ATS•2011
INTERNATIONAL CONFERENCE
DENVER, COLORADO
Where today’s science meets tomorrow’s care

MAY 13 - 18 • 2011
ADVANCE PROGRAM
Dear Colleague,

We are pleased to invite you to attend ATS 2011 • Denver, the annual International Conference of the American Thoracic Society.

The ATS International Conference is one of the largest gatherings of pulmonary, critical care and sleep clinicians and researchers in the world. Fourteen thousand people from 90 countries attended last year’s Conference and we expect this year’s meeting in Denver to be even bigger and better.

The Conference program will present the latest and most significant developments in clinical practice; clinical, basic, and translational research; health advocacy; and professional and patient education. The ATS presents a thriving, interactive venue for the presentation of original research from more than 5,000 scientific abstracts. Clinical sessions are designed to help the clinical practitioner and the science presented during the Conference often translates into immediate improvements in patient care.

A major strength of our International Conference is the ability of clinicians and researchers to interact and to exchange ideas. The Conference is also an excellent opportunity to become involved with other ATS programs and activities.

To enhance the offerings for clinicians, interesting and unique case reports submitted from around the world will be presented in a variety of sessions. In addition, our thematic poster and poster discussion sessions are interactive experiences for each investigator presenting their new research findings and discoveries.

Denver is the Mile High City and has been voted the fourth “most walkable” city. The downtown area boasts over 8,000 hotel rooms and 300 restaurants all within walking distance. In addition to fine dining, downtown Denver features three sports stadiums, the nation’s second largest performing arts center and two art museums.

So mark your calendars for ATS 2011 • Denver and plan to join us for an exciting and informative International Conference.

REGISTER EARLY to reserve the hotel of your choice. We look forward to seeing you in Denver.

Dean E. Schraufnagel, MD
President
American Thoracic Society

Marc Moss, MD
Chair
International Conference Committee
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- Year in Review  
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- Workshops  
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- Women’s Forum | 10:00 am – 3:00 pm  
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- Exhibit Hall | 11:30 pm – 1:00 pm  
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|               | 12:00 pm – 1:00 pm  
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- Outside Group Sessions | 11:30 pm – 1:00 pm  
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- Exhibit Hall Time: Gain Practical Knowledge to Advance Care and Research  
- Enjoy Dessert in the Exhibit Hall | 12:00 pm – 1:00 pm  
- Meet the Professor Seminars  
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- Meet the Professor Seminars  
- Thematic Seminar Series  
- Outside Group Sessions |
|               | 4:45 pm – 6:30 pm  
- Amberson Lecture/ Trudeau Medal Presentation/ATS Awards | 1:00 pm – 2:00 pm  
- Exhibit Hall Time: Gain Practical Knowledge to Advance Care and Research  
- Enjoy Dessert in the Exhibit Hall | 1:00 pm – 2:00 pm  
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|               | 6:30 pm – 8:30 pm  
- Assemblies Membership Meetings | 2:00 pm – 4:00 pm  
- ATS Recognition Awards for Scientific Accomplishments | 2:00 pm – 4:00 pm  
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| SATURDAY MAY 14 |               |               |               |               |
| 8:00 am – 4:00 pm  
- Postgraduate Courses |               |               |               |               |
| 4:30 pm – 5:30 pm  
- Opening Ceremony |               |               |               |               |
| 5:30 pm – 6:30 pm  
- Fellow and Junior Professional Exchange |               |               |               |               |
| 7:00 pm – 10:00 pm  
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Peter Hackett, MD, an internationally recognized expert in altitude medicine, will give the opening address at ATS 2011. In 1981, Dr. Hackett, who is also a mountain climber, became the first person to climb alone from Mt. Everest’s high camp to its summit and survive. His address, “High Science: Colorado, Everest and Beyond,” will focus on the history of altitude research, recent developments in the field and the potential applications of a growing body of knowledge on the healthcare of people living at lower altitudes.

Dr. Hackett’s career as a climber and high altitude medicine specialist began in 1974. After interning at San Francisco General Hospital, he worked as a rescue physician at Yosemite National Park, where he began rock climbing. That same year, he traveled to Mt. Everest, where he worked for six years as a trekking and climbing guide and as a medical and rescue volunteer. It was then that he started collecting data on altitude sickness.

Dr. Hackett has shifted the focus of his research. Originally interested in climbers and skiers—he directed research at both the Himalayan Rescue Association and the Denali [National Park] Medical Research Project for 14 years—he is now more interested in those who live and work at high altitudes.

In 2007, he founded the Institute for Altitude Medicine, in Telluride, Colorado, whose 2,200 residents live 8,000 to 10,000 feet above sea level. The institute provides care, conducts research and educates both medical professionals and the lay public about health issues related to high altitude.

“My hope is that I can contribute to helping people achieve the lifestyle they seek,” Dr. Hackett says, summing up his career. “If you want to live in the mountains, I believe there are ways to manage the health challenges and maintain your well-being so that you can live the life you want.”
ATS has arranged to provide 12 months of free access to 2011 Conference webcasts as a benefit of your ATS 2011 Conference registration.*

- Full Conference paid registrants will have post-Conference access to more than 200 hours of ATS 2011 Conference presentations (excluding PG Courses, which are available for a fee), reflecting the diverse topic areas of the Conference (including major symposia in clinical, basic, translational, and behavioral science, and all Year in Review sessions) at no extra charge.
- Best of ATS Conferences webcasts provide full audio and slides, synchronized and searchable.
- No additional registration or order is required of full Conference registrants to receive this benefit. More details will be provided in the Conference Final Program and in onsite materials.

* Free access is limited to PAID Conference registrants in the following registration categories: Full Members, Affiliate Members, In-Training Members, Senior/Emeritus Members; and Non-Members, and In-Training Non-Members who are registered for the full conference. One-day ONLY registrants and other-attendees may place orders at designated pricing levels.

The ATS also offers the purchase of the audio content of the major symposia, track sessions, postgraduate courses, and workshops as MP3 and audio CDs. The MP3 files are available onsite for immediate fulfillment and post-Conference through the ATS website. Audio CDs will be available post-Conference through the ATS website.

The full abstracts presented at the conference will be available on CD onsite in Denver. The CD of abstracts is supported by Pfizer, Inc.
The number of research grants that the Foundation is able to fund depends on your support.

Please support junior researchers at a crucial time in their careers, by joining us for our Third Annual Dinner honoring the recipient of the Breathing for Life Award.

For more information on the dinner, visit our Web site at http://foundation.thoracic.org or call 212-315-8622
The ATS Assemblies are the primary groups of the American Thoracic Society. Each of the 13 Assemblies holds an annual Membership Meeting at the International Conference. All ATS members and other interested individuals are invited to attend.

The Assembly Membership Meetings are designed to provide an update on the Assembly’s Activities via the Assembly’s Leadership. At the Assembly Membership Meetings you will hear the Assembly Chair’s message and the year’s agenda. The Meetings provide Assembly members the chance to have input on future direction, information on how to get involved and networking opportunities.

ATS members can vote for their Assembly’s future leaders at the Membership Meetings. Each ATS Assembly Nominating Committee has selected candidates for some or all of the following positions: Assembly Chair (2012-14); Program Committee Chair-Elect (2011-12); and two members of the Nominating Committee (2011-12.)

The Assembly Membership meetings will be held on Monday, May 16, 5:00 pm-7:00 pm, with the exception of the Assemblies on Behavioral Science and Pediatrics, which will be held on Sunday, May 15, 6:30 pm-8:30 pm. All meeting will be held at the Sheraton Denver Downtown Hotel. Hotel and meeting room locations will be listed in the Final Program.

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<th>Assembly Name</th>
<th>Outgoing Chair</th>
<th>Incoming Chair</th>
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<tr>
<td>Allergy, Immunology and Inflammation (All)</td>
<td>Serpil C. Erzurum, MD</td>
<td>Jeffrey L. Curtis, MD</td>
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<tr>
<td>Behavioral Science (BSA)</td>
<td>Lynn B. Gerald, PhD, MSPH</td>
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<tr>
<td>Clinical Problems (CP)</td>
<td>Kevin K. Brown, MD</td>
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<td>Critical Care (CC)</td>
<td>Jesse B. Hall, MD</td>
<td>Gordon Rubenfeld, MD</td>
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<tr>
<td>Environmental and Occupational Health (EOH)</td>
<td>Mark D. Eisner, MD</td>
<td>Paul K. Henneberger, MPH, ScD</td>
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<tr>
<td>Microbiology, Tuberculosis and Pulmonary Infections (MTPI)</td>
<td>Laurence Huang, MD</td>
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<tr>
<td>Nursing (NUR)</td>
<td>Lisa Cicutto, PhD, RN</td>
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<td>Pediatrics (PEDS)</td>
<td>Thomas W. Ferkol, MD</td>
<td>Howard B. Panitch, MD</td>
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<tr>
<td>Pulmonary Circulation (PC)</td>
<td>Mark N. Gillespie, PhD</td>
<td>Paul M. Hassoun, MD</td>
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<tr>
<td>Pulmonary Rehabilitation (PR)</td>
<td>Suzanne C. Lareau, RN, MS</td>
<td>Richard L. ZuWallack, MD</td>
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<tr>
<td>Respiratory Cell and Molecular Biology (RCMB)</td>
<td>Lynn M. Schnapp, MD</td>
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<tr>
<td>Respiratory Structure and Function (RSF)</td>
<td>Andrew J. Halayko, PhD</td>
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<tr>
<td>Sleep and Respiratory Neurobiology (SRN)</td>
<td>Atul Malhotra, MD</td>
<td>James A. Rowley, MD</td>
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The ATS Center will be located in the ATS Exhibit Hall
Sunday, May 15, 10:00 am–4:00 pm
Monday, May 16–Tuesday, May 17, 10:00 am–3:00 pm

TOP 11 Reasons To Visit the ATS Center in Denver:

1. Purchase a Denver tee-shirt at the ATS Store
2. Sample the three ATS Scientific Journals
3. Learn about ATS Education Products
4. Pick up a copy of the Highlights for Clinicians or the Road Map for Fellows and Junior Professionals
5. Browse over 20 different Patient Education materials translated in English and Spanish
6. Support the many Advocacy Efforts going on in Washington
7. Learn more about the ATS Research Program and take a copy of the Grant Resource Guide
8. Hear more about the revamped ATS Job Board Online
9. Purchase a Postgraduate Course Book
10. Become a New Member and learn about the new membership categories and reduced dues!
11. Discover how the ATS has enhanced institutional subscriptions to offer an alternative to paper storage and retrieval.

NOTE: A satellite ATS Center booth will be open Friday, Saturday and Wednesday on the Street Level of the Colorado Convention Center.

Learn More About ATS Membership!

Come by the ATS Center and speak with a staff member to learn more about the benefits of ATS Membership including:

- Membership in up to three Assemblies within the broad fields of respiratory disease and critical care medicine
- Cutting-Edge Medical Journals & Publications
- Local & Global Advocacy Efforts
- Discounts on educational Programs/Products
- Support the ATS Research Program & Career Development Opportunities
- Society Leadership Rights & Privileges
- Financial Benefits through insurance, credit card and other programs

* And remember, all first-time Trainee members can now join the ATS for free for one-year. We also have reduced the membership fees of international members.

To learn more about the value of ATS membership or to become a new member today, please visit www.thoracic.org/go/become-a-member

Questions? Please contact the ATS Concierge Department at 212-315-8684 or email membership@ thoracic.org
SPECIAL EVENTS AND RESOURCES
AT THE INTERNATIONAL CONFERENCE

The American Thoracic Society is dedicated to improving the International Conference experience for pulmonary, critical care and sleep medicine professionals. To assist you with planning for the Conference, we have highlighted some important events, programs and resources which we feel will enhance your overall experience at ATS 2011 • Denver.

CENTER FOR FELLOWS AND JUNIOR PROFESSIONALS
Sunday, May 15 – Tuesday, May 17
7:00 am-4:00 pm
The Center for Fellows and Junior Professionals (CFJP) is a networking and career development forum for physicians and other healthcare professionals in pulmonary, critical care and sleep medicine who are in training, in transition post fellowship. A complimentary breakfast will be served starting at 7:00 am as well as a social hour from 3:30-4:30 pm with cocktails and hors d’oeuvres.

CLINICIANS CENTER
Sunday, May 15 – Tuesday, May 17
7:00 am-4:00 pm
The Clinicians Center is a doctors’ lounge designed for the practicing clinician. Each day a clinical expert will be on hand to answer questions and offer advice on perplexing medical cases. A complimentary breakfast will be served starting at 7:00 am as well as a social hour from 3:00-4:00 pm with cocktails and hors d’oeuvres.

WOMEN’S FORUM
Sunday, May 15
11:30 am-1:00 pm
This annual forum highlights the advancement of women in pulmonary, critical care and sleep medicine and features the recognition of the 2011 Elizabeth A. Rich MD awardee.

DIVERSITY FORUM
Monday, May 16
11:30 am-1:00 pm
This annual forum focuses on career development of minorities, disparities in healthcare and the presentation of the 2011 Minority Trainee Travel Awards.
FELLOWS AND JUNIOR PROFESSIONALS EXCHANGE
Saturday, May 14
5:30 pm-6:30 pm
This annual networking event for fellows, junior professionals, and first-time Conference attendees is a networking event and will provide a brief orientation about the International Conference.

ASSEMBLY MEMBERSHIP MEETINGS
Sunday, May 15, 6:30 pm-8:30 pm
Monday, May 16, 5:00 pm-7:00 pm
As the primary groups of the ATS, the Assemblies provide members with the opportunity to collaborate with their peers in all areas of pulmonary, critical care and sleep medicine. Each of the 13 Assemblies holds an annual business meeting during the International Conference to discuss activities and provide information on projects and programs.

HIGHLIGHTS FOR CLINICIANS
The Highlights for Clinicians is a guide that identifies sessions and events that are relevant to practicing clinicians. Copies of the Highlights for Clinicians will be available at the ATS Center and Clinicians Center as well as in the registration bag.

ROAD MAP FOR FELLOWS AND JUNIOR PROFESSIONALS
The Road Map for Fellows and Junior Professionals identifies activities, sessions, meetings and seminars that may be of interest for fellows, junior professionals and first time attendees. Copies of the Road Map will be available at the ATS Center and CFJP as well as online via the ATS website.

ATS ONLINE JOB BOARD
The ATS has joined forces with the National Healthcare Career Network to enhance the ATS Online Job Board. The new job site provides easy online management of job postings, a searchable resume database and automatic email notifications. To learn more about the ATS Online Job Board, please visit: http://careers.thoracic.org. Job seekers and employers are also encouraged to visit the Job Recruitment Center in the ATS Exhibit Hall to receive discounted prices on employment opportunities.
CLINICAL SCIENCE

Please go to the page indicated after each title for the entire program, including speakers.

FRIDAY, MAY 13

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PG4  Tobacco Dependence: From Genes To CNS Pathways To Diagnosis And Treatment (p. 21)
PG5  Thoracic Imaging (p. 23)
PG6  Evolving Concepts In Lung Transplantation (p. 24)
PG7  Incorporating Ultrasound And Echocardiography Into ICU Practice (p. 25)
PG8  Will This Study Help My Patients? Critically Appraising Studies In Critical Care And Pulmonary Medicine (p. 26)
PG9  Noninvasive Ventilation From ICU To Home: Evidence, Guidelines And Best Practice (p. 27)
PG10 Pulmonary Epidemiology: Methods And Real Life Examples (p. 28)
PG11 Diagnostic Tests For The Pediatric Pulmonologist (p. 29)
PG12 Nuts And Bolts Of Aerosol Delivery: Theory, Guidelines And Practice (p. 30)
PG13 Engineered Nanoparticles And Airway: Therapeutic Applications And Health Risks (p. 31)
PG15 Comprehensive Update On Polysomnography: Interactive State Of The Art Review And Case Discussions (p. 33)

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PG19 Management Of Interstitial Lung Disease (p. 38)
PG20 Mechanical Ventilation: State Of The Art (p. 39)
PG21 ICU Monitoring: Everything You Wanted To Know But Were Afraid To Ask (p. 40)
PG22 Pulmonary And Critical Care Reviews: Built Around ABIM 2010 Modules (Updates) In Pulmonary And Critical Care (p. 41)

PG23 Therapeutic Hypothermia Post-Cardiac Arrest: A Review of the Physiology, Evidence, And A Practical Approach to Implementation (p. 42)
PG26 Practical Approach To Pulmonary Hypertension: A Case-Based Discussion (p. 45)
PG30 Leadership Workshop: Developing Skills To Advance Your Career And Improve Your Work Environment (p. 49)

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A4  Shock Revisited (p. 53)
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A7  Patient Comfort During Mechanical Ventilation (p. 55)
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A10 Clinical Implications And Management of Multi-Drug Resistant Pathogens (p. 57)
WS1 Endobronchial Ultrasound In 2011 (p. 59)
WS2 Improving Communication And Resolving Conflict At The End Of Life (p. 60)
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| B3 | Interstitial Lung Disease In The ICU (p. 80) |
| B4 | The Intensity Of Intensive Care: Is More Better? (p. 80) |
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| B12 | What The Clinical And Translational Science Award Consortium Can Do For You! (p. 86) |
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| WS4 | Understanding And Managing Exercise-Induced Bronchoconstriction (p. 89) |
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| B83 | Pediatric Clinical Chest Rounds (p. 97) |
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| B89 | Obesity: Implications For The Clinical Practice Of The Pulmonary, Critical Care And Sleep Physician (p. 101) |
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ATS 2011 SESSIONS

ATS 2011 • Denver will offer the latest information on clinical, basic and translational science in pulmonary, critical care and sleep medicine. The program will be presented in the following formats:

- **Postgraduate Courses**: full-day courses held on Friday and Saturday. Seating is limited and pre-registration is required.
- **Scientific Symposia**: educational sessions covering clinical, basic and translational science and behavioral issues
- **Clinical Topics in Pulmonary Medicine Track**: a comprehensive program for the practicing physician
- **Year in Review Track**: a daily series which offers a review of the past year’s literature on clinical and research topics
- **Critical Care Track**: a conference-long track covering all aspects of critical care medicine
- **Sunrise Seminars**: informal, one-hour breakfast sessions. Seating is limited and pre-registration is required.
- **Meet the Professor Seminars**: informal, one-hour lunch sessions. Seating is limited and pre-registration is required.
- **Thematic Seminar Series**: multi-part sessions in the Sunrise Seminar and Meet the Professor Seminar format. Seating is limited and pre-registration is required. Registrants must attend all parts.
- **Workshops**: lunchtime programs held each day. Seating is limited and preregistration is required.
- **Abstract Sessions**: oral and poster presentations of original scientific research and unique and interesting case reports.

SESSION LOCATIONS
The sessions will be held at the following locations:
- Colorado Convention Center
- Hyatt Regency Denver at the Colorado Convention Center

WEBCASTS AND AUDIO RECORDINGS OF SESSIONS
Postgraduate courses and most Scientific Symposia will be captured for release by ATS as Webcasts and DVD-ROM. Full Conference registrants will have access to most Webcasts (excluding postgraduate courses) as a registration benefit.

The postgraduate courses and most Scientific Symposia will be audio recorded and available for purchase at the Conference. Order online at https://cms.psav.com/library/ats.

CONTINUING MEDICAL EDUCATION CREDIT Accreditation Statement
The American Thoracic Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. ATS takes responsibility for the content, quality, and scientific integrity of this CME activity.

CME Credit
Most sessions in the following formats are eligible for CME Credits: Clinical Topics in Pulmonary Medicine, Critical Care Track, Meet the Professor Seminars, Postgraduate Courses, Scientific Symposia, Sunrise Seminars, Thematic Seminar Series, Workshops, and Year in Review.

Based on ACCME requirements, the ATS is unable to offer CME credits for some sessions that include presentations made by industry-employed speakers, if the topic of their presentation relates to a product or business line of their employer. Very
few sessions planned for ATS 2011 were impacted by these updates; however, the ATS is unable to offer CME credit for those sessions that have been impacted. Sessions that will not offer CME credit due to these updated ACCME requirements are indicated within the Advance Program.

Final designation of eligible credits toward the AMA Physician’s Recognition Award will be provided in the Final Program.

SOCIAL MEDIA TOOL FOR THE CONFERENCE
The ATS is offering a social networking tool for 2011 conference attendees: My ATS 2011. Powered through Zerista, My ATS 2011 enables attendees to see who is attending the conference, know when attendees are presenting at the conference, use attendee-to-attendee chat to set up meetings, and participate in conference-wide conversations about the conference. You may also build your own personal calendar of sessions through My ATS 2011.

ABSTRACTS ON CD
The full abstracts presented at the conference will be available on CD for pick up in Denver. The CD of abstracts is supported by Pfizer, Inc.

PROGRAM DEVELOPMENT
The scientific and educational program is developed by the ATS membership under the direction of the International Conference Committee. The postgraduate courses are selected by the ATS Education Committee in conjunction with the International Conference Committee.

The members of the International Conference Committee are:
- Marc Moss, MD, Chair 2009-2011
- David H. Au, MD, Chair 2011-2013
- Indu A. Ayappa, PhD
- Jason H.T. Bates, PhD, DSc
- Margaret Ann Carno, PhD, MBA, RN
- Kristina A. Crothers, MD
- Stephanie D. Davis, MD
- Robin R. Deterding, MD
- Niall D. Ferguson, MD, MSc
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- Carol Dukes Hamilton, MD
- Elizabeth O. Harrington, PhD
- Maritta S. Jaakkola, MD
- Amy Jordan, PhD
- Patricia A. Kritek, MD
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- Irina Petrache, MD
- Kristin A. Riekert, PhD
- Marc B. Schenker, MD, MPH
- Beverley J. Sheares, MD, MS
- Peter J. Sterk, MD, PhD
- Gregory Tino, MD
- Carolyn Welsh, MD
- Eileen Rubin, JD
ATS: COMMITTED TO EXCELLENCE IN CONTINUING MEDICAL EDUCATION AND SCIENTIFIC EXCHANGE

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

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

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

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

POSTGRADUATE COURSES

8:00 am-4:00 pm

Target Audience
Clinical researchers, clinicians (adult/pediatric), immunologists, cell biologists, physiologists, pharmacologists, research nurses, laboratory technicians, pharma industry representatives

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

• understand and have a full overview of the newest options for biomarkers in airways disease;

• describe how to measure biomarkers in induced sputum, blood, exhaled air and by imaging techniques;

• integrate biomarkers in clinical practice, thereby improving clinical outcome.

“Biomarkers” is the keyword in today’s management of airway diseases. It comprises cellular and molecular markers that provide useful information about the presence, control and progression of disease. This can be blood, sputum, exhaled air. Is not measuring all this far too complicated? Which biomarkers really qualify in the diagnosis and monitoring of asthma and COPD? Have promises been confirmed? Is the benefit of using biomarkers evidence-based?

