis beyond energy production. In this session, we will provide key knowledge about major cellular metabolic pathways and present recent discoveries and future perspectives on how these pathways regulate the pathogenesis of pulmonary diseases, such as COPD, pulmonary hypertension, interstitial lung diseases and lung cancer and how they may be targeted to alter disease progression. This session brings together experts who are among the pioneers to explore the new paradigm of cellular metabolic dysregulation as a key manifestation of pulmonary diseases.

Chairing: G.M. Mutlu, MD, ATSF, Chicago, IL
S.C. Erzurum, MD, Cleveland, OH
G. Liu, MD, PhD, Birmingham, AL

12:00 Metabolic Changes in Immune Cells in COPD
S.M. Cloonan, PhD, New York City, NY

12:18 Amino Acid Metabolism in Pulmonary Fibrosis
R.B. Hamanaka, PhD, Chicago, IL

12:36 Metabolism in Pulmonary Hypertension
S.C. Erzurum, MD, Cleveland, OH

12:54 Lipid Metabolism in Lung Diseases
R. Summer, MD, Philadelphia, PA

1:12 Macrophage Metabolism in ARDS
W.J. Janssen, MD, Denver, CO

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SCIENTIFIC SYMPOSIUM

D89 OSA-ASSOCIATED INFLAMMATION AND COMORBIDITIES: CAUSES AND CONSEQUENCES

Assemblies on Sleep and Respiratory Neurobiology; Allergy, Immunology and Inflammation

12:00 p.m. - 1:30 p.m.

Target Audience
Pulmonary critical care and sleep medicine practitioners (physicians, psychologists, nurse-practitioners) and researchers interested in the interactions between obstructive sleep apnea (OSA), inflammation, and comorbid chronic disease.

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

• describe the interplay of both biologic (genetic) and epidemiologic associations between OSA, chronic systemic inflammation and
comorbid disease. This will improve medical knowledge and practice-based learning and improvement

- understand the contribution of OSA in chronic comorbid diseases, including asthma, interstitial lung disease, cardiovascular disease, and HIV. This will improve medical knowledge, practice-based learning and improvement, and evidence-based practice

- identify research goals for precision health and personalized medicine in patients with OSA and co-morbid chronic inflammatory disease. This will improve medical knowledge

This session will focus on the interplay between OSA-associated inflammation and chronic comorbidities. The session will begin by detailing both epidemiologic and genetic associations between OSA and inflammatory biomarkers, which are key mediators in the downstream cardiopulmonary consequences in OSA. Particular focus will be given to the contribution of OSA-associated inflammation in the acceleration of chronic comorbid diseases, including asthma, interstitial lung disease, cardiovascular disease, and HIV. The session will conclude with a discussion/Q&A that will explore future research areas for this important field.

Chairing: V. Kundel, MD, New York, NY
P.V. Borker, MD, Pittsburgh, PA
B.E. Cade, PhD, Boston, MA

12:00 Welcome and Introduction of Speakers
V. Kundel, MD, New York, NY

12:05 Sleep Apnea, Biomarkers of Vascular Injury and Inflammation
S. Jelic, MD, New York, NY

12:20 Role of Epigenetic Regulation in Sleep Apnea
R. Cortese, PhD, Columbia, MO

12:35 Epidemiological and Genetic Associations Between Sleep-Disordered Breathing and Inflammatory Traits
B.E. Cade, PhD, Boston, MA

12:50 Investigating the Impact of Sleep Health on HIV-Associated Inflammation
P.V. Borker, MD, Pittsburgh, PA

1:05 OSA and Chronic Lung Disease
M. Teodorescu, MD, MS, Madison, WI

1:20 Question and Answer/Panel Discussion

12:00 p.m. - 2:00 p.m.
Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.