There will be a 5-minute discussion after each talk

Chairing: P.J. Sterk, MD, PhD, Amsterdam, Netherlands  
P. Nair, MD, PhD, Hamilton, Canada  
I. Horvath, MD, PhD, MScD, Budapest, Hungary
8:00 Where Are All These Biomarkers Coming From?
P. Woodruff, MD, MPH, San Francisco, CA

8:30 Induced Sputum Eosinophilis: The Gold Standard
P. Gibson, MBBS, Newcastle, Australia

9:00 Induced Sputum: Soluble Markers And Proteomics
R. Djukanovic, MD, PhD, Southampton, United Kingdom

9:30 Break

9:45 Sputum Inflammometry: The Essentials For A Practicing Physician
P. Nair, MD, PhD, Hamilton, Canada

10:15 Blood And Urine: Let Us Keep It Simple
S.E. Dahlen, MD, PhD, Stockholm, Sweden

10:45 Blood Biomarkers As Indices Of Co-Morbidity
B.R. Celli, MD, Boston, MA

11:15 Nitric Oxide: On The Rise Again?
R.A. Dweik, MD, Cleveland, OH

11:45 LUNCH

12:15 Exhaled Breath Condensate: From H2O2 To Metabolomics
I. Horvath, MD, PhD, MScD, Budapest, Hungary

12:45 Gaschromatography: Unraveling Exhaled Breath
S. Fowler, MD, PhD, Manchester, United Kingdom

1:15 Breathomics By Electronic Nose
P.J. Sterk, MD, PhD, Amsterdam, Netherlands

1:45 Exhaled Breath Analysis: 10 Good Reasons To Use It In Clinical Practice
E. Dompeling, MD, PhD, Maastricht, Netherlands

2:15 Break

2:30 Imaging Analysis: Towards Novel Markers Of Airway Structure And Function
S. Siddiqui, MD, PhD, Leicester, United Kingdom

3:00 When Is A Biomarkers Sufficiently Validated For Application?
D.R. Taylor, MD, Dunedin, New Zealand

3:30 Panel Discussion

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PG2 NOVEL GENETIC AND GENOMIC APPROACHES IN RESPIRATORY DISEASES

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Allergy, Immunology and Inflammation; Environmental and Occupational Health; Pediatrics; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:00 am-4:00 pm

Target Audience
Adult and pediatric allergy physicians, nurses, scientists, trainees, and other healthcare professionals interested in pathogenesis and treatment of genomics in respiratory medicine

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

• understand the genetic basis of respiratory diseases and the role of genomics in disease heterogeneity and severity;

• be able to understand the application of genomic techniques to personalized medicine.

• Understand differences in asthma genetics in African Americans and other minorities and the effects on disease characterization and heterogeneity in minority populations.

During this day of intensive training and tutoring, this course will review applications of statistics, molecular biology and genetics to respiratory genomics in both human and animal models. Participants will understand the genetic basis of disease susceptibility and progress, linkage analysis, GWAS, quantitative trait loci, gene-gene and gene environment interactions, mapping disease genes, and genome
wide sequencing. Emphasis is also placed on how to characterize gene function using the latest biochemical and molecular genetic techniques. Contemporary approaches to gene discovery including genome wide approaches and microarray analysis will be covered.

Chairing: E.R. Bleecker, MD, Winston-Salem, NC  
D.A. Meyers, PhD, Winston-Salem, NC

8:00 Introduction  
D.A. Meyers, PhD, Winston-Salem, NC

8:05 Update On Genome Wide Association Studies (GWAS)  
D.A. Meyers, PhD, Winston-Salem, NC

8:40 Integrating Genetics And Phenotype Severity: Disease Heterogeneity  
E.R. Bleecker, MD, Winston-Salem, NC

9:15 Role Of Micro RNA And Gene Expression  
A. Spira, MD, Boston, MA

9:55 Break

10:10 Role Of Epigenetics  
D.A. Schwartz, MD, Denver

10:50 Exome Sequencing And Rare Variants  
R.A. Mathias, ScM, ScD, Baltimore, MD

11:30 Studies In Minority Populations  
E. Burchard, MD, San Francisco, CA

12:05 Lunch

1:00 Gene Environment Interactions  
E. von Mutius, MD, Msc, Munich Germany

1:40 Functional Biology  
D. Vercelli, MD, Tucson, AZ

2:20 Break

2:40 Translational System Biology - Resources And Approaches  
N. Kaminski, MD, Pittsburgh, PA

3:20 Personalized Medicine And Translation Research  
T. Holgate, MD, Hampshire, United Kingdom

Target Audience
New and experienced researchers, including pulmonary and critical care physicians, clinicians (pulmonologists, allergists, pediatricians, pulmonary rehabilitation specialists, internists, family medicine practitioners, nurses), clinical and basic science researchers, postdoctoral fellows, fellows-in-training scientists, fellows-in-training and postdoctoral fellows

Objectives
At the conclusion of this session, the participant will be able to:
• discuss the conceptual, methodological, practical and statistical considerations associated with various measures and data collection methods;
• compare and contrast the relative strengths and limitations of commonly used outcome measures in pulmonary research trials;
• evaluate the applicability of emerging measures and methods to ongoing and future clinical trials.

Standardization and harmonization of outcomes in clinical research and quality improvement are needed to facilitate interpretation and comparison across studies. Recent developments in measurement science have increased opportunities and challenges. This workshop will provide new and experienced researchers with an in-depth examination of the current conceptual, methodological,
practical and statistical considerations in outcomes measurement by increasing knowledge and competency to select from common and emerging measures. Strengths and challenges of measures (e.g., reliability, validity, and MCID), methods and analyses will be contrasted using relevant examples. Breakout sessions (asthma, COPD, and CF) will focus on assessing exacerbations and use of biomarkers.

**Chairing:** A.J. Apter, MD, MSc, Philadelphia, PA  
K.A. Riekert, PhD, Baltimore, MD  
S.J. Bartlett, PhD, Montreal, Canada

**8:00 Welcome And Introduction**  
A.J. Apter, MD, MSc, Philadelphia, PA

**8:10 The Asthma Outcomes Workshop: An Inspiration**  
V. Taggart, MPH, Bethesda, MD

**8:30 Measuring Lung Function**  
R.A. Wise, MD, Baltimore, MD

**9:00 Integrating And Analyzing Symptoms Reports In Clinical Research**  
H.K. Reddel, MBBS, PhD, Glebe, Australia

**9:30 Measuring Functional Capacity And Disability**  
R.L. ZuWallack, MD, Hartford, CT

**10:00 Break**

**10:15 Assessing Psychological Processes And Outcomes**  
S.J. Bartlett, PhD, Montreal, Canada

**10:45 What Do We Measure When We Measure Quality Of Life?**  
S.R. Wilson, PhD, Palo Alto, CA

**11:15 At What Cost? Incorporating Healthcare Utilization Measures**  
J.K. Gerald, MD, PhD, Tuscon, AZ

**11:45 Cultural Context And Health Literacy**  
A.J. Apter, MD, MSc, Philadelphia, PA

**12:15 Lunch**

**1:00 Measurement Across The Lifespan**  
B.G. Bender, PhD, Denver, CO

**1:30 “He Said, She Said”: Measurement By Proxy**  
K.A. Riekert, PhD, Baltimore, MD

**2:00 Repeated Measures/Multiple Timepoints**  
W.M. Vollmer, PhD, Portland, OR

**2:30 Break**

**2:45 Breakout Session I: What Exactly Is An Exacerbation?**

**Cystic Fibrosis**  
C.H. Goss, MD, MSc, Seattle, WA

**Asthma**  
H. K. Reddel, MBBS, PhD, Glebe, Australia

**Chronic Obstructive Pulmonary Disease**  
J. Bourbeau, MD, MPH, Montreal, Canada

**3:20 Breakout Session II: Integrating Biomarkers Into Clinical Research**

**Cystic Fibrosis**  
N. Lechtzin, MD, Baltimore, MD

**Asthma**  
S.E. Wenzel, MD, Pittsburgh, PA

**Chronic Obstructive Pulmonary Disease**  
R.A. Wise, MD, Baltimore, MD

**3:55 Wrap Up/Comments**  
A.J. Apter, MD, MSc, Philadelphia, PA  
K.A. Riekert, PhD, Baltimore, MD  
S.J. Bartlett, PhD, Montreal, Canada
Target Audience
Clinical, practicing pulmonologists; basic science researchers in divisions of pulmonary and critical care medicine, particularly those involved in genetics, genomics, proteomics, and pharmacology research; pulmonary fellows

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

• explain about new knowledge about the neuropathology, neurogenetics, and neuropharmacology that causes tobacco dependence;
• effectively diagnose tobacco-dependence severity and be able to apply these diagnostic standards to developing an effective treatment plan;
• advise and treat a wide diversity of tobacco-dependent patients, from role-played examples demonstrated in this course, including the patient who does not want to stop using tobacco.

Expert, basic-science researchers and clinical pulmonologists will review cutting edge research showing how nicotine affects CNS alpha4-beta2 nicotinic receptors, up-regulating density but decreasing sensitivity; how SNPs affect response to nicotine, likelihood of nicotine dependence developing, and likelihood of response to specific pharmacotherapies. Other speakers will review fundamental and practical aspects of treatment and correct coding concepts and principles for appropriate and optimal reimbursement, drawing particularly on the recently released American College of Chest Physicians “Tobacco-Dependence Treatment Tool Kit, 3rd. Edition”. Program will conclude with interactive, clinical case examples involving two different types of adult, tobacco-dependent patients and a pediatric case.

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

Chairing: D.P.L. Sachs, MD, Palo Alto, CA
F.T. Leone, MD, Philadelphia, PA

8:00 Course Overview, Objectives, And Introduction
D.P.L. Sachs, MD, Palo Alto, CA

8:10 Feed Me! How Activation And Desensitization Of Nicotine Receptors Drive Tobacco Dependence
M. Picciotto, PhD, New Haven, CT

8:40 Nicotine-Addiction Pharmacogenetics: Implications For Targeted Therapy
Speaker To Be Announced

9:10 Role Of Dopamine, The Frontal Cortex, And Memory Circuits In Drug Addiction: Insight From Imaging Studies
Speaker To Be Announced

9:40 Break

9:55 Safety Of Medications To Treat Tobacco Dependence And How Regulation Can Expand Access And Use
R.J. West, PhD, London, United Kingdom

10:25 Safety And Toxicology Of Effective Medications For Treating Tobacco Dependence: Nicotine, Bupropion, And Varenicline
N.L. Benowitz, MD, San Francisco, CA

10:55 The 9/11 Attack: Its Health Consequences On FDNY First Responders, Their Cigarette Smoking, And Effective Treatment Of Their Tobacco Dependence
D.J. Prezant, MD, Brooklyn, NY

11:25 If You Can Treat Asthma, You Can Effectively Treat Tobacco Dependence
F.T. Leone, MD, Philadelphia, PA

11:55 LUNCH

12:55 Tobacco-Dependence Treatment Made Easy: The Stepped-Care Guide From The ACCP Tobacco-Dependence Treatment Tool Kit, 3rd Edition
D.P.L. Sachs, MD, Palo Alto, CA

1:20 Coding and Billing Principles For Appropriate, Optimal Reimbursement For Treating Tobacco Dependence: Case-Based Examples
F.T. Leone, MD, Philadelphia, PA

1:50 Diagnosis And Treatment Of Tobacco Dependence In Pediatric Patients And In Their Parents
H.J. Farber, MD, MSPH, Houston, TX

2:20 Break
Role-Played Examples Of Effective Physician Interaction With Diverse Tobacco-Dependent Patients
S. Evers-Casey, MPH, Philadelphia, PA

Panel Discussion, General Audience Questions And Answers Session
D.P.L. Sachs, MD, Palo Alto, CA

PG5 THORACIC IMAGING

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.
Member: $350 In Training Member: $200
Non-Member: $425 In Training Non-Member: $300

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

8:00 am-4:00 pm

Target Audience
Pulmonologists, fellows, thoracic surgeons, and pathologists

Objectives
At the conclusion of this session, the participant will be able to:
• explain the role of imaging in early detection, diagnosis, and staging of lung cancer;
• use imaging to assist in diagnosis and management of patients with acute or chronic pulmonary thromboembolism, pulmonary infection, airways, or pleural disease;
• optimize the use of CT in characterization of diffuse lung diseases.

This course will review the current status of imaging in acute and chronic pulmonary disease, including pulmonary embolism, airway disease, lung cancer, pleural disease, and diffuse lung disease. The focus will be on helping clinicians understand the role of imaging in dealing with common clinical problems.

Chaising: J.P. Kanne, MD, Madison, WI
J.M. Seely, MD, Ottawa, Canada
D.A. Lynch, MBBS, Denver, CO

8:00 Pre-Test
8:15 Imaging Of Non-Thrombotic Pulmonary Vascular Disease
C.J. Dennie, MD, Ottawa, Canada
8:45 Imaging Of Acute And Chronic Pulmonary Embolism
S.L. Primack, MD, Portland, OR
9:15 Staging Of Lung Cancer
A.N. Leung, MD, Stanford, CA
9:45 Imaging The Large Airways
J.P. Kanne, MD, Madison, WI
10:15 Break
10:25 Pleural Disease
J.M. Seely, MD, Ottawa, Canada
10:55 Imaging Of Pulmonary Infection
L. Ketai, MD, Albuquerque, NM
11:25 Hot Topics In Thoracic Imaging: Update On Lung Cancer Screening
D.A. Lynch, MBBS, Denver, CO
11:45 Hot Topics In Thoracic Imaging: Radiation Exposure
S.L. Primack, MD, Portland, OR
12:05 LUNCH
1:05 Chronic Obstructive Pulmonary Disease
A.A. Bankier, MD, Boston, MA
1:35 Approach To HRCT Of Diffuse Lung Disease
J.P. Kanne, MD, Madison, WI
2:05 Break
2:15 Case-Based Review Of ILD: Clinician’s Role
K.K. Brown, MD, Denver, CO
2:45 Case-Based Review Of ILD: Radiologist’s Role
D.A. Lynch, MBBS, Denver, CO
3:15 Case-Based Review Of ILD: Pathologist’s Role
S.D. Groshong, MD, Denver, CO
3:45 Post-Test
PG6 EVOLVING CONCEPTS IN LUNG TRANSPLANTATION

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assembly on Clinical Problems
8:00 am-4:00 pm

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

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

- identify new findings concerning key immunologic concepts in lung transplantation and current approaches to post-transplant immunosuppression;

- develop and update strategies that facilitate candidate selection, donor selection and ex vivo graft management, and optimal choice of the type of transplant operation to maximally benefit lung transplant recipients;

- apply principles that optimize prevention of rejection, infection, and other complications of lung transplant to improve survival and quality of life of lung transplant recipients by providing appropriate surveillance and management strategies;

This course will examine and discuss current approaches to lung transplantation. The course will review immunologic aspects of lung transplant and immunosuppressive therapies to prevent and treat allograft rejection. It will also cover all aspects of candidate evaluation, donor selection and management, pre- and post-transplant management, and use of database resources (e.g. United Network for Organ Sharing, International Society for Heart and Lung Transplantation) in lung transplantation.

Additionally, the potential for a career in transplant medicine will be discussed.

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

8:00 Selecting Lung Transplant Recipients: ISHLT Guidelines And The Impact Of The LAS System
D.J. Lederer, MD, MS, New York, NY

8:30 Advanced Lung Disease: Alternative Therapies To Lung Transplantation
S.D. Nathan, MD, Falls Church, VA

9:00 Important Considerations In Selecting The Best Type Of Transplant Operation
G. Thabut, MD, Paris, France

9:30 Using DCD Lungs And Ex Vivo Perfusion To Expand The Donor Pool And Optimize Early Graft Function
M. Cypel, MD, Toronto, Canada

10:00 Break

10:15 Pathology Of The Transplanted Lung
H. Tazelaar, MD, Scottsdale, AZ

10:40 Basic Mechanisms Of Allograft Rejection: Innate Immunity, Alloimmunity, and Autoimmunity
W.J. Burlingham, PhD, Madison, WI

11:10 Primary Graft Dysfunction: Predictors, Management, And Prevention
J.C. Lee, MD, Philadelphia, PA

11:35 Post-Transplant Immunosuppression
S.M. Bhorade, MD, Chicago, IL

12:00 LUNCH

1:00 Acute Cellular And Humoral Rejection Monitoring, Diagnosis And Treatment
A.R. Glanville, MD, Sydney, Australia

1:30 Prevention And Management Of Infection In The Lung Transplant Recipient
R. Avery, MD, Cleveland, OH

2:00 Chronic Complications And Monitoring
K.C. Meyer, MD, MS, Madison, WI

2:30 Break
This course will provide an introduction to both the theory and practice of ICU ultrasonography and echocardiography, with lectures focused on the applications and techniques of image acquisition followed by practical experience with machines using human models and mannequins. The course will provide basic training in ultrasound-guided procedures as well as echocardiographic assessment of ventricular function, pericardial disease, and volume assessment.

Chairing: W.D. Schweickert, MD, Philadelphia, PA
D. DeBacker, MD, Brussels, Belgium

8:00 Introduction To Ultrasound
W.D. Schweickert, MD, Philadelphia, PA

8:35 Lung And Pleural Ultrasound Applications
G.A. Schmidt, MD, Iowa City, IA

9:10 Abdominal Ultrasound And Applications
A. Dean, MD, Philadelphia, PA

9:45 Vascular Ultrasound And Image-Guided Access
W.D. Schweickert, MD, Philadelphia, PA

10:20 Break

10:30 Skill Sessions: Ultrasonography
W.D. Schweickert, MD, Philadelphia, PA

12:00 LUNCH

1:00 Echocardiography in the ICU: Indications, Applications And Planes
D. DeBacker, MD, Brussels, Belgium

1:30 Evaluation Of Systolic Function
A. Combes, MD, PhD, Paris, France

2:00 Pericardial And Right Ventricular Disease
A. Vieillard-Baron, MD, Boulogne, France

2:30 Echocardiography To Assess Volume Status
M. Slama, MD, Amiens, France

3:00 Break

3:10 Skill Sessions: Echocardiography
D. DeBacker, MD, Brussels, Belgium
PG8  WILL THIS STUDY HELP MY PATIENTS?
CRITICALLY APPRAISING STUDIES IN CRITICAL CARE AND PULMONARY MEDICINE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Critical Care; Behavioral Science; Clinical Problems

8:00 am-4:00 pm

Target Audience
Clinicians and non-clinicians from all disciplines wanting to improve their ability to interpret the medical literature and evaluate the quality of an observational study.

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

• describe different types of clinical studies, focusing on non-experimental methods;

• describe reasons for choosing particular study designs, and understand for each its uses, abuses, strengths and weaknesses;

• develop skills in critical appraisal that will help critique and interpret how findings in the medical literature can or cannot be applied to improve the care provided to patients, and to improve patient outcomes.

This postgraduate course focuses on the interpretation of observational studies. It will provide an overview of study design principles and discuss the concepts of association, causation, chance, bias and confounding. The course will consist of formal lectures and small group breakout sessions. Participants will receive study material covering key concepts and topics in advance of the course. Lectures provide an overview of observational study designs and how these designs are used to develop diagnostic tests, determine prognosis, identify harm, and obtain data on attitudes and behaviors. Themes are explored further during breakout sessions.

Chairing:  M. Terblanche, MBChB FRCA, EDIC, London, United Kingdom
D.C. Scales, MD, PhD, Toronto, Canada

8:00  Introduction
D.C. Scales, MD, PhD, Toronto, Canada

8:05  An Overview Of Study Methodologies
S.S. Carson, MD, Chapel Hill, NC

8:35  Association And Sources Of Error: Bias, Confounding And Chance
C.H. Goss, MD, MSc, Seattle, WA

9:05  Strategies For Dealing With Confounding.
M. Terblanche, MBChB FRCA EDIC, London, United Kingdom

9:25  Breakout Session 1: Bias And Confounding
A. Amaral, MD, Toronto, Canada

10:25  Break

10:40  Detecting Harm: Databases And Case-Control-Studies
H. Wunsch, MD, MSc, PhD, New York, NY

11:00  Diagnosis
A. Amaral, MD, Toronto, Canada

11:20  Breakout Session 2: Diagnosis
M. Moss, MD, Aurora, CO

12:20  LUNCH

1:05  Surveys: Testing Attitudes And Behaviour
J.M. Kahn, MD, MSc, Pittsburgh, PA

1:25  Prognosis
T.J. Iwashyna, MD, PhD, Ann Arbor, MI

1:45  Breakout Session 3: Prognosis
N. Adhikari, MDCM, MSc, Toronto, Canada

2:45  Break

3:00  Randomised Controlled Trials - Absolutely Necessary, But Not Necessarily Absolute
N.D. Ferguson, MD, MSc, Toronto, Canada

3:20  Bayesian Reasoning And Interpreting Clinical Evidence
G. Rubenfeld, MD, MSc, Toronto, Canada

3:40  Round Table Session: Ask The Experts
D.C. Scales, MD, PhD, Toronto, Canada
CLINICAL POSTGRADUATE COURSE

PG9 NONINVASIVE VENTILATION FROM INTENSIVE CARE UNIT TO HOME: EVIDENCE, GUIDELINES AND BEST PRACTICE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Critical Care; Clinical Problems; Sleep and Respiratory Neurobiology
8:00 am-4:00 pm

Target Audience
Pulmonary and critical care MDs, trainees, nurses, respiratory care practitioners

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

• select appropriate patients for patients in the ICU and post operative setting;

• identify new strategies to manage the respiratory care of patients with chronic neuromuscular disease;

• apply the new guidelines from the American Academy of Sleep Medicine for titration of NPPV in the sleep laboratory.

This course is designed to give the learner the most up-to-date information on the uses of noninvasive positive pressure ventilation (NPPV) in both the acute ICU as well as the chronic home setting. This is an opportunity to hear from experts in this field who will deliver state-of-the-art information that will be both practical and evidence based.

Chairing: J.O. Benditt, MD, Seattle, WA
N.S. Hill, MD, Boston, MA

8:00 Introduction
J.O. Benditt, MD, Seattle, WA

8:10 Selecting Appropriate Patients For NPPV In The ICU
N.S. Hill, MD, Boston, MA

8:45 NPPV for Obesity-Hypoventilation
A. Malhotra, MD, Boston, MA

9:20 Choosing The Interfaces And Ventilators For NPPV In The ICU
D.R. Hess, PhD, RRT, Boston, MA

9:55 Break

10:05 Long Term NPPV In COPD: Where Are We Now?
B.J. Make, MD, Denver, CO

10:40 NPPV In Children-Special Considerations
H.B. Panitch, MD, Philadelphia, PA

11:15 Use Of NPPV In The Post-Operative Setting
Speaker To Be Announced

11:50 LUNCH

12:50 NPPV To Shorten The Duration Of Mechanical Ventilation In The ICU
S. Epstein, MD, Boston, MA

1:25 Noninvasive Ventilation For Chronic Neuromuscular Disease
J.O. Benditt, MD, Seattle, WA

2:00 Newer Modes Of Outpatient NPPV: AVAPS, Auto-Titrating BiPAP, ASV. Are They Helpful?
P. Gay, MD, Rochester, MN.

2:35 Break

2:45 NPPV In The Long-Term Acute Care Hospital
A. White, MD, Stoughton, MA

3:20 New NPPV Titration Guidelines For Sleep Lab From The American Academy Of Sleep Medicine
J.A. Rowley, MD, Detroit, MI

3:55 Closing Comments
N.S. Hill, MD, Boston, MA
PG10 PULMONARY EPIDEMIOLOGY: METHODS AND REAL LIFE EXAMPLES

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Environmental and Occupational Health; Allergy, Immunology and Inflammation; Behavioral Science; Pediatrics

8:00 am-3:30 pm

Target Audience
Those with interest in research and public health related to lung diseases

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

• apply epidemiologic methods;

• identify new exposure and outcome measures in pulmonary epidemiology;

• explain how pulmonary epidemiology has been used to assess health hazards and influence public policy.

This course will summarize the fundamentals of epidemiology as applied to pulmonary diseases, and address topics related to the measurement of relevant exposures and outcomes. Experts will also present a range of examples for which epidemiology has contributed to important insights related to lung disorders.

There will be a 5-minute discussion after each talk

Chairing: C.C. Johnson, PhD, MPH, Detroit, MI
E. Garshick, MD, MOH, Boston, MA

8:00  Overviews Of Course And Epidemiological Methods In Pulmonary Disease Research
C.C. Johnson, PhD, MPH, Detroit, MI

8:25  Confounders, Effect Modification and Genetic Variants
C.G. Montgomery, PhD, Oklahoma City, OK

8:45  Respiratory Disease Questionnaires
G.T. O’Connor, MD, MS, Boston, MA

9:10  Outdoor Exposure Assessment/Reconstruction
J. Hart, ScD, Boston, MA

9:35  Indoor Exposure Assessment
D. Zeldin, MD, Research Triangle Park, NC

10:00  Break

10:15  Methodologies To Adjust For Exposure To Tobacco
E. Eisen, ScD, Berkeley, CA

10:40  Biomarkers Of Exposure And Outcomes
D. Sin, MD, Vancouver, Canada

11:10  Pulmonary Measurements
P. Scanlon, MD, Rochester, NY

11:40  Publicly Available Databases For Pulmonary Disease Research
D.M. Mannino, MD, Lexington, KY

12:00  LUNCH

1:00  Popcorn Lung
K. Kreiss, MD, Morgantown, WV

1:25  World Trade Center Studies
D.J. Prezant, MD, Brooklyn, NY

1:50  The Origins Of Asthma
D.R. Ownby, MD, Augusta, GA

2:15  Break

2:30  Health Effects Of PM: How Particles Cause Disease
N. Kuenzli, MD, PhD, Basel, Switzerland

3:00  Lung Cancer And Regulation Of Diesel Exhaust
E. Garshick, MD, MOH, Boston, MA
PG11 DIAGNOSTIC TESTS FOR THE PEDIATRIC PULMONOLOGIST

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care

8:00 am-4:00 pm

Target Audience
Pediatric pulmonologists; pediatric allergists; pediatric intensivists; nurse practitioners

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

• describe the various diagnostic modalities (especially the newer ones) that are available for the evaluation of pediatric respiratory disorders;

• understand the advantages and limitations of each test so they can choose the most appropriate ones for their patient;

• recognize and interpret the key findings in a variety of tests as well as the possible pitfalls in their interpretation.

The course will focus on the main diagnostic modalities used in the evaluation of pediatric patients with respiratory disorders (e.g. pulmonary function testing, bronchoscopy and bronchoalveolar lavage; radiologic studies etc). The objective is to present up-to-date information on the advantages and limitations of each test for a variety of conditions encountered in the practice pediatric pulmonology. Emphasis will be given on the interpretation of the tests and the clinical relevance of the various findings.

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

Chairing: A.C. Koumbourlis, MD, MPH, Washington, DC
E. Eber, MD, Graz, Austria
S.D. Davis, MD, Chapel Hill, NC

8:00 Endoscopic Evaluation Of The Upper And Lower Airways
R.E. Wood, MD, PhD, Cincinnati, OH

9:00 Bronchoalveolar Lavage: Tests And Interpretation
F. Midula, MD, Rome, Italy

9:30 Interventional Bronchoscopy
A. Colin, MD, Miami, FL

10:00 Indications And Interpretation Of Lung Biopsies
C. Langston, MD, Houston, TX

10:30 Break

10:40 Exhaled Nitric Oxide, Nasal Potential Difference And Videomicroscopy
M. Leigh, MD, Chapel Hill, NC

11:10 Hematologic, Immunologic And Other Tests In The Evaluation Of Lung Diseases
R.R. Deterding, MD, Aurora, CO

11:40 Pulmonary Function Testing In Clinical Practice
A.C. Koumbourlis, MD, MPH, Washington, DC

12:10 LUNCH

12:40 Infant Pulmonary Function Tests
J. Stocks, PhD, London, United Kingdom

1:10 Newer Pulmonary Function Tests
P. Sly, MBBS, Perth, Australia

1:40 Sleep Medicine For The Pulmonologist
J. Owens, MD, Washington, DC

2:10 Break

2:20 Exercise Testing In Children
D.M. Cooper, MD, Orange, CA

2:50 Selecting The Appropriate Radiographic Studies
A. Brody, MD, Cincinnati, OH
PG12 NUTS AND BOLTS OF AEROSOL DELIVERY: THEORY, GUIDELINES AND PRACTICE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

8:00 am-4:00 pm

Target Audience
Clinicians, pediatricians, internists, nurses, asthma educators, pharmacists

Objectives
At the conclusion of this session, the participant will be able to:
• identify aerosol drug delivery devices, demonstrate their proper use and discuss strategies for teaching patients;
• describe special considerations for effective aerosol therapy for children and infants;
• evaluate published guidelines for aerosol drug delivery and use to optimize selection for specific patients.

This course will focus on practical aspects of clinical aerosol medicine. Speakers will discuss aerosol devices, selection for different patient groups (e.g., pediatrics), device interchangeability, common use errors and why patients fail to adhere to prescribed therapy. Hands-on device demonstration and practical session on how to teach correct use of inhaler devices will include strategies/resources available for teaching patients and healthcare workers. Special considerations for aerosol therapy in developing countries will be explored.
Nanotechnology has revolutionized many technology sectors. The unique physicochemical characteristics of engineered nanomaterials (ENM) enable new therapeutic and diagnostic applications, but also engender new, unknown health risks, particularly in vulnerable populations, like individuals with pre-existing lung disease. New research has provided pioneering insights into potential health effects of ENM and the relation of ENM physicochemical and biological properties. This course will provide an in-depth view on ENM pulmonary effects and familiarize the audience with unique aspects of nanomaterial application and research, such as the effects of physicochemical properties on cellular uptake and toxicity. Speakers will furthermore discuss strategies to overcome the pathophysiological and technical barriers to develop novel nano-based diagnostics, imaging and therapeutics tools for airway diseases. The first part of the course will focus on diagnostic and therapeutic utilities of nanomaterials in different lung diseases, while the second part will take a step-wise approach to comprehensively address potential toxicities in different areas of the respiratory system.

There will be a 5-minute discussion after each talk

Chairing:  J.C. Bonner, PhD, Raleigh, NC
          S. Garantziotis, MD, Research Triangle Park, NC
          N. Vij, PhD, Baltimore, MD
          V. Sidhaye, MD, Baltimore, M

8:00 Overview Of Therapeutic And Diagnostic Application Of Nanomaterials
C.S. Thaxton, MD, PhD, Chicago, IL

8:30 An Integrated Nano-Cell Delivery Platform Theranostics For Airway
S. Mohapatra, PhD, Tampa, FL

9:00 Application Of Nanotechnology For Cancer Imaging And Therapy
R. Ramesh, PhD, Oklahoma City, OK

9:30 Quantum Dots For Diagnosis Of Airway Disease
I. Roy, PhD, Buffalo, NY

10:00 Break

10:10 Application Of Nanoparticles For Targeting Inflammatory Cells In Allergy And Lung Center
A. Foster, PhD, Houston, TX
10:40 Multifunctional Mucus-Penetrating Targeted Nano-Delivery Systems For Obstructive Lung Diseases
N. Vij, PhD, Baltimore, MD

11:10 Nano-Systems For Selective Epithelial Barrier Targeting In Chronic Airway Diseases
V. Sidhaye, MD, Baltimore, MD

11:40 LUNCH

12:20 Environmental Hazards Of Engineered Nanomaterials
S. Garantziotis, MD, Research Triangle Park, NC

12:50 Nanotoxicology As A Predictive Science: From Cells To Organisms And Whole Animals
A. Nel, MD, Los Angeles, CA

1:20 Fate Of Inhaled Metal And Metal Oxide Nanoparticles
A. Elder, PhD, Rochester, NY

1:50 Break

2:00 Oxidative Stress And Lung Injury By Nanoparticles
K.E. Pinkerton, PhD, Davis, CA

2:30 Fibrotic Lung Reactions To Carbon Nanotubes
J.C. Bonner, PhD, Raleigh, NC

3:00 Exacerbation Of Pre-Existing Lung Inflammation By Inhaled Nanoparticles
P.H.M. Hoet, PhD, Leuven, Belgium

3:30 Alveolar Epithelial Interactions With Environmental And Engineered Nanomaterials
E. Crandall, MD, PhD, Los Angeles, CA

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**PG14 PHYSIOLOGY MASTER CLASS: HEMODYNAMIC ASSESSMENT AND MANAGEMENT IN THE INTENSIVE CARE UNIT**

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

<table>
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<tr>
<th>Status</th>
<th>Fee</th>
<th>In Training</th>
<th>Member: $350</th>
<th>In Training Member: $200</th>
<th>Non-Member: $425</th>
<th>In Training Non-Member: $300</th>
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Assembles on Respiratory Structure and Function; Clinical Problems; Critical Care

8:00 am-4:00 pm

**Target Audience**
The target audience will be clinicians and trainees engaged in the practice of critical care medicine.

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

- describe the basic principles of cardiac physiology, pulmonary circulatory physiology and cerebral hemodynamics and their interactions with each other;
- outline indications for use of the pulmonary artery catheter and interpret hemodynamic information derived from this device;
- describe the various less-invasive methods for assessing volume status and cardiac output at the bedside in the ICU including their indications, benefits and pitfalls.

This session will provide a comprehensive review of the core physiologic principles of hemodynamics and review the current state of the art for the assessment and management of hemodynamic issues in patients with various forms of critical illness.

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

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

**PG15 COMPREHENSIVE UPDATE ON POLYSOMNOGRAPHY: INTERACTIVE STATE OF THE ART REVIEW AND CASE DISCUSSIONS**

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Sleep and Respiratory Neurobiology

8:00 am-4:00 pm

**Target Audience**
Physicians who care for patients with sleep disorders and read polysomnography studies, physicians with administrative responsibilities for a sleep laboratory, physicians preparing for the ABIM Sleep Medicine board exam, PSG technologists

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

- understand the new rules for scoring sleep and artifacts on polysomnography;
- understand pediatric polysomnography;
- review sleep logs, actigraphy, MSLT and MWT; and examine polysomnographic changes in patients with SDB, narcolepsy, PLMD, insomnia, RBD and seizures.

This is a day-long postgraduate course during which an expert faculty of researchers, academicians and clinicians at the forefront of the sleep medicine field will review a broad range of topics in polysomnography. The 2007 AASM guidelines for polysomnography scoring will be reviewed in detail. Presentations will be case-based with questions and will utilize an audience response system for an interactive experience. The course topics are especially timely given the upcoming ABIM Sleep Medicine board exams to be administered in Fall 2011.

**Chairing:**
G.W. Pien, MD, Philadelphia, PA  
R. Schwab, MD, Philadelphia, PA  
M. Thorpy, MD, Bronx, NY

8:00 **Pre-Test**

8:15 **Adult Polysomnography: New Scoring Rules Including Arousals**  
G.W. Pien, MD, Philadelphia, PA

8:55 **Polysomnography Artifacts, Sampling Rates, Filter Settings, Respiratory Scoring Rules And End Tidal PCO2**  
R. Berry, MD, Gainesville, FL

9:35 **Circadian Rhythm Disorders**  
I. Gurubhagavatula, MD, MPH, Philadelphia, PA

10:05 **Break**
10:20  Pediatric Polysomnography  
D. Gozal, MD, Chicago, IL

11:00  Narcolepsy, Other Hypersomnias And The MSLT And MWT  
M. Thorpy, MD, Bronx, NY

11:30  Leg Movements During Wake And Sleep  
D. Kirsch, MD, Boston, MA

12:00  LUNCH

1:00  Sleep Disordered Breathing: OSA And CSA  
R. Schwab, MD, Philadelphia, PA

1:40  Insomnia Including Sleep Logs And Actigraphy  
D. Neubauer, MD, Baltimore, MD

2:10  Break

2:25  Nocturnal Seizures And Parasomnias Including RBD  
B.V. Vaughn, MD, Chapel Hill, NC

3:05  Adult And Pediatric Case Presentations: Putting It All Together  
A. Malhotra, MD, Boston, MA

3:45  Post-Test
PG16 ASTHMA AND ALLERGIC DISEASES: STATE OF THE ART IN BIOLOGY AND THERAPEUTIC TARGETS

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

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

8:00 am-4:00 pm

Target Audience
Scientists, physician-scientists and clinicians interested in the mechanisms and therapeutics of asthma and allergic inflammation

Objectives
At the conclusion of this session, the participant will be able to:
• understand the basic pathophysiology and mechanisms of the biology of asthma and allergic disease;
• describe current research efforts in asthma and allergic diseases;
• recognize novel therapeutic targets and strategies for the treatment of asthma and allergy.

Allergic inflammation is central to the pathogenesis of asthma and other allergic diseases. Cells and molecules that mediate this process represent targets for therapy. This course will represent a state of the art of our knowledge of the biology of asthma and allergic diseases. The course will be provided by the 15 centers of excellence currently supported by NIAID. The course will provide comprehensive review of state of the art knowledge in asthma and allergic diseases. Based upon this knowledge, targets for therapeutic interventions could be envisioned.

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

Chairing:  N.T. Eissa, MD, Houston, TX
M.J. Holtzman, MD, St. Louis, MO

8:00  Introduction
N.T. Eissa, MD, Houston, TX

8:05  Genetics Of Allergic Inflammation
G. Hershey, MD, Cincinnati, OH

8:35  Regulation Of Inflammatory Genes In Asthma
P.J. Barnes, DM, DSc, London, United Kingdom

9:05  Mechanisms of Rhinovirus-Induced Exacerbations Of Asthma
J. Gem, MD, Madison, WI

9:35  Autophagy And Autophagy Genes In Asthma
N.T. Eissa, MD, Houston, TX

10:05  Break

10:20  Airway Biology Of Acute Environmental Asthma
D. Peden, MD, Chapel Hill, NC

10:45  Chitinase-Like Proteins In Lung Injury And Repair
J.A. Elias, MD, New Haven, CT

11:15  Regulation Of Th2 Immunity To House Dust Mite Allergen
B. Lambrecht, MD, Ghent, Belgium

11:45  Mast Cells And Basophils In Asthma And Allergic Diseases
L. Schwartz, MD, Richmond, VA
12:10  LUNCH

1:10  Allergen Exposure, IgE Responses And Asthma
T. Platts-Mills, MD, Charlottesville, VA

1:35  Role Of IgE In Mediating Allergic Inflammation
D. Macglashan, MD, Baltimore, MD

2:00  Differential Effects Of TGFbeta Activation By
Alphavbeta6 And Alphavbeta8 Integrins In
Acute And Chronic Asthma
D. Sheppard, MD, San Francisco, CA

2:25  Break

2:40  Immunologic And Inflammatory Mechanisms
That Drive Asthma Progression To Remodeling
D. Broide, MD, San Diego, CA

3:05  Role Of Unique ADP-Ribosylating Vaculoating
Mycoplasma Pneumoniae Toxin In Asthma
J. Baseman, PhD, San Antonio, TX

3:30  Drug Discovery For Airway Disease
M.J. Holtzman, MD, St. Louis, MO

BEHAVIORAL • CLINICAL • TRANSLATIONAL

PG17  SCIENTIFIC WRITING: PUBLISHING FOR
ACADEMIC SUCCESS

Pre-registration and additional fees required. Continental
breakfast and box lunch are included. Attendance is
limited and on a first-come, first-served basis.

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

Assemblies on Behavioral Science; Allergy, Immunology and
Inflammation; Clinical Problems; Critical Care; Environmental
and Occupational Health; Microbiology, Tuberculosis and
Pulmonary Infections; Nursing; Pediatrics; Pulmonary
Rehabilitation; Sleep and Respiratory Neurobiology

8:00 am-4:00 pm

Target Audience
Pulmonary and critical care physicians, allergists,
postdoctoral fellows, nurses, clinical researchers,
behavioral scientists, and research scientists

Objectives
At the conclusion of this session, the participant will be able to:
• identify strategies for becoming a successful scientific
  writer and describe the essential elements of a
  scientific manuscript;
• define authorship and identify the ethical
  responsibilities of authors;
• describe the peer review process, avoid common
  mistakes authors make during preparation and
  submission of manuscripts, and select appropriate
  journals based on the contents of the article and the
  target audience.

Fellows, researchers, and clinicians need practical
information about scientific writing and publishing. This
course is designed to provide investigators from various
disciplines the tools necessary to prepare scientific
manuscripts that are likely to be published. Course faculty
will give an overview of the importance of reporting new
science and teach participants about the elements of a
manuscript, the responsibilities of authorship, journal
selection, and the peer review process. The afternoon will
include interactive discussions with the faculty in small
group breakout sessions.

Chairing:  B.J. Sheares, MD, MS, New York, NY
J.M. Bruzzese, PhD, New York, NY
G.B. Diette, MD, MHS, Baltimore, MD

8:00  Introduction And Announcements
B.J. Sheares, MD, MS, New York, NY

8:05  Why Publish: The Importance Of Reporting
New Science
Speaker To Be Announced

8:30  General Discussion

8:40  Getting Started: Writing The Introduction
G.B. Diette, MD, MHS, Baltimore, MD

9:05  General Discussion

9:15  Describing Methods And Reporting Results
C.R. Cooke, MD, MSc, Ann Arbor, MI

9:40  General Discussion

9:50  Writing An Effective Discussion
L.B. Gerald, PhD, Tuscon, AZ

ATS 2011 • Denver  ADVANCE PROGRAM
10:15 General Discussion

10:25 Break

10:35 The Responsibilities Of Authorship
J.M. Bruzzese, PhD, New York, NY

11:10 Panel Discussion
A.J. Apter, MD, MSc, Philadelphia, PA
A.T. Dinh-Xuan, MD, PhD, Paris, France
J.M. Drazen, MD, Boston, MA
R. Irwin, MD, Worcester, MA
J.I. Sznajder, MD, Chicago, IL

12:00 General Discussion

12:30 LUNCH

1:00 Session A: Revise And Resubmit: Responding To Reviewers’ Comments
B.J. Sheares, MD, MS, New York, NY

1:45 Session B: Writing An Abstract And Choosing A Title
R. Grad, MD, Tuscon, AZ

2:30 Session C: Reporting Results: Univariate, Bivariate, And Multivariate Analysis
W.M. Vollmer, PhD, Portland, OR

3:15 Session D: Standardized Reporting Guidelines (CONSORT Guidelines)
J.M. Bruzzese, PhD, New York, NY

Target Audience
This postgraduate course will benefit all physicians and allied health professionals who care for patients with lung cancer.

Objectives
At the conclusion of this session, the participant will be able to:
- apply recent advances in molecular medicine to the care of their patients with lung cancer;
- more appropriately refer patients for minimally invasive staging and resection;
- identify new findings regarding gender differences in the epidemiology and outcomes of patients with lung cancer.

This course will discuss in detail the state of the art of caring for patients with lung cancer in 2011. Topics will include tobacco control policy, gender differences in epidemiology, biology and outcomes, staging, treatment, and palliation.

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

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

8:05 The Big Problem: What We’ve Learned Since 1965 And The Future Of World Tobacco Control
L. Zellers, JD, Oakland, CA

8:25 Lung Cancer Screening: Just Say No Or Sign Me Up?
C. Berg, MD, Bethesda, MD

8:50 New Insights Into The Genetics Of Lung Cancer: Risk Stratification And Therapy Selection
P.A. Bunn, MD, Aurora, CO

9:15 Lung Cancer In Women: Differences In Epidemiology, Biology And Outcomes
P. Rivera, MD, Chapel Hill, NC

9:40 Panel Discussion

9:55 Break

10:15 Lung Cancer Staging: A Review Of The JTO Guidelines
J.R. Jett, MD, Denver, CO
10:40 Lung Cancer Staging Pro-Con: EBUS And EUS Are The Gold Standard
A. Ernst, MD, Boston, MA

11:05 Lung Cancer Staging Pro-Con: Tissue Is The Issue: Surgical Staging Is The Gold Standard
S.C. Yang, MD, Baltimore, MD

11:30 Pre-Operative Evaluation
D. Midthun, MD, Rochester, NY

11:55 Minimally Invasive Surgery: Is Less More?
M.M. DeCamp, MD, Chicago, IL

12:20 Panel Discussion

12:35 LUNCH

1:35 Current Therapy For Small Cell Lung Cancer And The Trials That May Change Our Practice In The Future
J. Brahmer, MD, Baltimore, MD

2:00 Heterogeneity In Non-Small Cell Lung Cancer: The Role Of Targeted Therapy
G.V. Scagliotti, MD, Torino, Italy

2:25 Innovative Therapies For Pleural Mesothelioma - The Problem, The Person And The Plan
J. Friedberg, MD, Philadelphia, PA

2:50 Panel Discussion

3:05 Novel Radiotherapeutic Approaches For Medically Inoperable Patients: Stereotactic Body Radiation Therapy (Stereotactic Ablative Body Radiotherapy)
S. Lo, MD, Columbus, OH

3:30 Palliative Care: Endobronchial And Pleural Techniques
D.J. Feller-Kopman, MD, Baltimore, MD

3:55 Panel Discussion

PG19 MANAGEMENT OF INTERSTITIAL LUNG DISEASE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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<th>Category</th>
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<th>Non-Member</th>
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<td>Non-Member</td>
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Assemblies on Clinical Problems; Allergy, Immunology and Inflammation

8:00 am-4:00 pm

Target Audience
Clinicians interested in the latest guidelines for the management of interstitial lung diseases

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

- better understand the pathogenesis of interstitial lung disease;
- recognize specific interstitial lung diseases;
- treat specific interstitial lung diseases.

This course will provide a detailed summary of the diagnosis and management of interstitial lung disease.

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

Chairing:  R.P. Baughman, MD, Cincinnati, OH
H.R. Collard, MD, San Francisco, CA
G. Raghu, MD, Seattle, WA

8:00 Pre-Test

8:15 New Guidelines For Diagnosis Of IPF
H.R. Collard, MD, San Francisco, CA

8:45 Pathogenesis Of IPF
M.R.J. Kolb, MD, Hamilton, Canada

9:15 Pathology Of Idiopathic Interstitial Lung Disease
K. Leslie, MD, Scottsdale, AZ

9:45 Break
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>10:00</td>
<td>Radiology Of Interstitial Lung Disease</td>
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<td></td>
<td>E.A. Kazerooni, MD, MS, Ann Arbor, MI</td>
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<td>10:30</td>
<td>How To Monitor Interstitial Lung Disease</td>
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<td>K.K. Brown, MD, Denver, CO</td>
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<tr>
<td>11:00</td>
<td>Treatment Of IPF: What To Do Now</td>
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<td>G. Raghu, MD, Seattle, WA</td>
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<tr>
<td>11:30</td>
<td>LUNCH</td>
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<tr>
<td>12:30</td>
<td>Management Of Comorbidities Of Interstitial Lung Diseases</td>
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<td>A. Wells, MD, London, United Kingdom</td>
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<td>1:00</td>
<td>Hypersensitivity Pneumonitis</td>
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<td>M. Selman, MD, Mexico City, Mexico</td>
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<td>1:30</td>
<td>Interstitial Lung Disease In Collagen Vascular Diseases</td>
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<td>K.B. Highland, MD, Charleston, SC</td>
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<td>2:00</td>
<td>Break</td>
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<tr>
<td>2:15</td>
<td>Role Of Genetics In Evaluating Interstitial Lung Disease</td>
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<td>L.R. Young, MD, Cincinnati, OH</td>
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<td>2:45</td>
<td>Pulmonary Hypertension In Interstitial Lung Disease</td>
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<td>M. Humbert, MD, PhD, Clamart, France</td>
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<td>3:15</td>
<td>Treatment Of Pulmonary Sarcoidosis: Something Old, Something New</td>
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<td>R.P. Baughman, MD, Cincinnati, OH</td>
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<td>3:45</td>
<td>Post-Test</td>
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**Target Audience**
Clinicians and researchers, including trainees, with an interest in critical care and mechanical ventilation

**Objectives**
At the conclusion of this session, the participant will be able to:
- describe basics of mechanical ventilation, including ventilator waveform analysis;
- discuss the expanded role of non-invasive ventilation and CPAP;
- identify new modes of ventilation and their potential role in clinical practice.

This course will provide clinicians and clinical investigators with a comprehensive, interactive day-long discussion, including working through some case scenarios, designed to help develop a cogent approach to mechanical ventilation for both clinical care and future clinical research.

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

**Chairing:** N.D. Ferguson, MD, MSc, Toronto, Canada
E. Fan, MD, Baltimore, MD

**PG20 MECHANICAL VENTILATION: STATE OF THE ART**

- Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

**Assemblies on Critical Care; Clinical Problems**

- 8:00 am-4:00 pm
11:25  My Patient: Optimizing NIV Technique/Minimizing Failure (Case-Based)  
D.R. Hess, PhD, RRT, Boston, MA

11:50  LUNCH

12:50  A Decade Of Lung Protective Ventilation  
R. Brower, MD, Baltimore, MD

1:15  Lung Recruitment: PEEP And Recruitment Maneuvers  
M. Amato, MD, PhD, Sao Paolo, Brazil

1:40  Alphabet Soup: APRV/HFV/NAVA/PAV For ALI/ARDS  
N.D. Ferguson, MD, MSc, Toronto, Canada

2:05  My Patient: What To Do When Conventional MV Fails? (Case-Based)  
E. Fan, MD, Baltimore, MD

2:30  Break

2:45  Airway Obstruction - Asthma/COPD  
J.J. Marini, MD, Minneapolis, MN

3:10  Brain Injury And Increased ICP  
J. Singh, MD, MSc, Toronto, Canada

3:35  The Future Of Mechanical Ventilation?  
L. Gattinoni, MD, Milan, Italy

Objectives
At the conclusion of this session, the participant will be able to:
• understand how ICU monitoring is performed and how reliable the generated data are;
• recognize and incorporate standard and novel methods of monitoring in clinical decision making;
• assess standard and novel technology and determine the possible clinical utility of monitoring.

Monitoring patients in the ICU is a fundamental skill for clinicians who care for the critically ill. This session will review common methods of ICU monitoring, with special focus on respiratory and circulatory monitoring, as well as controversies regarding whether such monitoring makes a difference in patient outcomes.

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

8:00  Introduction To ICU Monitoring: Measurement And Error  
A. Jubran, MD, Hines, IL

8:30  Measurement Of Gas Exchange In The ICU  
D.A. Kaufman, MD, Bridgeport, CT

8:55  Ventilator Waveforms: How Do The Signals Get To The Screen?  
S. Holets, RRT, Rochester, MN

9:25  Ventilator Waveforms In ALI/ARDS: What Should I Look At And Why Does It Matter?  
L. Blanch, MD, Sabadell, Spain

9:55  Break

10:10  Using Waveforms To Assess And Improve Patient-Ventilator Interactions  
F. Lellouche, MD, Quebec, Canada

10:40  Monitoring During Ventilator Liberation: What Really Matters?  
J. Siner, MD, New Haven, CT

11:10  Hemodynamic Variables: Interpretation And Drawbacks  
S. Magder, MD, Montréal, Canada

11:40  What Becomes Of The Broken Hearted: Advantages And Limitation Of Techniques For Monitoring Cardiac Function  
M.R. Pinsky, MD, CM, Dr hc, Pittsburgh, PA
12:10  LUNCH

12:50  Practical Use Of Currently Available Hemodynamic Monitoring Systems
J.L. Teboul, MD, Paris, France

1:20  Monitoring The Microcirculation: Ready For Prime Time?
D. De Backer, MD, PhD, Brussels, Belgium

1:50  Break

2:05  Clinical Use Of Hemodynamic Monitoring: What To Use, When To Use It?
L. Bigatello, MD, Boston, MA

2:30  Neuro-Circulatory Monitoring In The ICU
S. Park, MD, Philadelphia, PA

3:00  Help, I'm Drowning In Data!
V. Herasevich, MD, PhD, Rochester, MN

3:30  Trials Of ICU Monitoring: How Do We Know What Works?
M. Tobin, MD, Hines, IL

CLINICAL
POSTGRADUATE COURSE

PG22  PULMONARY AND CRITICAL CARE REVIEWS: BUILT AROUND ABIM 2010 MODULES (UPDATES) IN PULMONARY AND CRITICAL CARE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.
Member: $400  In Training Member: $250
Non-Member: $475  In Training Non-Member: $350

Assemblies on Critical Care; Clinical Problems
8:00 am-4:00 pm

Target Audience
Pulmonary, critical care and sleep physicians who are preparing for re-certification, and clinicians needing an in depth review of recent advances.

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

• recognize critical care concepts and answer clinical questions in critical care as developed for the ABIM SEP module Critical Care 2010 update;
• understand and recognize pulmonary concepts and answer clinical questions in pulmonary medicine as developed for the ABIM SEP module Pulmonary Medicine 2010 update;
• submit ABIM SEP module answers to ABIM via internet and gain recertification credit, provided s/he has registered with ABIM MOC program in advance of the PG course.

Led by expert faculty, some of whom have served on the ABIM, this group learning session is designed around the ABIM Self-Evaluation Process (SEP) modules in Pulmonary and Critical Care. This session will provide a convenient opportunity to complete two (2) SEP modules and offers a valuable review for practicing physicians. Participants who are recertifying MUST purchase the ABIM SEP module from ABIM. However, you need not be recertifying to participate.

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

Chairing:  M. Osborne, MD, PhD, Portland, OR
J. Mandel, MD, San Diego, CA

8:00  MOC Overview
M. Osborne, MD, PhD, Portland, OR

8:30  Pulmonary Module
J. Mandel, MD, San Diego, CA

10:00  Break

10:15  Pulmonary Module
M. Osborne, MD, PhD, Portland, OR

11:45  LUNCH

12:45  Critical Care
A. Malhotra, MD, Boston, MA

2:15  Break

2:30  Critical Care
J.B. Hall, MD, Chicago, IL
PG23 THERAPEUTIC HYPOTHERMIA POST-CARDIAC ARREST: A REVIEW OF THE PHYSIOLOGY, EVIDENCE, AND A PRACTICAL APPROACH TO IMPLEMENTATION

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Critical Care; Behavioral Science; Clinical Problems

8:00 am-4:00 pm

Target Audience
Clinicians, fellows, ICU directors, neurologists, cardiologists, pediatrics, nurses, respiratory therapists

Objectives
At the conclusion of this session, the participant will be able to:
• identify new strategies to manage the care of cardiac arrest patients who remain in a coma;
• improve the clinical outcome of patients who remain in a coma following cardiac arrest;
• apply their knowledge and tools provided in the course to begin to develop a protocol for hypothermia;

This session is designed to improve the learner's understanding of the evidence and guidelines around therapeutic hypothermia with the majority of the day focused on practical aspects of development and implementation of a cooling protocol, as well as caring for these patients. Small group sessions with clinical experts in the field will help the participant fine tune their understanding of protocol development and bedside care of these patients.

Chairing:  C.C. Thomson, MD, MPH, Cambridge, MA
K.H. Polderman, MD, PhD, Pittsburgh, PA
B. Fuchs, MD, Philadelphia, PA

8:00 Welcome And Opening Remarks
C.C. Thomson, MD, MPH, Cambridge, MA

8:05 Thermal Biology: The Basics
L.A. Sonna, MD, PhD, Baltimore, MD

8:30 Resuscitation And Cooling: What The Future Holds
B.S. Abella, MD, Philadelphia, PA

8:55 Evidence Of Therapeutic Hypothermia: Translation Failure?
C.R. Weinert, MD, MPH, Minneapolis, MN

9:20 Pathophysiology Of Therapeutic Hypothermia And Its Side Effects
B. Fuchs, MD, Philadelphia, PA

9:45 Translating Evidence Into Practice While Improving Quality
C.C. Thomson, MD, MPH, Cambridge, MA

10:10 Bedside Management Of The Therapeutic Hypothermia Patient: Know What To Expect
R. Logiudice, RN, MS, Cambridge, MA

10:35 Break

10:50 WHO And WHEN To Cool: Post Arrest Care
R.C. Hyzy, MD, Ann Arbor, MI

11:15 HOW To Cool?: A Review Of Cooling Methods
K.H. Polderman, MD, PhD, Pittsburgh, PA

11:40 Cardiovascular Considerations In Therapeutic Hypothermia
S. Hollenberg, MD, Camden, NJ

12:05 Neurologic Monitoring And Prognosis Before, During, And After TH
T. Bleck, MD, Chicago, IL

12:30 LUNCH

1:15 Multimedia Presentation: Step By Step Review Of The Process And Procedure Of Therapeutic Hypothermia
J. Poston, MD, Chicago, IL

1:40 Breakout Workshop: Forming A Multidisciplinary Team And Building A Protocol At Your Institution: Barriers And Solutions
C.R. Weinert, MD, MPH, Minneapolis, MN
2:10 Breakout Workshop: How To Manage Common Side Effects Of Therapeutic Hypothermia
K.H. Polderman, MD, PhD, Pittsburgh, PA

2:50 Breakout Workshop: Patient Selection And Protocol Implementation: Bring Institution-Specific Questions
B.S. Abella, MD, Philadelphia, PA

3:20 Breakout Workshop: How To Manage Common Side Effects Of Therapeutic Hypothermia: EEG, Shivering, Seizures
T. Bleck, MD, Chicago, IL

3:50 Panel Discussion Wrap Up
K.H. Polderman, MD, PhD, Pittsburgh, PA

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BASIC • CLINICAL
POSTGRADUATE COURSE

PG24 LUNG INNATE IMMUNITY: AT THE FRONTLINES OF HOST DEFENSE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

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

8:00 am-4:00 pm

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

Objectives
At the conclusion of this session, the participant will be able to:
• identify new findings about the normal host defense response to microbial infections of the lungs;
• improve understanding and identify critical areas of deficient knowledge in the area of lung infections.

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

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

8:00 Toll-Like Receptor: Danger Signal Molecules In The Lungs
S. Skerrett, MD, Seattle, WA

8:30 Regulation Of Toll-Like Receptors In Health And Disease
Speaker To Be Announced

9:00 NLR And Cytoplasmic Signaling Molecules In The Lungs
Speaker To Be Announced

9:30 Inflamasome Activation And Cell Death Pathways In The Lungs
M.D. Wewers, MD, Columbus, OH

10:00 Break

10:15 Basophils, Mast Cells, Eosinophils And Lung Host Defense
S.N. Abraham, PhD, Durham, NC

10:45 Dendritic Cells Lung Innate And Adaptive Immunity
B. Lambrecht, MD, Ghent, Belgium

11:15 Nuocytes: New Kids On The Block?
A.N.J. McKenzie, PhD, Cambridge, United Kingdom

11:45 LUNCH

12:45 microRNA In The Regulation Of Lung Innate Immunity
J.P. Mizgerd, PhD, Boston, MA

1:15 Lung Collectins And Antimicrobial Peptides
S. Hansen, MD, PhD, Odense, Denmark

1:45 Epithelial Cells In Lung Host Defenses: More Than A Barrier
A. Prince, MD, New York, NY

2:15 Break

2:30 Genetic Variability In Innate Immunity And Susceptibility To Lung Infections
M.M. Wurfel, MD, PhD, Seattle, WA
3:00  Stimulation Of Innate Immunity To Prevent And Treat Lung Infections  
      B. Dickey, MD, Houston, TX

3:30  Innate Immunity And Vaccine Strategies  
      Speaker To Be Announced

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**CLINICAL POSTGRADUATE COURSE**

**PG25 THE PHYSIOLOGIC BASIS OF PEDIATRIC RESPIRATORY FUNCTION TESTING**

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Pediatrics; Clinical Problems; Respiratory Structure and Function; Sleep and Respiratory Neurobiology

8:00 am-4:00 pm  

**Target Audience**

Pediatric pulmonologists, fellows, respiratory therapists, nurses, adult pulmonologists

**Objectives**

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

- describe the physiologic principles underlying pediatric respiratory function testing;
- apply principles of pulmonary physiology to the design of pediatric respiratory function equipment;
- describe the developmental considerations that affect the interpretation of results from pediatric respiratory function testing.

The objective of this course is to teach fundamental concepts of pulmonary physiology by illustrating their application to pediatric respiratory function testing. We will engage the audience by using case examples and an interactive audience response system. Although this course is directed towards fellows in training, the topics will be of value and interest to anyone caring for patients with respiratory disease regardless of age.

We anticipate developing enduring materials from the course (e.g. CD-ROM) that all ATS members will be able to access in the future.

**Chairing:** C.L. Ren, MD, Rochester, NY  
J.L. Allen, MD, Philadelphia, PA  
H.B. Panitch, MD, Philadelphia, PA

8:00  **Introduction**  
      C.L. Ren, MD, Rochester, NY

8:05  **Dynamic And Static Measurement Of Resistance And Compliance**  
      H.B. Panitch, MD, Philadelphia, PA

8:45  **Applied Pulmonary Physiology In The Infant**  
      PFT Lab  
      S.D. Davis, MD, Chapel Hill, NC

9:25  **The Physiologic Basis Of Tidal Breathing Analysis**  
      C.L. Ren, MD, Rochester, NY

10:00 **Break**

10:15  **Measurement Of Lung Volumes And Gas Exchange**  
      P. Sly, MBBS, Perth, Australia

10:55  **Ventilation/Perfusion Mismatch**  
      J.L. Allen, MD, Philadelphia, PA

11:35  **Applying Gas Dilution And Washout Techniques To Study Ventilation Inhomogeneity**  
      P. Subbarao, MD, Toronto, Canada

12:15  **LUNCH**

1:15  **The Physiology Of Forced Expiratory Flows**  
      R.S. Tepper, MD, PhD, Indianapolis, IN

1:55  **The Physiology Of Pediatric Sleep**  
      S. Ward, MD, Los Angeles, CA

2:35  **Break**

2:50  **Assessment Of Respiratory Muscle Strength**  
      G. Redding, MD, Seattle, WA

3:30  **Selection Of Normal Reference Equations For The Pediatric Population**  
      W. Morgan, MD, Tucson, AZ
PG26 PRACTICAL APPROACH TO PULMONARY HYPERTENSION: A CASE-BASED DISCUSSION

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assembly on Pulmonary Circulation

8:00 am-4:00 pm

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

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

• identify the various therapeutic targets and pharmacologic molecules available for treatment of pulmonary hypertension;

• gain new strategies to manage the care of patients with pulmonary hypertension;

• identify novel therapeutic approaches and new clinical trials in pulmonary hypertension.

This scientific symposium brings together international experts in pulmonary hypertension who will discuss topics that challenge both pulmonary vascular scientists, as well as practitioners treating patients with pulmonary hypertension. Current practice guidelines will be reviewed. The audience will interact with complex cases highlighting different forms of pulmonary hypertension. Treatment algorithm will be discussed and applied to different case scenarios.

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

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

8:00  Pre-Test
8:15  Introduction
      N.S. Hill, MD, Boston, MA
8:30  Idiopathic Pulmonary Arterial Hypertension
      J.R. Klinger, MD, Providence, RI
8:55  Scleroderma Associated Pulmonary Arterial Hypertension
      K.A. Fagan, MD, Mobile, AL
9:20  HIV Related Pulmonary Arterial Hypertension
      H.W. Farber, MD, Boston, MA
9:45  Portopulmonary Hypertension
      M. Krowka, MD, Rochester, MN
10:10 Break
10:25 Pulmonary Hypertension WHO Group II
      M. Gomberg-Maitland, MD, Chicago, IL
10:50 Pulmonary Hypertension WHO Group III
      M.M. Hoeper, MD, Hannover, Germany
11:15 Chronic Thromboemolic Pulmonary Hypertension (WHO Group IV)
      I. Lang, MD, Vienna, Austria
11:40 Pulmonary Hypertension WHO Group V
      I.R. Preston, MD, Boston, MA
12:05 LUNCH
1:25 Current Treatment Guidelines For Pulmonary Arterial Hypertension
      M. Humbert, MD, PhD, Clamart, France
1:55 Evidence Based Review Of Combination Therapies In PAH
      D. Badesch, MD, Denver, CO
2:25 Break
2:40 Multidisciplinary Approach To Treating Pulmonary Hypertension
      D. McCollister, RN, Denver, CO
3:05 What The Future Holds
      H.A. Ghofrani, MD, Giessen, Germany
3:35 Post-Test
BASIC • TRANSLATIONAL

POSTGRADUATE COURSE

PG27 FUNCTIONAL ANALYSIS OF STEM CELLS: GETTING READY TO TRANSLATE

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Respiratory Cell and Molecular Biology; Environmental and Occupational Health; Pediatrics; Pulmonary Circulation; Respiratory Structure and Function

8:00 am-4:00 pm

Target Audience
Expansion of funding opportunities designed to “accelerate study of cell based therapy for lung diseases” has encouraged intensive investigation of lung stem cells in situ and development of methods for isolation and functional assessment of such cells in vitro. Researchers executing these studies come from diverse backgrounds and it is the goal of this postgraduate course to provide expert advice on use of existing model systems and for development and analysis of new methodologies. Members of the audience are expected to include all members of the research community from Principal Investigators to graduate students and those with interests in both basic and applied aspects of stem cell biology.

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

• appropriately use stem cell terminology as it relates to the nuances of lung tissue specific stem cells;

• apply well characterized methods for analysis of tissue-specific stem cells to newly developed lines of genetically modified mice in vivo;

• apply stem cell methods to analysis of human cells and to genetically modified mice.

The potential for cell based therapy to prevent or treat human disease has led to unprecedented growth of the field of stem cell biology. However, use of stem cells for treatment of chronic lung disease has been encumbered by an incomplete knowledge of tissue-specific stem cell (TSC) behavior in normal and pathological conditions. This course will focus on functional analysis of TSC in vivo and in vitro and will emphasize model design and assessment.

Charing:  S.D. Reynolds, PhD, Denver, CO
B.R. Stripp, PhD, Durham, NC

8:00 Lecture 1: Bench To Bedside I: Use Of Acellular Matrix To Facilitate Tissue Regeneration
T. Gilbert, PhD, Pittsburgh, PA

8:40 Lecture 2: Stem Cell Nomenclature: Stem Vs. Progenitor
D.J. Weiss, MD, PhD, Burlington, VT

9:20 Lecture 3: Analysis Of Proliferation And Differentiation Potential: The Naphthalene Model
B.R. Stripp, PhD, Durham, NC

10:00 Lecture 4: Regulation Of Stem Cell Function: Genetically Modified Mouse Models
A.K. Perl, PhD, Cincinnati, OH

10:40 Lecture 5: Mesenchymal Stem Cells
L. Ortiz, MD, Pittsburgh, PA

11:20 LUNCH DISCUSSION: Review of Lung Stem And Progenitor Cell Manuscripts And Grant Applications
Z. Borok, MD, Los Angeles, CA
M. Matthay, MD, San Francisco, CA

12:20 Lecture 6: Epithelial Stem Cells
S.D. Reynolds, PhD, Denver, CO

1:00 Lecture 7: Ex Vivo Functional Analysis
J. Engelhardt, PhD, Iowa City, IA

1:40 Lecture 8: Multiparametric Analysis: Flow Cytometry For Stem Cell Applications
I. Bertoncello, PhD, Melbourne, Australia

2:20 Lecture 9: Morphometric Analysis
D. Hyde, PhD, Davis, CA

3:00 Lecture 10: Bench To Bedside 2: Rational Design Of Biomaterials For Tissue Engineering, Drug Delivery, And Biosensing Applications
K. Anseth, PhD, Boulder, CO
PG28 IMPLEMENTING MODERN MICROSCOPY FOR IMAGING LIVING CELLS AND INTACT ANIMALS

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Respiratory Cell and Molecular Biology; Pulmonary Circulation; Respiratory Structure and Function

Target Audience
The course is designed for biological research scientists and advanced graduate students who use, or plan to apply, microscopy for study of living cells and living laboratory animals.

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

- design studies appropriately employing imaging of live specimens in addition to, or in lieu of, imaging of fixed specimens;
- perform the techniques of live cell and intravital imaging including capturing image stacks for 3D information and time-elapsed images for temporal information;
- perform post-imaging processing including 3D volume renderings and time series movies; and perform basic quantification techniques using image analysis software.

Modern microscopy has ushered in radical improvement in our ability to view biological processes in living cells, tissues, and intact animals. To help bring these revolutionary microscopy tools into more widespread use by lung biologists, we offer a ‘how to’ of live cell imaging and intravital microscopy of the isolated lung and intact animal. Breakout sessions will utilize commercially-available instruments for hands-on live cell and intravital imaging. The knowledge gained from this course can be applied to studies of any lung disease involving the microcirculation or lung parenchyma, such as acute lung injury, chronic obstructive pulmonary disease and idiopathic pulmonary fibrosis.

Chairing:
R.G. Presson, Jr., MD, Indianapolis, IN
W.M. Kuebler, MD, PhD, Toronto, Canada
I. Petrache, MD, Indianapolis, IN

8:00 Principles Of Imaging In Live Cells And In Isolated Perfused Lungs
C. St. Croix, PhD, Pittsburgh, PA

8:30 Caged Probes And Uncaging Strategies
K. Parthasarathi, PhD, Memphis, TN

9:00 Ex-Vivo Study Of The Kinetics Of Surfactant Secretion In Type II Cells
P. Dietl, MD, Ulm, Germany

10:00 Break

10:10 Imaging Protein Dynamics Within The Glycocalyx Using Fluorescence Correlation Spectroscopy
R. Dull, PhD, Salt Lake City, UT

10:40 Micropuncture To Image The Isolated, Perfused Rat Lung
J. Battacharya, MD, PhD, New York, NY

11:10 Intravital Endoscopic Confocal Fluorescence Microscopy
O. Lesur, MD, PhD, Quebec, Canada

11:40 LUNCH

12:10 Intravital Imaging Of Tracheal Circulation
E. Wagner, PhD, Baltimore, MD

12:40 Surgical Techniques And Apparatus For Intravital 2-Photon Lung Microvasculature Imaging In The Intact Rodent
R.G. Presson, Jr., MD, Indianapolis, IN
M.B. Brown, PhD, Indianapolis, IN

1:10 Break
Breakout Session For Hands-On Live Cell Imaging
C. St. Croix, PhD, Pittsburgh, PA

Breakout Session For Hands-On Intravital Imaging
R.G. Presson, Jr., MD, Indianapolis, IN

Breakout Session For Hands-On Image Processing
M.B. Brown, PhD, Indianapolis, IN

PG29 PHYSIOLOGY OF INTERMITTENT HYPOXIA

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Assemblies on Sleep and Respiratory Neurobiology;
Allergy, Immunology and Inflammation; Clinical Problems;
Critical Care; Pulmonary Circulation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:00 am-4:00 pm

Target Audience
Clinicians and scientists interested in sleep disordered breathing. The attendees will be primary or secondary members of the SRN but some members of All, CP, PC, RCMB, RSF and CC Assemblies would also be welcome. Trainees in respiratory and sleep medicine would certainly benefit.

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

• identify new findings about the pathogenesis of intermittent hypoxia and its role in neurocognitive and cardiovascular outcomes of OSA;

• develop new approach to treatment of OSA and its consequences.

Intermittent hypoxia is a landmark manifestation of sleep apnea, which accounts for many pathological manifestation of the disorder. We will characterize the stimulus and describe pathophysiology of intermittent hypoxia starting from the molecular level to different organs and systems. We will characterize effects of intermittent hypoxia on oxidative stress and systemic inflammation. We will describe effects of intermittent hypoxia on cognitive function, ventilator control, the upper airway, systemic and pulmonary blood pressure, vascular reactivity, lipid and glucose metabolism. There is recent exciting development in the area, which will be of particular interest to trainees.

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

Chairing: V.Y. Polotsky, MD, PhD, Baltimore, MD
C.P. O’Donnell, PhD, Pittsburgh, PA

8:00 Intermittent Hypoxia: Nature Of The Stimulus In Humans And Animal Models
C.P. O’Donnell, PhD, Pittsburgh, PA

8:30 Molecular Basis Of Susceptibility To Hypoxic Injury
G.G. Haddad, MD, La Jolla, CA

9:00 Intermittent Hypoxia And Oxidative Stress
N. Prabhakar, PhD, Chicago, IL

9:30 Intermittent Hypoxia And Systemic Inflammation
W.T. McNicholas, MD, Dublin, Ireland

10:00 Intermittent Hypoxia And Long Term Facilitation: Lessons From Animal Models
G.S. Mitchell, PhD, Madison, WI

10:30 Intermittent Hypoxia: Molecular Targets To Promote Adaptation And Prevent Neural And Cardiovascular Injury
S. Veasey, MD, Philadelphia, PA

11:00 Impact Of Intermittent Hypoxia On Apnea Severity
J.H. Mateika, PhD, Detroit, MI
11:30 Intermittent Hypoxia And Cortical Function: From Animal Model To Human Disease: Part 1, Human Disease
D. Gozal, MD, Chicago, IL

11:45 Intermittent Hypoxia And Cortical Function: From Animal Model To Human Disease: Part 2, Animal Model
Y. Wang, MD, PhD, Chicago, IL

12:00 LUNCH

1:00 Intermittent Hypoxia, Vascular Reactivity And Systemic Hypertension
B.J. Morgan, PhD, Madison, WI

1:30 Intermittent Hypoxia And Pulmonary Hypertension
K.A. Fagan, MD, Mobile, AL

2:00 Intermittent Hypoxia And Lipid Metabolism: Implications For The Metabolic Syndrome
V.Y. Polotsky, MD, PhD, Baltimore, MD

2:30 Intermittent Hypoxia And Atherosclerosis
P. Levy, MD, PhD, Grenoble, France

3:00 Intermittent Hypoxia And Glucose Metabolism
N. Punjabi, MD, PhD, Baltimore, MD

3:30 Intermittent Hypoxia In Clinical Prospective
J.W. Weiss, MD, Boston, MA

BEHAVIORAL•CLINICAL
POSTGRADUATE COURSE

PG30 LEADERSHIP WORKSHOP:
DEVELOPING SKILLS TO ADVANCE YOUR CAREER AND IMPROVE YOUR WORK ENVIRONMENT

Pre-registration and additional fees required. Continental breakfast and box lunch are included. Attendance is limited and on a first-come, first-served basis.

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

Education Committee; Career Development Task Force; Assemblies on Allergy, Immunology and Inflammation; Behavioral Science; Clinical Problems; Critical Care;

Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections; Nursing; Pediatrics; Pulmonary Circulation;

8:00 am-4:00 pm

Target Audience
Those with clinical, research, or administrative responsibilities

Objectives
At the conclusion of this session, the participant will be able to:
• create appreciation for, and expertise within, the teamwork approach to problem solving, planning, and operational implementation;
• develop negotiating skills, including conflict resolution techniques;
• study and understand the practical skills for leaders that are needed to pursue interdisciplinary and programmatic work relationships in the pulmonary, critical care, and sleep community.

The complexity of any work environment necessitates the use of interdisciplinary approaches and teamwork, promoting richer solutions to complex challenges and accelerating progress. These competencies apply to most if not all jobs. They are often assumed to be present. However, these skills are not usually taught. Our new postgraduate course will begin to educate the future leaders in the fields of pulmonary, critical care, and sleep medicine. Attendees will begin to acquire the skills that are necessary to transition from a “first job” to a leadership position in practice/industry/academics, improve job satisfaction, time management skills, and productivity.

Chairing: J.M. Beck, MD, Ann Arbor, MI
P.A. Kritek, MD, EdM, Seattle, WA
M. Moss, MD, Aurora, CO

8:00 Welcome, Goals, And Objectives
M. Moss, MD, Aurora, CO

8:10 Team Building
E. Brooks, MS, Aurora, CO

8:50 How To Deal With Challenging Individuals
M. Osborne, MD, PhD, Portland, OR
9:30  Negotiation Skills  
J.G.N. Garcia, MD, Chicago, IL

10:10  Break

10:25  How To Chair A Committee And Run A Meeting  
T.R. Martin, MD, Seattle, WA

11:05  Time Management Skills: How To Get The Most Out Of Your Day  
K. Kennedy, DrPh, MA, Denver, CO

11:45  LUNCH

12:45  Breakout Sessions I  
Team Building Exercises  
M. Moss, MD, Aurora, CO  
How To Deal With Challenging Individuals  
P.A. Kritek, MD, EdM, Seattle, WA  
Negotiation Exercises  
J.M. Beck, MD, Ann Arbor, MI  
Cultural And Gender Issues In The Workplace  
E. Brooks, MS, Aurora, CO

2:15  Break

2:30  Breakout Sessions II  
Team Building Exercises  
M. Moss, MD, Aurora, CO  
How To Deal With Challenging Individuals  
P.A. Kritek, MD, EdM, Seattle, WA  
Negotiation Exercises  
J.M. Beck, MD, Ann Arbor, MI  
Cultural And Gender Issues In The Workplace  
E. Brooks, MS, Aurora, CO

4:30 pm-5:30 pm  
OPENING CEREMONY

The American Thoracic Society invites you to attend the official kick-off of the International Conference at the Opening Ceremony. Peter Hackett, MD, who is recognized as a world authority on high altitude medicine, will deliver the keynote address. Dr. Hackett is the Clinical Director of the Altitude Research Center at the University of Colorado in Denver and the Director of the Institute of Altitude Medicine in Telluride, Colorado. In 1981, he became the first person to climb alone from Mt. Everest’s high camp to its summit and survive. Dr. Hackett’s address will focus on the history of altitude research, recent developments in the field and how these can be applied to those living in lower altitudes.

5:30 pm-6:30 pm  
S1 FELLOW AND JUNIOR PROFESSIONAL EXCHANGE

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

The Membership Committee, Training Committee, and the Members In-Transition & Training Committee of the ATS jointly host the Fellow and Junior Professional Exchange.

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

Space is limited and admittance will be on a first-come, first-served basis. There is no additional fee. Cocktails and hors d’oeuvres will be served.
A1 CLINICAL YEAR IN REVIEW 1

8:15 am-10:15 am

Target Audience
Providers of care for patients with diverse lung diseases

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

• identify recent articles for core pulmonary/critical care topics;

• apply recent advances in core pulmonary/critical care topics to the care of patients;

• describe new strategies/treatment options to manage patients with pulmonary/critical care illnesses.

Clinical year in review sessions are presented each morning of the ATS meeting. A total of 16 pulmonary diseases areas are covered, 4 each morning. Each disease is presented by an invited expert in the field. Prior to the conference, the expert does an extensive literature search and also solicits feedback from peers. Four to six key articles from the previous year are presented for each disease. In addition, a detailed bibliography which contains summaries of the articles presented as well as additional articles of interest is provided to attendees.

Chairing: K.R. Flaherty, MD, MS, Ann Arbor, MI
M. Herridge, MD, Toronto, Canada
E.R. Sutherland, MD, Denver, CO

8:15 Interstitial Lung Disease
L. Richeldi, MD, Modena, Italy

8:45 Occupational Lung Disease
L.A. Maier, MD, Denver, CO

9:15 Education Of Residents And Fellows
J.D. Buckley, MD, Indianapolis, IN

9:45 Pediatrics
A.G. Randolph, MD, Boston, MA

A2 ADVANCES IN STAGE III AND IV LUNG CANCER

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology; European Respiratory Society; Japanese Respiratory Society

8:15 am-10:45 am

Target Audience
Pulmonary physicians, thoracic surgeons, fellows in training, nurses who are involved in the diagnosis and treatment of lung cancer patients, and basic scientists involved in lung cancer research. The symposium is organized by SOTO (section on thoracic oncology) on behalf of the American Thoracic Society, European Respiratory Society and the Japanese Respiratory Society.

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

• determine which patients with Stage IIIA NSCLC are best treated with surgery;

• learn best methods for obtaining adequate tissue samples via EBUS;
• apply the results of molecular testing to decisions on optimal treatment.

This symposium will address the controversy of the role of surgery for Stage IIIA non-small cell lung cancer (NSCLC), delineate the current status of PET/CT for staging the mediastinum and distant disease. The utility of EBUS for staging and obtaining of tissue for molecular markers will be highlighted. Treatment of unresectable Stage III and IV will be emphasized with detailed discussion on the current status of EGFR and ALK mutations testing and their role in determining treatment. The role of individualized therapy with targeted agents will be summarized.

Chairing: J.R. Jett, MD, Denver, CO

8:15 Patient Perspective
Speaker To Be Announced

8:20 PET Is An Important Tool For Staging NSCLC
J. Vansteenkiste, MD, Leuven, Belgium

8:40 EBUS For Diagnosis, Staging And Molecular Testing
K. Yasufuku, MD, Toronto, Canada

9:00 Neoadjuvant Treatment And Surgery For Stage IIIA NSCLC
F. Detterbeck, MD, New Haven, CT

9:20 Combined Modality Therapy In The Treatment Of Unresectable Stage III NSCLC
R. Huber, MD, Muenchen, Germany

9:40 EGFR Mutational Testing And Clinical Trials In Asia
T. Mitsudomi, MD, Nagoya, Japan

10:00 Current Status And Role Of ALK Mutational Testing In NSCLC
M. Soda, MD, Tochigi, Japan

10:20 Target Therapy For NSCLC: Are We There Yet?
J.R. Jett, MD, Denver, CO

10:40 General Discussion
8:15 Introduction
B. Carlin, MD, Pittsburgh, PA

8:20 Clinical Case Presentations

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A4 SHOCK REVISITED
Assemblies on Critical Care; Clinical Problems
8:15 am-10:45 am

Target Audience
Physicians, physicians in-training, researchers, nurses.

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

• insist in the timely approach to the treatment of septic shock in order to improve outcomes;
• apply new findings about common practices in the ICU, as: the assessment of the response to fluids, the selection of vasopressors and the choice of treatment goals;
• learn new findings about how to evaluate the microcirculation.

Several studies have demonstrated that the timely approach to the treatment of septic shock leads to improved survival. Different therapies and suggested targets, new proposed methods of evaluation and possible pathophysiological mechanisms involved in septic shock are discussed.

Chairing:
M.R. Pinsky, MD, Pittsburgh, PA
D. DeBacker, MD, Brussels, Belgium

8:15 Patient Perspective
Speaker To Be Announced

8:20 The Importance Of The Timing Of Therapies In Shock
A. Kumar, MD, Winnipeg, Canada

8:40 Fluid Responsiveness In Shock: Always Something To Add
J.L. Teboul, MD, Paris, France

9:00 Titrating Arterial Blood Pressure: Are Goals Consisten And Appropriate
S. Magder, MD, Montréal, Canada

9:20 Inotopic Drugs: The End Of The Discussion?
K.R. Walley, MD, Vancouver, Canada

9:40 Microcirculation In Shock: A Possible Forthcoming Target
D. DeBacker, MD, Brussels, Belgium

10:00 Measuring Whether Resuscitation Strategies Really Work
D. Angus, MD, Pittsburgh, PA

10:20 General Discussion

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A5 PHENOTYPING OF OBSTRUCTIVE AIRWAY DISEASE: WILL IT IMPROVE DIAGNOSIS AND PERSONALIZE TREATMENT?
Assemblies on Allergy, Immunology and Inflammation; Clinical Problems; Pediatrics; Respiratory Cell and Molecular Biology; Respiratory Structure and Function
8:15 am-10:45 am

Target Audience
Clinicians, clinical and translational researchers in asthma and related airway diseases. Those interested in ‘omics of any kind

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

• appreciate the clinical and molecular heterogeneity of diseases “asthma and COPD”;
• learn new findings about genetic, genomic (and environmental/epigenomic) approaches to airway phenotyping;
• consider the evolution of new strategies to personalize approaches to the treatment of airways diseases.
Asthma and COPD are rather general terms for 2 different airway related lung diseases. This session will be divided into four parts with the 1st focusing general terminology, 2nd an update on new phenotypes of airway disease in children, the 3rd on phenotyping in relation to genetics, genomics and environmental impact and the 4th on the translation of these findings into development of personalized approaches to treatment.

Chairing:  S.E. Wenzel, MD, Pittsburgh, PA  
           H.K. Reddel, MBBS, PhD, Glebe, Australia

8:15  What’s In A Name? Diseases, Definitions, And Diagnostic Criteria  
P. Gibson, MBBS, Newcastle, Australia

8:35  Biased And Unbiased Methods For Phenotyping Severe Asthma  
C. Brightling, MD, Leicester, United Kingdom

8:55  Severe Asthma Phenotypes In Children  
A.M. Fitzpatrick, PhD, Atlanta, GA

9:15  GWAS Mapping Of Severe Asthma Phenotypes  
D.A. Meyers, PhD, Winston-Salem, NC

9:35  Molecular Phenotyping: Can Expression Data Begin To Predict Response To Therapy?  
P. Woodruff, MD, MPH, San Francisco, CA

9:55  The Role Of Environment And Comorbidities In Determining Obstructive Airway Disease Phenotypes  
L.P. Boulet, FRCPC, FCCP, Quebec, Canada

10:15 Translation Of Phenotyping Into Improved Management Of Obstructive Airway Disease  
K.F. Chung, MD, London, United Kingdom

10:35 General Discussion

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

Chairing:  S.H. Abman, MD, Denver, CO

8:15  Patient Perspective  
Speaker To Be Announced
8:20 Unique Aspects Of The Pathobiology Of Pulmonary Hypertension In The Developing Lung
U. Raj, MD, Chicago, IL

8:40 Disease Classification And Diagnostic Approach To Pediatric Pulmonary Hypertension
I. Adatia, MD, Edmonton, Canada

9:00 New Advances In The Mechanisms And Treatment Of PPHN
R. Steinhorn, MD, Chicago, IL

9:20 Pulmonary Hypertension In BPD
P. Mourani, MD, Aurora, CO

9:40 Pulmonary Hypertension In Congenital Diaphragmatic Hernia
R. Keller, MD, San Francisco, CA

10:00 Pulmonary Hypertension In Sickle Cell Disease
B. Hanna, MD, Philadelphia, PA

10:20 Therapeutic Strategies For Pediatric PH
E. Rosenzweig, MD, New York, NY

BEHAVIORAL• CLINICAL
SCIENTIFIC SYMPOSIUM

A7 PATIENT COMFORT DURING MECHANICAL VENTILATION

Assemblies on Nursing; Behavioral Science; Clinical Problems; Critical Care

8:15 am-10:45 am

Target Audience
Critical care nurses and physicians, researchers interested in patient comfort and dyspnea

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

• assess the latest information concerning pathophysiological mechanisms which may interfere with patient comfort during mechanical ventilation;

• identify emerging strategies which can improve patient comfort during mechanical ventilation.

Mechanical ventilation is one of the most common interventions in the intensive care unit. Despite being invasive and commonly delivered for days or weeks, little attention has been paid to patient comfort. This session provides a state-of-the-art review of the mechanisms which may interfere with patient comfort during mechanical ventilation. Clinical relevance and strategies for improving comfort during mechanical ventilation will be discussed.

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

Chairing: L. Hoffman, PhD, Pittsburgh, PA
C. Sassoon, MD, Orange, CA

8:15 The Birth Of Mechanical Ventilation
M. Tobin, MD, Hines, IL

8:40 Pathophysiology Of Weaning Failure
F. Laghi, MD, Hines, IL

9:05 Dyspnea In Ventilated Patients
R.B. Banzett, PhD, Boston, MA

9:30 Reducing Patient Discomfort During Mechanical Ventilation
L.L. Chlan, PhD, RN, Minneapolis, MN

9:55 Psychological Impact of Mechanical Ventilation
A. Jubran, MD, Hines, IL

10:20 Rehabilitation During Weaning From Mechanical Ventilation
E.G. Collins, PhD, Chicago, IL

BASIC • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

A8 AIR POLLUTION AND IMMUNITY: INNATE AND ADAPTIVE

Assemblies on Environmental and Occupational Health; Allergy, Immunology and Inflammation; Clinical Problems; Pediatrics; Respiratory Cell and Molecular Biology; Respiratory Structure and Function
8:15 am-10:45 am

**Target Audience**
Clinicians, researchers, public health officials and government officials. Those with interest in air pollution will be particularly drawn to this symposium. However, we have designed the symposium to have outstanding applicability to a broad span of ATS International Conference Attendees. Though we are submitting to EOH as a primary sponsor, our co-chairs and speakers represent a range of ATS Assemblies, including AII and RCMB.

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

- learn new findings about the role of air pollution in immunity;
- appreciate how particulate matter and gases can influence immunity in clinically relevant ways;
- understand the gaps within this topic and how experts propose to fill them in the context of clinical medicine and public health.

The learner will appreciate the impact of air pollution on the immune system. It is increasingly appreciated that air pollution, both particulate and gaseous, influences both innate and adaptive immunity. Effects include modulation of monocyte and dendritic cell function, cytokine production, antibody isotype-switching, ‘de novo’ antibody production, and phagocytic function. Understanding these effects both informs our evolving understanding of essential human immune function and also helps decipher the role of air pollution in dramatic changes in global asthma and allergy, thereby informing public health. World-class speakers will discuss this from basic and clinical perspectives, referring to currently influential research.

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

**Chairing:**
C. Carlsten, MD, MPH, Vancouver, Canada
N. Alexis, PhD, Chapel Hill, NC
S. Georas, MD, Rochester, NY

**8:15 Introduction**
C. Carlsten, MD, MPH, Vancouver, Canada

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**8:25**
Particles And DCs: A Paradigm For The Host-Environment Interface
S. Georas, MD, Rochester, NY

**8:50**
TLRs And Ozone: From Science To Clinical Application
J.W. Hollingsworth, MD, Durham, NC

**9:10**
Occupational Exposure To Organic Particles Impairs Macrophage Function
J. Poole, MD, Omaha, NE

**9:30**
Low-Level Ozone, Course Particles And Immunity: Novel Controlled Human Exposure Studies
N. Alexis, PhD, Chapel Hill, NC

**9:55**
Air Pollution And Immunity: An Epidemiologic Perspective
A. Peters, PhD, Neuherberg, Germany

**10:20**
Particles, Allergens And Antibodies: Science And Public Health
D. Diaz-Sanchez, MD, PhD, Research Triangle Park, NC

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**BEHAVIORAL • CLINICAL • TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

A9 THE SCIENCE OF DISSEMINATING AND IMPLEMENTING INTERVENTIONS:
EFFICACY VERSUS EFFECTIVENESS RESEARCH

**Assemblies on Behavioral Science; Nursing; Pediatrics**

8:15 am-10:45 am

**Target Audience**
Providers of lung health and clinical researchers

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

- apply the RE-AIM model (i.e., reach, efficacy/effectiveness, adoption, implementation, and maintenance), a practical conceptual framework for designing and evaluating clinical studies, to efficacy, effectiveness, and comparative effectiveness research.
so that dissemination of interventions beyond the initial research is successful;
• adapt interventions to settings and populations that extend beyond those of initial efficacy trials;
• improve the health status of patients and reduce health disparities by using new strategies to support the broader dissemination and implementation interventions.

Barriers to progress in the dissemination of behavioral and educational interventions include: 1) the fact that effectiveness studies are rarely conducted, and 2) challenges involved with translating efficacious interventions into clinical practice in a sustainable manner. Participants will learn ways to bridge this significant gap between research and practice. First, they will learn a conceptual framework that can be applied in all research phases to guide dissemination. Then three efficacious interventions that have been successfully translated to broader populations will be featured, including a discussion of the challenges faced during dissemination and implementation.

Chairing:  J.M. Bruzzone, PhD, New York, NY
K.A. Riekert, PhD, Baltimore, MD
L. Gerald, PhD, MSPH, Tucson, AZ

8:15 Applying RE-AIM To Behavioral And Educational Respiratory Interventions
R.E. Glasgow, PhD, Rockville, MD

8:35 PACE: An Efficacious Physician Intervention To Improve Asthma Outcomes In Patients
N.M. Clark, PhD, Ann Arbor, MI

8:45 A Successful Adaptation Of PACE For Australian Physicians
S. Shah, MBChB, Sydney, Australia

9:15 The Development And Initial Testing Of A Problem-Solving Intervention To Improve Adherence In Adolescent CF Patients
A.L. Quittner, PhD, Coral Gables, FL

9:25 iCARE In Boston: Dissemination Of An Intervention To Promote Adherence At A Large Cystic Fibrosis Center
G. Sawicki, MD, MPH, Boston, MA

9:55 Motivating Parents Of Children With Asthma To Quit Smoking: The PAQS Project
B. Borrelli, PhD, Providence, RI

10:05 The PRIDE Study: Disseminating A Motivational Interviewing Intervention To Reduce Secondhand Smoke Exposure Of Children In Head Start
M.N. Eatkin, PhD, Baltimore, MD

BEHAVIORAL • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

A10 CLINICAL IMPLICATIONS AND MANAGEMENT OF MULTI-DRUG RESISTANT PATHOGENS

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Pediatrics

8:15 am-10:45 am

Target Audience
Pediatric and adult pulmonary medicine specialists; critical care physicians; researchers with interest in pulmonary infection

Objectives
At the conclusion of this session, the participant will be able to:
• acquire new strategies for the use of antibiotic combinations in the treatment of MDR pulmonary infections;
• consider strategies to prevent the spread of antibiotic resistant pathogens in vulnerable patient populations;
• apply the concept of resistance suppression to prevent the development of antibiotic resistant pulmonary pathogens.

Multi-drug resistant lung infections are increasingly important in a wide range of clinical conditions and settings, including tuberculosis, cystic fibrosis, and the critically ill. Various approaches to the diagnosis and management of such infections have been proposed, including combination susceptibility testing and resistance
suppression dosing. This session will examine the supporting evidence for these clinical strategies.

**Chairing:** S.M. Moskowitz, MD, Boston, MA  
K. Dheda, MBChB, MD, PhD, Cape Town, South Africa

**8:15 MDR Pathogens In Pulmonary Infection: An Overview**  
S.M. Moskowitz, MD, Boston, MA

**8:25 MDR Gram-Negative Pathogens In Cystic Fibrosis And Other Chronic Lung Infections**  
S.M. Moskowitz, MD, Boston, MA

**8:50 MDR Pseudomonas And Acinetobacter In Acute Pulmonary Infections: When And How To Treat**  
J.E. Chastre, MD, Paris, France

**9:15 MRSA Pneumonia**  
H.F. Chambers, MD, San Francisco, CA

**9:40 MDR, XDR, And TDR Tuberculosis: Controversies And Challenges In Clinical Management**  
K. Dheda, MBChB, MD, PhD, Cape Town, South Africa

**10:05 Resistance Suppression In The Management Of MDR Pulmonary Infections**  
G. Drusano, MD, Albany, NY

### STATE OF SCIENTIFIC RESEARCH IN COLORADO

**Target Audience**

This session will highlight the quality of research in Colorado and include a collection of Howard Hughes investigators and National Academy of Science members. Thus, this session will be of interest and will benefit any physician-scientist and Ph.D. scientist interested in state of the art immunology, lung development, microbiology and virology. This proposed session will also be of interest to fellows in training to show the level of success that is attainable in science.

**Objectives**

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

- understand the role of cytokines and T cells in disease pathogenesis;
- comprehend the basis of microbial ecology and its relation to human disease;
- integrate these concepts into their field of interest.

This session will bring together an accomplished group of non-ATS scientists from the state of Colorado to discuss current topics in their field of interest.

**Chairing:** M.W. Geraci, MD, Aurora, CO  
A.P. Fontenot, MD, Aurora, CO

**8:15 Role Of IL-1 In Inflammatory Disease**  
C. Dinarello, MD, Aurora, CO

**8:45 The Causes And Consequences Of The Obsession Of T Cells For The MHC**  
P. Marrack, PhD, Denver, CO

**9:15 B Cells And Autoimmunity: Molecular Mechanisms And Therapeutic Strategies**  
J. Cambier, PhD, Denver, CO

**9:45 Linking Lung Development And Disease Pathogenesis**  
Speaker To Be Announced

**10:15 Microbial Ecology And Relationship To Human Disease**  
N. Pace, PhD, Boulder, CO

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

WS1  ENDOBRONCHIAL ULTRASOUND IN 2011
Registration Fee: $95.00 (includes box lunch.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

Assemblies on Clinical Problems
11:30 am-1:00 pm

Target Audience
Pulmonologists and thoracic surgeons interested in reviewing the data and gaining experience in EBUS.

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

- apply the ACCP 2007 guidelines suggesting EBUS-TBNA as strategy to evaluate mediastinal and hilar adenopathy;
- improve the quality of life of one’s patients by utilizing minimally invasive techniques;
- improve EBUS skills on an individual and systems level.

This workshop will provide a review of data regarding the utility of EBUS for mediastinal staging as well as provide 60 minutes of hands-on training and close interaction with faculty experts. (please note: this session will consist of a 30 minute lecture followed by 60 minutes of hands-on training.)

Chairing:  D.J. Feller-Kopman, MD, Baltimore, MD

11:30  EBUS In 2011: The State Of The Art
F.J.F. Herth, MD, PhD, Heidelberg, Germany

12:00  Questions And Answers

12:10  EBUS Preceptors For Hands-On Training
R. Bechara, MD, Atlanta, GA
A. Chen, MD, St. Louis, MO
H. Lee, MD, Richmond, VA
G. Michaud, MD, Boston, MA
A.I. Mussani, MD, Denver, CO
W. Shepherd, MD, Richmond, VA
M.M. Wahidi, MD, Durham, NC
L.B. Yarmus, DO, Baltimore, MD

SECTION MEMBERSHIP MEETINGS
11:30 am-1:00 pm

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

GENETICS AND GENOMICS
Chairing:  M. Aldred, PhD, Cleveland, OH
E.R. Bleecker, MD, Winston Salem, NC

TERRORISM AND INHALATION DISASTERS
Chairing:  C.E. Sandrock, MD, MPH, Sacramento, CA

THORACIC ONCOLOGY
Chairing:  E.A. Hirschowitz, MD, Lexington, KY
J.R. Jett, MD, Denver, CO
C.A. Powell, MD, New York, NY
WS2 IMPROVING COMMUNICATION AND RESOLVING CONFLICT AT THE END OF LIFE

Registration Fee: $75.00 (includes box lunch.)
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

Assemblies on Behavioral Science; Critical Care
11:30 am-1:00 pm

Target Audience
Clinicians, particularly those working in the intensive care unit

Objectives
At the conclusion of this session, the participant will be able to:
• apply and learn to use strategies of conflict resolution to approach emotionally difficult end-of-life conversations and feel ready to apply them to clinical practice;
• increase knowledge of the evidence describing core communication skills at the end of life;
• approach end of life conversations as you would any difficult clinical case.

Decisions regarding life-sustaining interventions for critically ill patients are often emotionally-charged and filled with conflict. This session will introduce a framework for conflict resolution through case-based discussions of difficult communication including physician-physician conflict over comfort care vs. euthanasia, physician-caregiver conflict around opiate use for palliation of symptoms, and physician-family conflict regarding artificial nutrition, to provide participants with skills to manage difficult conversations and conflict at the end of life. Participants will learn to apply the first steps of conflict resolution, including acknowledging one’s own emotions and those of the patient and family, to building consensus regarding end of life decisions.

Chairing: J.M. Luce, MD, San Francisco, CA
11:30 Improving Communication And Resolving Conflict At The End Of Life
L. Smith, MD, San Francisco, CA

L1 NATIONAL INSTITUTE OF NURSING RESEARCH: FUNDING OPPORTUNITIES AND PRIORITIES
12:00 pm-1:00 pm

Target Audience
Nurse researchers, doctoral and post-doctoral students, researchers and clinicians

Objectives
At the conclusion of this session, the participant will be able to:
• describe current funding opportunities offered by NINR;
• discuss funding priorities of the NINR;
• identify how to work with the NINR Program Director prior to submission and following grant attainment.

This session will discuss funding opportunities available for pulmonary and critical care science through the NINR, as well as identify priority areas for research. The presenter will provide essential information regarding different types of funding mechanisms.

Chairing: W.M. Gibson-Scipio, PhD, Detroit, MI
12:00 National Institute Of Nursing Research: Funding
K. Huss, DNSc, RN, Bethesda

L2 COPD OUTCOMES-BASED NETWORK FOR CLINICAL EFFECTIVENESS AND RESEARCH TRANSLATION (CONCERT)
12:00 pm-1:00 pm

Target Audience
Providers of lung health; trainees and established investigators in comparative effectiveness research
Objectives
At the conclusion of this session, the participant will be able to:

• define comparative effectiveness research;

• learn how to use consensus conferences with stakeholders to set a research agenda in comparative effectiveness research;

• use linked patient registries as the basis of observational and experimental study designs for comparative effectiveness research.

The session will provide an update on the research agenda developed in collaboration with a broad-base of COPD stakeholders, as well as the development of a national research infrastructure for comparative effectiveness research in COPD.

Chairing: J.A. Krishnan, MD, PhD, Chicago, IL
A. Punturieri, MD, PhD, Bethesda, MD

12:00 CONCERT Consortium And COPD CER
J.A. Krishnan, MD, PhD, Chicago, IL

12:10 Developing Research Agendas For CER
D.H. Au, MD, MS, Seattle, WA

12:35 Developing Linked Registries For Observational CER Studies And As Basis For Pragmatic Clinical Trials Of Effectiveness
R.A. Mularski, MD, MSHS, MCR, Portland, OR

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

• present new findings about the design, content, and results of multi-center clinical trials in ALI;

• apply new strategies for treatments for ALI.

The NHLBI ARDSnet is composed of 12 clinical centers and a clinical coordinating center whose purpose is to conduct clinical trials in ARDS. Results of ARDSnet clinical trials and ancillary studies will be presented.

Chairing: G.R. Bernard, MD, Nashville, TN

12:00 Update On SAILS (Statins For Acutely Injured Lungs) And EDEN (Early Trophic vs. Full Enteral Feedings) Trials
G.R. Bernard, MD, Nashville, TN

12:05 ARDSnet Clinical Trial Design With Early Stopping Rules: Costs And Benefits
D. Schoenfeld, PhD, Boston, MA

12:25 Discussion Of Statistical Issues
G.R. Bernard, MD, Nashville, TN

12:30 H1N1 Epidemiology And Natural History In ARDSnet Adult ICU
T.W. Rice, MD, MSc, Nashville, TN

12:42 H1N1 Epidemiology And Natural History In PALISI Pediatric ICU
A.G. Randolph, MD, Boston, MA

12:54 Discussion Of H1N1 Studies
G.R. Bernard, MD, Nashville, TN
Objectives
At the conclusion of this session, the participant will be able to:
• describe new findings about the incidence and environmental risk factors of atopy and wheezing disorders among high risk inner-city children;
• understand new findings about the role of obesity and adipokines in the development of atopy and wheezing disorders among high risk inner-city children;
• describe new findings about the role of TSLP in the development of atopy and wheezing disorders among high risk inner-city children.

URECA is a birth cohort studying environmental and viral influences on the development of the immune system and asthma among inner-city children. This session will present the 3-year outcomes from this cohort. The presentations will focus on the incidence of atopy, persistent wheezing, and asthma. The role of environmental factors, obesity, and thymic stromal lymphopoieten (TSLP) in the development of these outcomes will be presented.

Chairing:  P.J. Gergen, MD, MPH, Bethesda, MD
J. Gern, MD, Madison, WI

12:00 Environmental Risk Factors For Atopy And Wheezing At 3 Years Of Age
R.D. Wood, MD, Baltimore, MD

12:15 Obesity And Adipokines As Predictors Of Atopy And Wheezing At 3 Years Of Age
M. Kattan, MD, New York, NY

12:30 TSLP In the Pathogenesis Of Atopy And Wheezing At 3 Years Of Age
G. Bloomberg, MD, St. Louis, MO

12:45 General Discussion

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U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

L5 IMPROVING THE HOME ENVIRONMENT: THE ROLE OF FEDERAL HEALTHY HOMES PROGRAM

12:00 pm-1:00 pm

Target Audience
Providers of lung health, in particular those providing care for children with asthma, researchers interested in residential exposures

Objectives
At the conclusion of this session, the participant will be able to:
• learn the evidence on the efficacy of integrated home interventions to improve asthma control;
• better understand the programmatic goals of three federal agencies with respect to “healthy homes” activities;
• learn about non-traditional research funding opportunities.

The U.S. Department of Housing and Urban Development (HUD), the Environmental Protection Agency (EPA), and the Centers for Disease Control and Prevention (CDC) are among the federal agencies administering programs focused on improving indoor environmental quality (IEQ). The programs are components of growing federal “healthy homes” efforts that target multiple residential health and safety hazards, with a particular focus on vulnerable populations such as children and the elderly. Key federal activities include the release of a Surgeon General’s Call to Action on Healthy Homes; transition of lead poisoning prevention programs to a healthy homes model; creation of a network of community-based asthma programs; development of guidelines for improved IEQ in new homes; implementation of national IEQ surveys, HUD’s development of a healthy homes strategic plan, and creation of a federal “Strategy for Action” on healthy homes. The agencies also support research and demonstration projects on a wide variety of healthy homes issues.

Chairing:  L.S. Birnbaum, PhD, Research Triangle Park, NC
12:00 Interventions Targeting Residential Health Hazards: Evidence For Effectiveness And Research Needs
Speaker To Be Announced

12:18 IAQ, Policy, And Healthy Buildings In The U.S.
Speaker To Be Announced

12:36 Highlights Of HUD’s Healthy Homes Program
P.J. Ashley, DrPH, Washington, DC

DIVISION OF LUNG DISEASES/NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

L6 CHILDHOOD ASTHMA MANAGEMENT PROGRAM: NEW FINDINGS ON GROWTH AND CLINICAL COURSE OF ASTHMA

12:00 pm-1:00 pm

Target Audience
Physicians, nurses, respiratory therapists, asthma clinical researchers or trainees, patient organizations

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

1. incorporate new evidence about the long term effects of inhaled corticosteroids on linear growth into decision making for treating childhood asthma;

2. describe the factors that influence whether asthma remits or progresses in severity throughout childhood and will integrate this into clinical decision making;

3. discuss the long term impact of asthma treatment and environmental exposures on the development of chronic airflow obstruction.

The Childhood Asthma Management (CAMP) has followed 1041 children, orginally enrolled in a clinical trial at ages 5-11, for 17 years. Session participants will learn about new findings from this extensive follow-up. One talk addresses a continuing clinical concern: the effects of regular use of inhaled corticosteroids in early childhood on final adult height. Another talk describes the predictors of different long-term asthma outcomes — from remission to severe asthma. The final talk elucidates patterns of lung function growth and decline over time, and the contribution of medication and environmental exposures to those patterns.

Chairing: V. Taggart, MPH, Bethesda, MD
R. Zeiger, MD, PhD, San Diego, CA

12:00 Effects Of Regular Inhaled Corticosteroids Used In Early Childhood On Final Adult Height
H.W. Kelly, PharmD, Albuquerque, NM

12:20 Natural History Of Mild To Moderate Persistent Asthma Through Early Adulthood
R. Covar, MD, Denver, CO

12:40 Patterns Of Lung Function Growth And Decline And The Effects Of Participant Characteristics, Asthma Treatment, And Environmental Exposures
S. Szefler, MD, Denver, CO

DIVISION OF LUNG DISEASES/NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

L7 NEW INSIGHTS INTO HIV-ASSOCIATED PULMONARY DISEASES FROM THE NHLBI LUNG HIV STUDY

12:00 pm-1:00 pm

Target Audience
Clinicians, researchers, healthcare workers, and trainees with interests in pulmonary diseases associated with HIV-infected persons

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

1. understand the NHLBI-funded Lung HIV Study and its goals and objectives, and the resources available for future collaboration;

2. describe changes in the epidemiology of infectious and non-infectious pulmonary complications of HIV over the course of the AIDS epidemic and to describe how these complications vary by geographic region and ART;

3. understand and discuss potential pathogenetic mechanisms for HIV-associated pulmonary diseases such as pulmonary arterial hypertension.
The spectrum of pulmonary diseases in HIV-infected patients is changing in the era of combination antiretroviral therapy (ART). In populations without access or not responding to ART, opportunistic pneumonias continue to be major causes of morbidity and mortality. In populations responding to ART, chronic lung diseases and respiratory symptoms are increased in frequency. This symposium presents recent advances in our understanding of epidemiology, diagnosis, management, and pathogenesis of HIV-associated lung diseases from a global perspective, and highlights the recently formed Lung HIV Study, sponsored by the NHLBI to facilitate collaborative research.

**Chairing:**  
K.A. Crothers, MD, Seattle, WA  
H. Peavy, MD, Bethesda, MD

**12:00 Introduction To The Lung HIV Study: A Novel Collaborative Clinical And Translational Research Consortium**  
B. Thompson, PhD, Owings Mills, MD

**12:05 Pneumocystis Pneumonia And Putative Trimethoprim-Sulfamethoxazole Drug Resistance**  
L. Huang, MD, San Francisco, CA

**12:15 Title Risk Factors For Tuberculosis In HIV-Infected South African Adults**  
N. Martinson, MBBCh, MFPG, MPH, Johannesburg, South Africa

**12:25 HIV-Associated Pulmonary Hypertension: Role Of Nef**  
S.C. Flores, MD, Aurora, CO

**12:35 Respiratory Health And Chronic Lung Disease In Aging HIV-Infected Patients**  
Speaker To Be Announced

**BEHAVIORAL• CLINICAL • TRANSLATIONAL**  
DIVISION OF LUNG DISEASES/NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

**L8 ROLE OF AZITHROMYCIN IN THE PREVENTION OF ACUTE EXACERBATIONS OF COPD**

**12:00 pm-1:00 pm**

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

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

- understand the possible role of azithromycin in AECOPD prevention;
- identify which patients may receive benefit from the treatment;
- assess antibiotic resistance as a consequence of azithromycin treatment.

Three presentations will be offered. The first will illustrate the effect on AECOPD of daily treatment with azithromycin. The second will depict the characteristics of the responding populations. The third will clarify the effects of azithromycin on bacterial colonization and antibiotic resistance.

**Chairing:**  
S.C. Lazarus, MD, San Francisco, CA

**12:00 Daily Azithromycin For One Year Decreases Acute Exacerbations Of COPD**  
R.K. Albert, MD, Aurora, CO

**12:30 Effects Of Azithromycin On COPD Exacerbations: Subgroup Analyses**  
J.E. Connett, PhD, Minneapolis, MN

**12:45 Effects Of Azithromycin On Colonization And Infection With Macrolide-Resistant Organisms**  
C.S. Price, MD, Denver, CO
11:30 am-1:00 pm

**S2 WOMEN’S FORUM**

The purpose of the annual Women’s Forum is to recognize the achievements and support the advancement of women in pulmonary, critical care, and sleep medicine and research. The forum provides a terrific opportunity to meet and network with other women members and leaders of the ATS! The 2011 Elizabeth A. Rich, MD Award will be presented at the forum to a female ATS member who has made significant achievements in the practice or science of a respiratory-related field of medicine, leadership in her field and dedicated mentorship of her junior colleagues.

In addition, the forum will feature a guest speaker who will highlight resources from the ATS that support career development and describe her professional and personal journey to become a leader among her peers.

The forum will be hosted by Anne Dixon, MD, chair of the ATS Membership Committee.

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

Space is limited and admittance will be on a first-come, first-served basis. There is no additional fee. A plated lunch and refreshments will be served.

MEET THE PROFESSOR SEMINARS

Registration Fee: $70.00 (includes box lunch.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

12:00 pm-1:00 pm

**MP401 BETA AGONISTS IN ASTHMA: OPTIMIZING PATIENT SELECTION AND RISK-BENEFIT**

E.R. Bleecker, MD, Winston Salem, NC

**MP402 PULMONARY DISEASE AND PRIMARY IMMUNODEFICIENCY**

A. Dosanjh, MD, San Diego, CA

**MP404 PPH: PARENCHYMAL PULMONARY HYPERTENSION**

S.D. Nathan, MD, Falls Church, VA

**MP405 PULMONARY MANAGEMENT OF A PATIENT WITH NEUROMUSCULAR DISORDER**

G.D. Sharma, MD, Chicago, IL

**MP406 HIGH ALTITUDE PHYSIOLOGY AND MEDICINE**

K.E. Bloch, MD, Zurich, Switzerland

**MP407 CYSTIC FIBROSIS AND LUNG TRANSPLANTATION**

J.D. Edelman, MD, Seattle, WA

**MP408 MANAGEMENT OF PULMONARY EMBOLISM: FROM ER TO ICU**

K.V. Leeper, MD, Atlanta, GA

**MP409 RECOGNIZING POST-INTUBATION PULMONARY COMPLICATIONS**

A. Torres, MD, PhD, Barcelona, Spain

**MP410 MEASURING AND REPORTING HOSPITAL QUALITY AND SAFETY FOR PULMONARY AND CRITICAL CARE**

I.S. Douglas, MD, Denver, CO

**MP411 CONTROVERSIES IN THE MANAGEMENT OF COMMUNITY ACQUIRED PNEUMONIA**

C. Feldman, MD, PhD, DSc, Johannesburg, South Africa
MP412 PULMONARY TUBERCULOSIS AMONG U.S. CHILDREN IN 2010
J.R. Starke, MD, Houston, TX

MP413 PERI-OPERATIVE RISK AND MANAGEMENT IN THE PATIENT WITH PH: THE SCIENCE AND THE ART
O.A. Minai, MD, Cleveland, OH
J.P. Yared, MD, Cleveland, OH

MP414 PULMONARY REHABILITATION FOR PATIENTS WITH ACUTE EXACERBATIONS OF COPD
C.L. Rochester, MD, New Haven, CT

MP415 INDUCED PLURIPOTENT STEM (iPS) CELLS: TIPS AND TRICKS FOR LUNG RESEARCHERS
D.N. Kotton, MD, Boston, MA

MP416 LUNG CANCER GENOMICS: HYPE OR HOPE?
M.W. Geraci, MD, Aurora, CO

MP417 THE DYNAMICS OF RECRUITMENT AND DERECRUITMENT IN ACUTE LUNG INJURY
J.H.T. Bates, PhD, DSc, Burlington, VT

MP418 THE GENETICS OF SLEEP AND SLEEP APNEA
A.I. Pack, MD, PhD, Philadelphia, PA

ATS 2011 • Denver, Colorado
SUNDAY AFTERNOON, MAY 16
2:00 pm - 6:30 pm

1:00 pm-2:00 pm
VISIT THE EXHIBIT HALL
Take this opportunity between sessions to visit the Exhibit Hall to gain practical knowledge to advance care and research. Over 175 exhibitors will be on hand to provide information on pharmaceutical products, medical equipment, publications and research services.

BASIC • CLINICAL • TRANSLATIONAL
YEAR IN REVIEW

A81 PEDIATRIC YEAR IN REVIEW
Assemblies on Pediatrics; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care
2:00 pm-4:30 pm

Target Audience
Pediatric pulmonologists, nurses, respiratory therapists, fellows, researchers and other healthcare practitioners interested in children with lung disease.

Objectives
At the conclusion of this session, the participant will be able to:
• apply new knowledge to the diagnosis and management of infantile wheeze;
• critically examine and discuss the determinants and optimal management of the developing lung;
• describe recent advances in clinical care and research in cystic fibrosis and childhood pneumonia.

This session will provide an update on clinical and research advances in cystic fibrosis, infantile wheeze, pneumonia and bronchiectasis in children. In addition, recent developments in understanding the molecular determinants and treatment of the developing lung will be highlighted.

**Chairing:** S.D. Davis, MD, Chapel Hill, NC  
R.R. Deterding, MD, Aurora, CO

**2:00 Introduction**  
S.D. Davis, MD, Chapel Hill, NC

**2:10 Cystic Fibrosis**  
B. Ramsey, MD, Seattle, WA

**2:45 The Dilemma Of The Wheezy Infant: Diagnosis, Treatment And Future Implications**  
W. Morgan, MD, Tucson, AZ

**3:20 Childhood Pneumonia**  
H. Zar, MD, Capetown, South Africa

**3:55 Determinants And Treatment Of The Developing Lung**  
J. Whitsett, MD, Cincinnati, OH

### Target Audience
Pulmonary physicians, trainees, nurses, respiratory therapists

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

• define a diagnostic approach to patients with suspected bronchiectasis;
• review specific disease entities - ABPA and CF;
• review specific disease entities - NTM infection and PCD.

This session will present a diagnostic approach to patients with suspected bronchiectasis, and then will highlight specific causes that may impact clinical course and therapy. The lectures will review specific entities including ABPA, PCD, Pulmonary NTM infections, and Cystic Fibrosis. An international perspective will be also presented; specifically, the relationship between TB and bronchiectasis will be discussed.

**Chairing:** A.E. O'Donnell, MD, Washington, DC  
G. Tino, MD, Philadelphia, PA  
M.L. Metersky, MD, Farmington, CT

**2:00 Approach To The Diagnosis Of Bronchiectasis**  
G. Tino, MD, Philadelphia, PA

**2:25 Allergic Bronchopulmonary Aspergillosis**  
Speaker To Be Announced  

**2:45 Primary Ciliary Dyskinesia**  
Speaker To Be Announced

**3:05 Adult Cystic Fibrosis**  
Speaker To Be Announced

**3:25 Nontuberculous Mycobacterial Infections**  
Speaker To Be Announced

**3:50 An International Perspective: Tuberculosis**  
Speaker To Be Announced
A83 GREAT CASES: CLINICAL, RADIOLOGIC AND PATHOLOGIC CORRELATIONS BY MASTER PHYSICIANS

Council of Chapter Representatives; Assembly on Clinical Problems
2:00 pm-4:30 pm

Target Audience
This is an educational opportunity for clinicians in the fields of pulmonary and critical care medicine, thoracic surgery and infectious disease.

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

• integrate the clinical presentation, radiographic and pathologic findings for 10 challenging cases;

• describe the clinical reasoning and differential diagnosis of master clinicians and radiologists;

• describe underlying pathology of challenging cases and review key points in diagnosis and management.

This session offers the attendee the opportunity to watch how master clinicians approach difficult clinical problems. Ten cases will be presented as ‘unknowns’ to master clinicians followed by discussion, review of radiographs by a thoracic radiologist and finally a review of pathology by a pulmonary pathologist. Further discussion and educational comments will be added by presenters and master clinicians. Audience will participate through interactive questions that are tallied electronically.

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

Chairing: D. Upson, MD, MA, Albuquerque, NM
R. Robbins, MD, Phoenix, AZ
M. Harkins, MD, Albuquerque, NM

2:00 Master Clinician
M.I. Schwarz, MD, Aurora, CO

2:45 Master Clinician
J.E. Heffner, MD, Portland, OR

3:30 Pathologist
K. Leslie, MD, Scottsdale, AZ

4:00 Expert Radiologist
J.D. Newell, MD, Denver, CO

A84 HOW ARE WE USING MECHANICAL VENTILATION? A NEW APPROACH

Assemblies on Critical Care; Clinical Problems; Pulmonary Rehabilitation
2:00 pm-4:30 pm

Target Audience
Adult and pediatric pulmonary/critical care practicing physicians and nurses, clinical researchers, epidemiologists, and trainees.

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

• apply the use of mechanical ventilation in critically ill patients;

• learn new strategies to manage the care of patients that required mechanical ventilation;

• improve the quality of life/health status of patients that required mechanical ventilation.

Mechanical ventilation is the pivotal therapy in patients with respiratory failure associated with hypoxemia and/or hypercarbia. In recent years, large epidemiological studies and prospective clinical trials have changed our concepts on mechanical ventilation implementation. This symposium will provide the clinician with up-to-date information on how-to implement mechanical ventilation, assist critically-ill patients and understand its potential limitations.

Chairing: A.S. Slutsky, MD, Toronto, Canada
L. Brochard, MD, Paris, France

2:00 How Are We Implementing Mechanical Ventilation?
A. Esteban, MD, Madrid, Spain
Self management (SM) in COPD has been shown to improve meaningful outcomes. There is a great need for translating SM to daily practice, to describe a method that empowers patients, evokes their motivation and fosters autonomy to function better in daily life. This session will describe a number of novel modalities currently under development, or in use in chronic disease management and will explain their potential beneficial effects in COPD.

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

**Chairing:** R. Benzo, MD, MSc, Rochester, MN
J. Bourbeau, MD, MPH, Montreal, Canada

2:00 **Introduction Of The Session And Patient Perspective**
R. Benzo, MD, MSc, Rochester, MN

2:10 **Gaining Insight To The Different Trajectories Of COPD Patients: The Need For Customized Programs**
J. Bourbeau, MD, MPH, Montreal, Canada

2:40 **Simple Programs To Decrease COPD Exacerbations**
K. Rice, MD, Minneapolis, MN

3:10 **Patients Teaching Patients: Enhancing Self-Efficacy**
K. Lorig, PhD, Palo Alto, CA

3:40 **Motivational Interviewing: Promoting A Behavioral Change**
D. Ernst, PhD, Portland, OR

4:10 **Delivering Self-Management: Merging The Best Of Patient Education And Motivation to A Self-Management Method**
R. Benzo, MD, MSc, Rochester, MN
BASIC CLINICAL TRANSLATIONAL SCIENTIFIC SYMPOSIUM

A86 SENSORS, DANGER SIGNALS, PEPTIDES AND CELL SUICIDE: NEW CONCEPTS OF HOST INFECTION CONTROL

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

2:00 pm-4:30 pm

Target Audience
Basic scientists, clinicians and translational researchers involved in understanding regulation of host infections.

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

- understand the fundamental biology by which the lung is capable of recognizing pathogen challenges;
- recognize that systemic inflammatory responses can involve host danger signals that themselves can cause disease;
- learn that noncytokine pathways of host protection include cell death packages and antimicrobial peptides that can modulate host responses in ways previously unrecognized.

Innate immunity to infection evolutionarily predates adaptive immunity, yet we are only beginning to understand its significance. Key aspects of innate immunity include detection of danger signals (from pathogens and host) by extracellular and intracellular sensors that induce inflammation, cell death and release of antimicrobial factors. This symposium will serve to provide a comprehensive overview of the latest concepts of innate immunity to infection with the goal of improving our options to detect, prevent and treat infection.

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

Chairing:
M.D. Wewers, MD, Columbus, OH
S. Jeyaseelan, PhD, DVM, Baton Rouge, LA
S. Skerrett, MD, Seattle, WA

2:00 TLRs And Infection Risk
M.M. Wurfel, MD, PhD, Seattle, WA

2:20 Inflammasome Sensors
Speaker To Be Announced

2:40 Negative Regulators Of Tolls
T.J. Standiford, MD, Ann Arbor, MI

3:00 Microvesicular Death Messages
A. Sarkar, PhD, Columbus, OH

3:20 Antimicrobial Peptides
N.G. McElvaney, MBBS, Dublin, Ireland

3:40 Mast Cells And Eosinophils
J.A. Gold, MD, Portland, OR

4:00 Epithelial Cells In Lung Defense
S.E. Evans, MD, Houston, TX

BASIS CLINICAL TRANSLATIONAL SCIENTIFIC SYMPOSIUM

A87 RESTORATION OF ALVEOLO-CAPILLARY BARRIER FUNCTION

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

2:00 pm-4:30 pm

Target Audience
Clinicians and basic scientists

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

- describe very recent advances in efforts to promote alveolo-capillary repair in the context of barrier failure associated with acute lung injury. These advances include cutting-edge approaches employing mesenchymal stem cells, and tweaking pre-existing signaling pathways to promote barrier repair;
- identify exciting advances in the field of targeted drug delivery, using the example of targeted drug delivery to the endothelium with the aim of promoting alveolo-capillary barrier integrity.
• describe how basic sciences approaches to study alveolo-capillary barrier function may be translated to a clinically relevant setting.

This symposium addresses very new concepts in the promotion of alveolo-capillary barrier repair in the context of acute lung injury. These concepts include (i) tweaking pre-existing nucleoside and hypoxia-responsive pathways, (ii) the use of a lung-resident population of mesenchymal stem cells, (iii) the role played by two groups of inflammatory cells- macrophages and regulatory T-cells - in promoting barrier repair, (iv) the use of cutting-edge technologies to deliver drugs to target cells resident in the barrier, and (v) translational aspects of alveolo-capillary barrier repair, taking the example of restoring the balance between fibrin deposition and fibrinolysis in lung injury patients.

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

Chairing: R.E. Morty, PhD, Giessen, Germany
J. Bhattacharya, MD, New York, NY

2:00 Introduction And Overview
J. Bhattacharya, MD, New York, NY

2:12 Role Of Adenosine and Hypoxia-Inducible Factor In Restoring The Alveolar-Capillary Barrier During Acute Lung Injury
H. Eltzschig, MD, Aurora, CO

2:35 Promoting Restoration Of Alveolo-Capillary Barrier Properties Using A Resident Lung Mesenchymal Stem Cell Population
S. Majka, PhD, Denver, CO

2:58 Improvement Of Pulmonary Endothelial Barrier Function By Targeted Therapeutics
V. Muzykantov, MD, PhD, Philadelphia, PA

3:21 Macrophage-Mediated Repair Of The Alveo-Capillary Barrier
S. Herold, MD, PhD, Giessen, Germany

3:44 Regulatory T-Cell Dependent Resolution Of Acute Lung Injury
L. King, MD, Baltimore, MD

4:07 Restoring The Balance Between Alveolar Fibrin Deposition and Fibrinolysis Translational Studies Of The Alveolar Epithelium
L. Ware, MD, Nashville, TN

CLINICAL TRANSLATIONAL SCIENTIFIC SYMPOSIUM

A88 IT SERVES A PURPOSE! CLINICAL IMPACT OF PATHOPHYSIOLOGY ON TREATMENT OF OBSTRUCTIVE SLEEP APNEA/HYPOPNEA SYNDROME

Assemblies on Sleep and Respiratory Neurobiology; Clinical Problems; Pediatrics; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Clinicians, pulmonary and sleep trainees and researchers interested in sleep apnea.

Objectives
At the conclusion of this session, the participant will be able to:
• understand the role of local and distant anatomy, control of breathing, loop gain and arousal responses to the pathophysiology of OSAHS;
• understand the potential for pathophysiologic etiologies of the obstruction to guide the development and implantation of therapy;
• understand how developing a phenotype for OSAHS will help advance clinical, physiologic and therapeutic decisions.

This session will update the clinician and researcher interested in obstructive sleep apnea/hypopnea syndrome on current thinking about the spectrum of pathophysiological mechanisms contributing to the disorder. The emphasis will be on how each mechanism may suggest approaches to therapy with the goal of better defining multiple “phenotypes.”

Chairing: D.M. Rapoport, MD, New York, NY
D.J. Eckert, PhD, Boston, MA
S. Chowdhuri, MD, MS, Detroit, MI

2:00 Introduction - Physiological Phenotypes Of OSAHS
D.M. Rapoport, MD, New York, NY
2:10  How Phenotyping The Upper Airway Anatomy Can Influence Clinical Management
R. Schwab, MD, Philadelphia, PA

2:30  Do Neuromuscular Changes Occur In OSAHS And Does This Influence Treatment?
Speaker To Be Announced

2:55 Effect Of Distant Anatomic Factors On Upper Airway Function And Potential Therapeutic Options
A.S. Jordan, PhD, BSc, Melbourne, Australia

3:15 Effect Of Sleep And Arousal On Breathing
R.L. Horner, PhD, Toronto, Canada

3:35 Effective Recruitment Threshold: Definition, Mechanisms And Importance In OSA
M. Younes, MD, PhD, Winnipeg, Canada

4:00 Integrating The Pathophysiology For Individualized Therapy: Let The Punishment Fit The Crime
A. Wellman, MD, Boston, MA

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**SCIENTIFIC SYMPOSIUM**

**A89 EPITHELIAL-MESENCHYMAL CROSSTALK: A MATRIX FOR LUNG REMODELING**

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

2:00 pm-4:30 pm

**Target Audience**
Basic and clinical scientists focused on/with interests in the mechanisms underpinning airway remodeling in obstructive lung diseases.

**Objectives**
At the conclusion of this session, the participant will be able to:
- describe emerging mechanisms that support the role of epithelial-mesenchymal crosstalk as a key player in remodeling, with consequences for respiratory function;
- understand the potential of the epithelium and surrounding matrix to modulate features of remodeling through epithelial-to-mesenchymal transition (EMT) as well as through dysregulation of mesenchymal function;
- identify potential emerging therapies and future research questions related to epithelial-mesenchymal crosstalk in obstructive lung diseases.

Increases in airway smooth muscle mass and subepithelial fibrosis are important remodeling processes that contribute to airway obstruction and hyperresponsiveness in obstructive lung diseases. In this symposium, we will focus on the current understanding of epithelial-mesenchymal crosstalk and interactions with the extracellular matrix that contribute to airway remodeling. We will address the relative merits of three emerging concepts in airway remodeling: 1) dysfunctional crosstalk between the epithelial-mesenchymal trophic unit and its effects on airway function; 2) the possible contribution of epithelial-to-mesenchymal transition in defective epithelial repair, airway remodeling and fibrosis; and 3) the integration of the extracellular matrix in the processes underlying remodeling and altered lung function.

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

**Chairing:**
A.J. Halayko, PhD, Winnipeg, Canada
H. Chapman, PhD, San Francisco, CA
R. Gosens, PhD, Groningen, Netherlands

**2:00 New Beginnings: Epithelial-Mesenchymal Crosstalk In Lung Development**
M. Post, PhD, Toronto, Canada

**2:25 Epithelial Barrier Dysfunction As Driver Of Remodeling And Target For Future Therapeutic Strategies?**
I. Heijink, PhD, Groningen, Netherlands

**2:50 Pathological Activation Of The EMTU: What W(e)nt Wrong And Can We Treat It?**
M. Königshoff, MD, PhD, Munich, Germany

**3:15 Epithelial-Mesenchymal Transition: A Future Target In Airway Diseases?**
T.L. Hackett, PhD, Vancouver, Canada
3:40  Differential Roles Of Integrin-Mediated Activation Of TGFβ1 In Diseases Of The Conducting Airways And Alveoli  
D. Sheppard, MD, San Francisco, CA

4:05  Environment Driven Epithelial Effects On Smooth Muscle Function  
R. Panettieri, MD, Philadelphia, PA

BASIC • CLINICAL • TRANSLATIONAL  
SCIENTIFIC SYMPOSIUM

A90  PRENATAL EXPOSURES AND PREDISPOSITION TO ADULT LUNG DISEASE  
Assemblies on Allergy, Immunology and Inflammation; Clinical Problems; Pediatrics; Respiratory Cell and Molecular Biology

2:00 pm-4:30 pm

Target Audience
Providers (doctors, nurses, and other healthcare providers), trainees, and researchers

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

• describe recent studies implicating prenatal and perinatal exposures to adult lung disease;

• summarize new mechanistic studies that implicate ethanol, nicotine, biomass and other exposures in the prenatal and peri-natal period to lung disease in the adult;

• define potential interventions at early stages of development and childhood that could positively impact the lung at later stages.

This session will explore how environmental exposures (e.g. diet, nicotine, ethanol, biomass) affect the lung during the prenatal and perinatal periods, and how these events predispose the individual to lung disease (e.g. asthma, COPD) that becomes manifested as an adult.

Chairing:  J. Roman, MD, Louisville, KY  
T.W. Gauthier, MD, Atlanta, GA  
T.W. Guilbert, MD, Madison, WI

2:00  Introduction  
J. Roman, MD, Louisville, KY

2:05  Pediatric Origins Of Adult Lung Disease  
P. Sly, MBBS, Perth, Australia

2:30  The Connection Between Early Life Wheezing And Subsequent Asthma  
F. Martinez, MD, Tucson, AZ

2:55  Pre- And Perinatal Exposure To Alcohol: Implications For Chronic Lung Disease  
T.W. Gauthier, MD, Atlanta, GA

3:20  Consequences Of Early Exposure To Biomass And Chronic Lung Disease  
R.A. Accinelli, MD, Lima, Peru

3:45  The Impact Of Maternal Nutrition On Susceptibility To Lung Disease In The Adult  
A.A. Jackson, PhD, Southampton, United Kingdom

4:10  Prenatal Exposure To Nicotine And Implications For Obstructive Lung Disease In The Adult Lung  
J. Roman, MD, Louisville, KY

BASIC • BEHAVIORAL  
CLINICAL • TRANSLATIONAL  
SCIENTIFIC SYMPOSIUM

A91  CAREER DEVELOPMENT SYMPOSIUM: TRANSITIONING TO A SUCCESSFUL ACADEMIC CAREER. PART II  
Members in Transition and Training Committee; Training Committee; Assemblies on Allergy, Immunology and Inflammation; Behavioral Science; Clinical Problems; Critical Care; Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections; Nursing; Pediatrics; Pulmonary Circulation

2:00 pm-4:30 pm

Target Audience
Fellows, Post-doctoral Trainees, Junior Faculty, Residents, Nursing and Allied Health Professionals in the early stages of a career in academic pulmonary, allergy, critical care and/or sleep medicine.
Objectives
At the conclusion of this session, the participant will be able to:

• identify ways to improve the mentor/mentee relationship by being an effective mentee and mentor;

• understand the fundamentals of, and be able to apply, specific strategies aimed at writing/submitting/re-submitting manuscripts, successful grantsmanship, and establishing an educational portfolio;

• balance a successful academic career with personal growth and development.

This symposium aims to equip audience members with practical tools that will enhance the likelihood of achieving academic success, including academic career development and promotion. Critical areas of discussion will include
1) being an effective mentee,
2) best practices for mentoring,
3) writing/submitting/re-submitting manuscripts,
4) grantsmanship,
5) establishing an educational portfolio, and
6) work-life balance.

Chairing: D.W. Ford, MD, Charleston, SC
A. Ramirez, MD, Louisville, KY

2:00 Opening Comments
D.W. Ford, MD, Charleston, SC

2:05 Mentoring From The Mentee Perspective
G.S. Martin, MD, MSc, Atlanta, GA

2:25 What Are The Best Mentoring Practices?
E.L. Burnham, MD, MS, Aurora, CO

2:45 Grantsmanship
J.H.T. Bates, PhD, DSc, Burlington, VT

3:05 Writing, Submitting And Re-submitting A Manuscript
J.I. Sznajder, MD, Chicago, IL

3:25 Building An Educational Portfolio
P.A. Kritek, MD, EdM, Seattle, WA

3:45 Balancing Work And Life
A.C. Wang, MD, La Jolla, CA

4:05 Panel Discussion
A. Ramirez, MD, Louisville, KY

2:00 pm-4:30 pm
Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.
4:45 pm-6:30 pm

AWARDS SESSION

AMBERSON LECTURE
The Amberson Lecturer is an individual with a career of major lifetime contributions to clinical or basic pulmonary research and/or clinical practice. The Lecture is given in honor of James Burns Amberson, an international authority on chest disease and tuberculosis.

TRUDEAU MEDAL
The Trudeau Medalist is an individual with lifelong major contributions to prevention, diagnosis and treatment of lung disease through leadership in research, education, or clinical care. This award was established in 1926 and is given in honor of Edward Livingston Trudeau, a founder and the first president of the American Lung Association.

DISTINGUISHED ACHIEVEMENT AWARD
The Distinguished Achievement Award is given to individuals who have made outstanding contributions to fighting respiratory disease through research, education, patient care, or advocacy.

OUTSTANDING CLINICIAN AWARD
The Outstanding Clinician Award is presented to an individual who embodies excellence in the clinical practice of lung health medicine. The awardee has spent a substantial part of his/her career in the clinical care of patients with lung disease, and has made substantial contributions to the American Thoracic Society and American Lung Association on a local or national level.

OUTSTANDING EDUCATOR AWARD
The Outstanding Educator Award recognizes lifetime contributions in education and mentoring in the fields of pulmonary, critical care or sleep medicine. This award honors excellence in clinical or research education as it relates to pulmonary disease.

PUBLIC SERVICE AWARD
The Public Service Award is presented to an individual for the contributions in the public health arena related to respiratory disease and medicine. Those considered for the award would be recognized for a significant lifetime contribution to the field or a unique one-time contribution.

WORLD LUNG HEALTH AWARD
The World Lung Health Award is given to individuals with recognized contributions to world lung health in the area of basic or clinical research, delivery of healthcare, continuing education or care of patients with lung disease.

The 2011 lecturer and awardees will be announced in the Final Program.
6:30 pm-8:30 pm

ASSEMBLY MEMBERSHIP MEETINGS

The thirteen Assemblies are the primary groups of the American Thoracic Society. Each Assembly holds an annual Membership Meeting at the International Conference. All Assembly members and other interested individuals are invited to attend.

The Assembly Membership Meetings provide an update on the Assembly's activities via the Assembly's Leadership and provide Assembly members the chance to have input on future direction, information on how to get involved, networking opportunities and the opportunity to vote on the Assembly's future leaders.

The Assembly Membership Meetings will be held on Monday, May 16, 5:00 pm-7:00 pm, with the exception of the Assemblies on Behavioral Science and Pediatrics (see below.)

BEHAVIORAL SCIENCE

Chairing: L.B. Gerald, PhD, MSPH, Tucson, AZ

PEDIATRICS

Chairing: T.W. Ferkol, MD, St. Louis, MO
THEMATIC SEMINAR SERIES

TSS1  CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Registration Fee: $170 for the full series (includes continental breakfast and box lunch.)
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.
This is a 4-part series. Those registering for this seminar series will be registered for all 4 parts. The topics and schedule for each part are listed below.

Monday, May 16, 7:00 am-8:00 am
Risk Factors For Exacerbations
J. Hurst, MD, London, United Kingdom

Monday, May 16, 12:00 pm-1:00 pm
How Can We Prevent The Exacerbations?
B.R. Celli, MD, Boston, MA

Tuesday, May 17, 7:00 am-8:00 am
Beyond The Acute Event: Impact On Patient’s Life
M. Miravitlles, MD, Madrid, Spain

Tuesday, May 17, 12:00 pm-1:00 pm
When Should I Use Antibiotics And/Or Steroids?
A. Anzueto, MD, San Antonio, TX

THEMATIC SEMINAR SERIES

TSS2  INTERSTITIAL LUNG DISEASE

Registration Fee: $140.00 for the full series (includes continental breakfast.)
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.
This is a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The topics and schedule for each part are listed below.

Monday, May 16, 7:00 am-8:00 am
Aches And A Pain: Identifying Rheumatologic Causes Of Lung Diseases
S.L. Schmidt, MD, Ann Arbor, MI

Tuesday, May 17, 7:00 am-8:00 am
Gastroesophageal Reflux And Microaspiration In Interstitial Lung Disease
J.S. Lee, MD, San Francisco, CA

Wednesday, May 18, 7:00 am-8:00 am
Idiopathic Pulmonary Fibrosis: What Every Trainee Needs To Know And An Update On Familial IPF
A.U. Leahy, MBBS, Bristol, United Kingdom

THEMATIC SEMINAR SERIES

TSS3  LUNG CANCER

Registration Fee: $140.00 for the full series (includes continental breakfast.)
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.
This is a 3-part series. Those registering for this seminar series will be registered for all 3 parts. The topics and schedule for each part are listed below.

Monday, May 16, 7:00 am-8:00 am
Update On Screening And New Pathological Classification
J.R. Jett, MD, Denver, CO
Tuesday, May 17, 7:00 am-8:00 am

Update On Bronchoscopic And Modalities For Diagnosis, Staging And Therapeutic Interventions
P.N. Chhajed, MD, Mumbai, India

Wednesday, May 18, 7:00 am-8:00 am

Update On Chemoradiotherapy And Surgical Approach
P.N. Mathur, MD, Indianapolis, IN

SUNRISE SEMINARS

Registration Fee: $65.00 (includes continental breakfast.)
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

7:00 am-8:00 am

SS101 ANALYSIS OF NEXT GENERATION SEQUENCING DATA FOR SMALL RNA SPECIES
S. Sanga, PhD, San Francisco, CA

SS102 WHAT'S NEW WITH ASTHMA IN PREGNANCY?
J.W. McCallister, MD, Columbus, OH

SS103 A CASE-BASED APPROACH TO PULMONARY ISSUES IN RHEUMATOID ARTHRITIS
D.E. Antin-Ozerkis, MD, New Haven, CT

SS104 IMPROVING THE QUALITY OF CARE OF LUNG TRANSPLANT CANDIDATES
D.J. Lederer, MD, MS, New York, NY

SS105 CHRONIC BRONCHITIS IN COPD: THE BLUE BLOATER REVISITED
V. Kim, MD, Philadelphia, PA

SS106 CONNECTIVE TISSUE DISEASES FOR THE PULMONOLOGIST
M. Kreider, MD, Philadelphia, PA

SS107 NOSOCOMIAL INFECTIONS IN THE ICU: PREVENTION AND TREATMENT
N. Marchetti, DO, Philadelphia, PA

SS108 CHURG-STRAUSS SYNDROME
K.A. Keogh, MD, Rochester, MN

SS109 GLUCOSE CONTROL AFTER NICE-SUGAR: WHAT SHOULD INTENSIVISTS DO?
W. Henderson, MD, Vancouver, Canada

SS110 MULTIDRUG- AND EXTENSIVELY DRUG-RESISTANT TUBERCULOSIS: IMPLICATIONS FOR GLOBAL TB CONTROL
S. Shah, MD, Bronx, NY
N.R. Gandhi, MD, New York, NY

SS111 OVERVIEW OF COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA
M.C. Kapella, PhD, RN, Chicago, IL

SS112 CAN WE IMPROVE ADHERENCE WITH CPAP IN CHILDREN?
S.K. Jambhekar, MD, Little Rock, AR

SS113 EVALUATING THE PATIENT REFERRED FOR PULMONARY HYPERTENSION
C.E. Ventetuolo, MD, New York, NY

SS114 DOES TELOMERASE ACTIVITY ONLY LENGTHEN TELOMERE? IMPLICATIONS IN IPF
C.T. Jourdan Le Saux, PhD, San Antonio, TX

SS115 PULMONARY REHABILITATION: SCIENCE AND PRACTICE
E.P. Riesenfeld, MD, Burlington, VT

SS116 SLEEP DISORDERED BREATHING AND CARDIAC ARRHYTHMIAS
R. Mehra, MD, Cleveland, OH

SS117 ADULT CYSTIC FIBROSIS
D. Hadjiliadis, MD, Philadelphia, PA

CLINICAL YEAR IN REVIEW

B1 CLINICAL YEAR IN REVIEW 2

8:15 am-10:15 am

Target Audience
Providers of care for patients with diverse lung diseases

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

• have improved knowledge of recent articles for core pulmonary/critical care topics;
• apply recent advances in core pulmonary/critical care topics to the care of patients;
• have new strategies/treatment options to manage patients with pulmonary/critical care illnesses.

Clinical year in review sessions are presented each morning of the ATS meeting. A total of 16 pulmonary diseases areas are covered, 4 each morning. Each disease is presented by an invited expert in the field. Prior to the conference, the expert does an extensive literature search and also solicits feedback from peers. Four to six key articles from the previous year are presented for each disease. In addition, a detailed bibliography which contains summaries of the articles presented as well as additional articles of interest is provided to attendees.

Chairing:  
K.R. Flaherty, MD, MS, Ann Arbor, MI  
M.S. Herridge, MD, Toronto, Canada  
E.R. Sutherland, MD, Denver, CO

8:15 Lung Cancer  
P.J. Mazzone, MD, Cleveland, OH

8:45 Sleep Apnea  
D.P. White, MD, Brighton, MA

9:15 Interventional Pulmonary/Pleural Disease  
M.M. Wahidi, MD, Durham, NC

9:45 Cystic Fibrosis  
J.A. Nick, MD, Denver, CO

BASIC • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B2 A LARGE, MULTICENTER  
CROSS-SECTIONAL CLINICAL,  
RADIOGRAPHIC AND GENOMIC  
CHARACTERIZATION STUDY IN COPD:  
LESSONS FROM COPD GENE

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Behavioral Science; Pulmonary Rehabilitation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Providers of lung health; those serving a specific patient group or multiple groups; those with clinical, research, or administrative responsibilities; those needing instruction in areas of medicine outside of their specialty

Objectives
At the conclusion of this session, the participant will be able to:
• describe the features of a successful multicentered trial in COPD;
• discuss the radiological and genomic patterns of association in COPD;
• understand the important features of research needed to develop personalized treatments for COPD patients in the future.

Provide information from COPD Gene regarding how to structure a large multicentered trial in COPD and review the state of the art approaches to the genomic, radiological and clinical characterization of COPD patients and provide insights into what COPD Gene has learned to date regarding these matters.

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

Chairing:  
B.J. Make, MD, Denver, CO  
J. Crapo, MD, Denver, CO  
G.J. Criner, MD, Philadelphia, PA

8:15 COPDGene: The Design And Implementation Of A Successful Large Multicenter Study  
J. Crapo, MD, Denver, CO

8:35 CT Characterization Of COPD: What Abnormalities Are Clinically Important?  
D.A. Lynch, MBBS, Denver, CO

8:55 Genomic Profiling In COPD: Where Are We?  
E.K. Silverman, MD, Boston, MA

9:15 Impact Of Race And Gender On COPD Presentation: Does It Matter?  
M.G. Foreman, MD, Atlanta, GA

9:35 Exacerbations: What Influences Their Frequency And Severity Of Presentation?  
G.J. Criner, MD, Philadelphia, PA
9:55 Symptoms And Quality Of Life In COPD: Have We Learned Anything New?
M.L.K. Han, MD, MS, Ann Arbor, MI

10:15 Using Clinical Data To Target Personalized Care In COPD: Are We Closer?
B.J. Make, MD, Denver, CO

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B3 INTERSTITIAL LUNG DISEASE IN THE INTENSIVE CARE UNIT

Assemblies on Clinical Problems; Critical Care
8:15 am-10:45 am

Target Audience
Pulmonary medicine and critical care medicine physicians, nurses, trainees and affiliated health professionals

Objectives
At the conclusion of this session, the participant will be able to:
• diagnose interstitial lung diseases that may present with acute respiratory failure including diffuse alveolar hemorrhage syndromes, AIP/AE-ILD, acute eosinophilic pneumonia and idiopathic pneumonia syndrome;
• incorporate new knowledge and findings about the diagnosis and management of pulmonary vasculitis/diffuse alveolar hemorrhage syndromes and acute exacerbations of ILD into clinical practice;
• learn and acquire management and treatment strategies for interstitial lung diseases that may present with acute respiratory failure including diffuse alveolar hemorrhage syndromes, AIP/AE-ILD, acute eosinophilic pneumonia and idiopathic pneumonia syndrome

The session will review the presentation, diagnosis, and management of diffuse parenchymal lung diseases that may present with acute-onset, hypoxemic respiratory failure. The specific clinical syndromes to be reviewed include: diffuse alveolar hemorrhage syndromes, acute interstitial pneumonitis/acute exacerbations of ILD, acute eosinophilic pneumonia and idiopathic pneumonia syndrome.

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

Chairing: I. Noth, MD, Chicago, IL
E.L. Burnham, MD, MS, Aurora, CO

8:15 When ARDS Isn’t: ILD As A Mimic Of ARDS
S.K. Frankel, MD, Denver, CO

8:40 Diffuse Alveolar Hemorrhage Syndromes
K.B. Highland, MD, Charleston, SC

9:05 AIP And Acute Exacerbations Of ILD
H.R. Collard, MD, San Francisco, CA

9:30 Acute Eosinophilic Pneumonias
V. Cottin, MD, Lyon, France

9:55 Bone Marrow Transplantation Associated Idiopathic Pneumonia Syndrome
B.T. Suratt, MD, Burlington, VT

10:20 ILD In the ICU: A Case-Based Panel Discussion
I. Noth, MD, Chicago, IL

CLINICAL

CRITICAL CARE TRACK

B4 THE INTENSITY OF INTENSIVE CARE: IS MORE BETTER?

Assemblies on Critical Care; Clinical Problems
8:15 am-10:45 am

Target Audience
Critical care practitioners, including physicians, physicians in training, nurses, respiratory therapists, pharmacists, physician assistants

Objectives
At the conclusion of this session, the participant will be able to:
• understand the consequences of different ICU triage decisions;
• identify aspects of ICU care where some patients may benefit from less intensity of treatment;
• understand the challenges of assessing the impact of staffing and technology in the ICU setting.
With increasing availability of intensive care beds and increasing technology, it is easy to assume that more care of all kinds is better. This session seeks to explore the pros and cons of intensity of treatment, including admission practices, specific technologies in the ICU, and staffing patterns. Attendees will gain knowledge that will allow for balanced, and appropriate application of many aspects of critical care to improve overall care of patients.

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

Chairing: H. Wunsch, MD, MSc, PhD, New York, NY
D.C. Scales, MD, PhD, Toronto, Canada

8:15 Patient Perspective
Speaker To Be Announced

8:20 Triaging Patients For The ICU: Consequences Of Over And Under-Use Of Intensive Care
H. Wunsch, MD, MSc, PhD, New York, NY

8:40 Rethinking Monitoring Devices
A. Garland, MD, Winnipeg, Canada

9:05 Is It Better To Wait? Early Versus Late Tracheostomy
D.C. Scales, MD, PhD, Toronto, Canada

9:25 From Light Sedation To Paralysis
J.B. Hall, MD, Chicago, IL

9:50 Is 24 Hour Intensivist Coverage Better Than Just Daytime?
D. Angus, MD, Pittsburgh, PA

10:10 Ratio Of Nurses And Physicians To Patients In The ICU
B. Cuthbertson, MD, Toronto, Canada

10:40 General Discussion

B5  NHLBI AND NIAID RECOMMENDATIONS FOR STANDARDIZED ASTHMA OUTCOMES IN CLINICAL RESEARCH

Assemblies on Allergy, Immunology and Inflammation; Behavioral Science; Clinical Problems; Environmental and Occupational Health; Nursing; Pediatrics; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Clinical researchers (intervention studies and epidemiologic studies), clinicians, those responsible for clinical pathways, guidelines, or quality improvement programs

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

• explain the goal of standardizing core and supplemental asthma outcomes and describe the core outcomes for clinical research;

• apply definitions and methods for measuring selected asthma outcomes to future research proposals;

• discuss how standardized outcome measures described in the symposium can be used to interpret study findings and apply findings to clinical practice.

This session will present the final recommendations from the 2010 NHLBI-NIAID Asthma Outcomes Workshop on establishing standardized definitions and methodologies for a range of asthma outcome measures. Asthma Outcomes include: exacerbations, biomarkers, asthma control measured by composite scores, symptoms, physiology, quality of life, and healthcare utilization and costs. Session participants will learn how the recommendations relate to the 2009 ATS/ERS Statement on standardizing endpoints on asthma control and exacerbations and how the recommendations will affect future NIH asthma clinical research funding opportunities.
Chairing: J.P. Kiley, PhD, MS, Bethesda, MD
A. Togias, MD, Bethesda, MD
W. Morgan, MD, Tucson, AZ

8:15 Standardizing Asthma Outcomes Measures: Overview
W.W. Busse, MD, Madison, WI

8:25 Challenges Raised By The ATS/ERS Task Force On Asthma Control And Exacerbations
H.K. Reddel, MBBS, PhD, Glebe, Australia

8:35 Defining And Measuring Asthma Symptoms
J.A. Krishnan, MD, PhD, Chicago, IL

8:53 Defining And Measuring Asthma Exacerbations
D. Peden, MD, Chapel Hill, NC

9:11 Defining And Measuring Lung Physiology
R.A. Wise, MD, Baltimore, MD

9:29 Defining And Measuring Asthma Control With Composite Scores
M. Cloutier, MD, Farmington, CT

9:47 Defining And Measuring Asthma Quality Of Life
S.R. Wilson, PhD, Palo Alto, CA

10:05 Defining And Measuring Healthcare Utilization And Costs
T.A. Lee, PharmD, PhD, Chicago, IL

10:23 Defining And Measuring Asthma Biomarkers
S.E. Wenzel, MD, Pittsburgh, PA

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Chairing: L.F. Reinke, PhD, ARNP, Seattle, WA
R.A. Mularski, MD, MSHS, MCR, Portland, OR

8:15 Overview Of ATS Dyspnea Crisis Workshop
M. Fischer, MD, FACP, Olympia, WA

8:35 Evidence Base Summaray On The State Of The Science
R.A. Mularski, MD, MSHS, MCR, Portland, OR

8:55 State Of The Science On Communication And Coordination Of Care
L.F. Reinke, PhD, ARNP, Seattle, WA

9:15 Development Of Dyspnea Crisis Educational Tools
V. Carrieri-Kohlman, DNSc, RN, San Francisco, CA

9:35 International Panel Discussion On Existing State Of The Science Protocols - Hospital Setting
D.R. Taylor, MD, Otago, New Zealand

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BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

B6 DYSPNEA CRISIS: STATE OF THE SCIENCE FOR PALLIATIVE MANAGEMENT

Assemblies on Nursing; Behavioral Science; Clinical Problems

8:15 am-10:45 am

Target Audience
Pulmonary physicians, pulmonary nurses, critical care and emergency room physicians and nurses, palliative care specialists, paramedics and other first responders, respiratory therapists, researchers, administrators, trainees, and policy makers

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

- define dyspnea crisis and discuss the state of the science and gaps in the evidence on management of dyspnea crisis;
- appreciate the importance and benefits of developing and utilizing educational tools to guide patients, caregivers and health care providers on dyspnea crisis action plans;
- apply palliative care management concepts/protocols to patients with very advanced lung/cardiac disease and their caregivers to prevent or ameliorate dyspnea crisis.

At the conclusion of the session, participants will be able to: define and describe dyspnea crisis, identify key aspects related to dyspnea crisis, and discuss the current evidence and gaps on the state of the science. Participants will have the opportunity to engage in a discussion with panelists on state of the art protocols that may be applied to their practices.

There will be a 5-minute discussion after each talk.
9:55 International Panel Discussion On Existing State Of The Science Protocols - Pulmonary Rehabilitation Setting
J. Richman-Eisenstat, MD, FRCPC, Manitoba, Canada

10:15 International Panel Discussion On Existing State Of The Science Protocols - Hospice
A. Schneidman, MS, CNS, RN, Phoenix, AZ

B7 BIOENGINEERING FOR LUNG DISEASES: PROGRESS IN REBUILDING THE LUNG
Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Pulmonary Circulation; Respiratory Structure and Function

8:15 am-10:45 am

Target Audience
Physician scientists, thoracic and transplant surgeons, biomedical engineers, basic scientists, pulmonary physicians, translational researchers, pre- and post-doctoral fellows

Objectives
At the conclusion of this session, the participant will be able to:
• describe the use of natural and artificial scaffolds to bioengineer pulmonary tissue constructs and potential for clinical translation;
• apply new knowledge and strategies to improve quality of lung tissue engineering research in their own and others’ labs back at their institution;
• appreciate the importance of the challenges that need to be overcome in the use of bioengineered pulmonary tissue.

After the first Scientific symposium in 2009 and mini-symposium in 2010, this represents the yearly update on the progress being made in this rapidly expanding area that has finally reached the pulmonary arena as evidenced by several recent, groundbreaking publications. This session will focus on cutting edge research and clinical applications of bioengineered tissue for replacing/repairing injured or diseased lungs. It brings together bioengineers and pulmonary scientists in a series of talks that will encompass 3-dimensional natural and artificial tissue scaffolds, lung stem cells, clinical translatable and challenges of bioengineered pulmonary tissue.

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

Chairs:
A. Panoskaltsis-Mortari, PhD, Minneapolis, MN
P. Lelkes, PhD, Philadelphia, PA
T. Gilbert, PhD, Pittsburgh, PA

8:15 Engineering Tissues By Bioprinting
F. Guillemot, PhD, Bordeaux, France

8:45 Murine Derived Embryonic Stem Cells In Tissue Engineered Scaffolds
C. Finck, MD, Hartford, CT

9:15 Tissue Engineered Human Trachea For In Vivo Implantation
P. Macchiarini, MD, Florence, Italy

9:45 Building Lungs With iPS Cells In A Decellularized Lung Matrix
A. Panoskaltsis-Mortari, PhD, Minneapolis, MN

10:15 New Advances In Artificial Vs Natural Scaffolds For Lung Constructs: How Far Along Are We Really?
P. Lelkes, PhD, Philadelphia, PA

B8 ENDOTHELIAL DYSFUNCTION, VASCULAR DISEASE AND SLEEP DISORDERED BREATHING
Assemblies on Sleep and Respiratory Neurobiology; Clinical Problems; Pulmonary Circulation; Respiratory Structure and Function

8:15 am-10:45 am
Target Audience
Basic scientists and clinicians with an interest in sleep disordered breathing and vascular disease

Objectives
At the conclusion of this session, the participant will be able to:
• understand the mechanisms of endothelial dysfunction;
• describe the evidence for endothelial dysfunction in subjects with sleep disordered breathing;
• describe the distribution of vascular disease in subjects with sleep disordered breathing.

This session will describe the basic vascular biology of endothelial dysfunction, mechanisms of endothelial dysfunction in sleep disordered breathing and distribution of vascular disease in sleep disordered breathing.

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

Chairing: K. Kairaitis, MB,BS, PhD, Westmead, Australia
M. Kohler, MD, Zurich, Switzerland

8:15 Endothelial Function: Measurement Of Cardiovascular Health
J. Regensteiner, PhD, Denver, CO

8:40 Stem Cells And Endothelial Repair In Obstructive Sleep Apnea
R. Farre, PhD, Barcelona, Spain

9:05 Endothelial Dysfunction In Sleep Apnea: A Possible Role Of Purinergic Signalling
E. Kaczmarek, PhD, Boston, MA

9:30 Snoring Vibrations And Endothelial Dysfunction
J. Wheatley, MB, BS, PhD, Westmead, Australia

9:55 Endothelial Dysfunction And Sleep Disordered Breathing
M. Kohler, MD, Zurich, Switzerland

10:20 Sleep Disordered Breathing Influences In Different Vascular Beds
J.R. Stradling, MD, MPH, Oxford, United Kingdom
Objectives
At the conclusion of this session, the participant will be able to:

- describe the most important occupational/environmental exposures that cause respiratory outcomes on a community level;
- include these diseases in the differential diagnosis of respiratory conditions;
- learn what preventive strategies could be implemented to address community level exposures to occupational/environmental hazards.

Many hazardous exposures, traditionally regarded as occupational in nature, have been described as affecting entire communities through environmental contamination. These environmental exposures have occurred both from para-occupational exposure from take home exposures along with pollution from industrial sources - air pollution, water, and others. This session aims to provide an update on the most common causes of respiratory outcomes in communities exposed to occupational/environmental hazards, to raise awareness among the target audience to the need for prevention strategies to protect these communities.

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

Chaising: M.B. Schenker, MD, MPH, Davis, CA

8:15 Session Introduction
M.B. Schenker, MD, MPH, Davis, CA

8:20 Patient Perspective
Speaker To Be Announced

8:25 Environmental Respiratory Disease From Agriculture Processes: Inorganic Dusts
M.B. Schenker, MD, MPH, Davis, CA

8:45 Community Exposures To Asbestos And Asbestiform Fibers
V. Antao, MD, Atlanta, GA

9:05 Non-Occupational Chronic Beryllium Disease (CBD)
L.A. Maier, MD, Denver, CO

9:30 Environmental Causes Of Asthma
J.M. Anto, MD, Barcelona, Spain

9:55 Environmental Causes Of Sarcoidosis
L. Newman, MD, FCCP, FACOEM, Denver, CO

10:20 Living AT Busy Roads: A Cause For Asthma
N. Kuenzli, MD, PhD, Basel, Switzerland
B11 RACIAL DISPARITIES IN PULMONARY AND CRITICAL CARE

Target Audience
All members of the ATS community would benefit from the proposed symposium. The timing of this proposal is related to the 10th anniversary of the Minority Travel Trainee Award Program, the purpose of this proposed symposium would be to highlight issues related to diversity in the ATS community. Racial disparities need to be addressed as a work-force issue among scientists, and all healthcare professionals. Racial disparities predict susceptibility to, and outcomes from some of the most common pulmonary disorders, and education of clinicians, researchers and administrators regarding these issues are needed.

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

1. understand the extent and significance of racial and ethnic disparities in outcome in pulmonary and critical care disorders;
2. understand the social and genetic factors which contribute to disparate outcomes among various racial/ethnic groups;
3. highlight the interdependence between increasing racial/ethnic diversity among providers and improving outcomes in these racial/ethnic groups.

We are fortunate to be living in an age of significant scientific advances in the treatment of disorders pertaining to pulmonary and critical care medicine. However, significant ethnic and racial disparities exist in regard to both the delivery of care and outcome for many or our most commonly treated diseases. Understanding these factors is paramount for all health care professionals, researchers and administrators if we are to improve outcomes for the entire population.

Chairing: J.A. Gold, MD, Portland, OR
W. Drake, MD, Nashville, TN

8:15 Introduction
J.A. Gold, MD, Portland, OR

8:25 Racial Disparities In Lung Cancer
C. Lathan, MD, Boston, MA

8:48 Racial Disparities In COPD
M.T. Dransfield, MD, Birmingham, AL

9:11 Racial Disparities In Tuberculosis
C.D. Hamilton, MD, MHS, Durham, NC

9:34 Racial Disparities In Asthma
C.S. Rand, PhD, Baltimore, MD

9:57 Racial Disparities In The ICU
D. Angus, MD, Pittsburgh, PA

10:20 Racial Disparities Among Providers
W. Drake, MD, Nashville, TN

B12 WHAT THE CLINICAL AND TRANSLATIONAL SCIENCE AWARD CONSORTIUM CAN DO FOR YOU!

Target Audience
Clinical, translational, and basic researchers would benefit from the presented examples of how the CTSA Consortium can support research in Pulmonary, Critical Care, and Sleep Medicine.

Objectives
At the conclusion of this session, the participant will be able to:
• improve understanding of capabilities and resources of the CTSA Consortium;

• identify examples of CTSA support of lung and critical care research;

• identify examples of CTSA involvement in sleep research.

An overview of the NIH’s CTSA Consortium will be presented, with focus on how individual CTSAs and the Consortium advance pulmonary, critical care, and sleep medicine research across the entire translational research spectrum. This symposium will give specific examples of how CTSA funding has been used transform clinical and translational research. Mechanisms include training and pilot support for early phase research and researchers, consultative help in statistics, informatics, practice of human research including institutional resources, and navigating the IRBs. Speakers will discuss some of the tools generated by the CTSA Consortium, how they have enhanced research collaborations across institutions, and how the networking of multiple centers has improved the clinical research product and amplified translational impact.

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

Chairing:  D. Center, MD, Boston, MA
              G.R. Bernard, MD, Nashville, TN
              J. Solway, MD, Chicago, IL

8:15 Overview Of The CTSA Consortium
    J. Solway, MD, Chicago, IL

8:27 How CTSA Can Expedite T1-T2 Research
    D. Center, MD, Boston, MA
    G.R. Bernard, MD, Nashville, TN

8:55 Pediatric Research In The CTSA Consortium
    R.J. Sokol, MD, Aurora, CO

9:23 Biomedical Informatics Tools That Transform Translational Research
    Speaker To Be Announced

9:51 Collaborations Between CTSA And The NIH Institutes
    J.P. Kiley, PhD, MS, Bethesda, MD
    M.J. Fenton, PhD, Bethesda, MD
    A. Togias, MD, Bethesda, MD

10:19 Panel Discussion
11:30 am - 1:00 pm

S3 DIVERSITY FORUM

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

The forum will feature a guest speaker who will address the importance of increasing diversity within the research, academic and clinical realms, to meet the needs of a diverse public.

The 2011 ATS Minority Trainee Travel Awards (MTTA) will be given at the forum to deserving recipients who are authors on abstracts accepted for presentation at the International Conference. MTTA alumni are invited to attend, share their experience in the program with this year’s recipients, and to let them know how receiving the award impacted their career choices.

This Diversity Forum is sponsored by the ATS Membership Committee and will be hosted by Estelle Gaudia, MD, a member of the Membership Committee.

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

Space is limited and admittance will be on a first-come, first-served basis. There is no additional fee. A plated lunch and refreshments will be served.

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12:00 pm - 1:00 pm

How Can We Prevent The Exacerbations?

B.R. Celli, MD, Boston, MA

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11:30 am - 1:00 pm

WS3 APPLYING NEW ATS CONSENSUS GUIDELINE RECOMMENDATIONS FOR CHILDREN’S INTERSTITIAL LUNG DISEASE (ChILD)

Registration Fee: $75.00 (includes box lunch.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

Assembly on Pediatrics

11:30 am - 1:00 pm

Target Audience

Pediatric pulmonary, neonatology, pediatric critical care physicians, pediatric radiologists and pathologists as well as nurses who care for children with diffuse lung disease.

Objectives

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

- recognize patients with ChILD, including new ChILD disorders;
- describe an appropriate evaluation plan for infants and young child with ChILD;
describe resources from the ChILD Foundation that can help patients.

Infants and young children with ILD have considerable morbidity and mortality and present challenges for the physician and family. An ATS Consensus Guideline for the evaluation of infants and young children with Children's Interstitial Lung Disease (ChILD) is in final revision and will be ready for release by the 2011 ATS meeting. These guideline recommendations will be an important resource for clinicians. This workshop will include brief didactic sessions from members of the ATS Consensus writing group followed by interactive case-based discussions to allow participants the opportunity to apply recommendations in a problem-based manner and clarify their understanding.

Chairing: R.R. Deterding, MD, Aurora, CO
G. Kurland, MD, Pittsburgh, PA

11:30 Welcome And Overview Of ChILD Workshop
R.R. Deterding, MD, Aurora, CO

11:40 Review ATS Consensus Recommendation Process And Recommendations
G. Kurland, MD, Pittsburgh, PA

12:00 Clinical Case 1 Session And Review
J. Hagood, MD, San Diego, CA

12:25 Clinical Case 2 Presentation And Review
L.R. Young, MD, Cincinnati, OH

12:50 Wrap Up
R.R. Deterding, MD, Aurora, CO

Assemblies on Allergy, Immunology and Inflammation;
Clinical Problems; Pediatrics; Respiratory Cell and
Molecular Biology
11:30 am-1:00 pm

Target Audience
Providers of lung health and biomedical researchers with an interest in asthma

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

• understand the characteristics of the patient at risk for exercise-induced bronchoconstriction (EIB) and the latest methods to diagnose EIB;
• describe the events leading to EIB including the release of lipid mediators and mucins through the activation of immune cells and sensory nerves;
• explain the strengths and limitations of conventional and novel therapies used to prevent EIB.

Exercise-induced bronchoconstriction (EIB) is a common disorder that occurs in asthma as well as in high-level athletes and subjects with rhinitis. Recent studies have identified alterations in the airway epithelium and increased production of inflammatory lipid mediators in this disorder. The purpose of this workshop is convey recent advances in knowledge about 1) the airway immunopathology leading to EIB, 2) diagnostic studies used to evaluate EIB, and 3) advantages and limitations of therapies for EIB.

Chairing: T.S. Hallstrand, MD, Seattle, WA
D.A. Kaminsky, MD, Burlington, VT

11:30 Immunopathology Of The Patient At Risk For Exercise-Induced Bronchoconstriction
S.T. Holgate, MD, DSc, Southampton, United Kingdom

11:50 Airway Provocation To Establish A Diagnosis Of Exercise-Induced Bronchoconstriction
J.D. Brannan, PhD, Sydney, Australia

12:10 Inflammatory Mechanisms Of Exercise-Induced Bronchoconstriction
T.S. Hallstrand, MD, Seattle, WA
**U.S. CRITICAL ILLNESS AND INJURY TRIALS**

**L9 U.S. CRITICAL ILLNESS AND INJURY TRIALS (USCIIT) GROUP: CLINICAL TRIALS UPDATE**

12:00 pm-1:00 pm

**Target Audience**
Intensivists interested in clinical trials, comparative effectiveness research, and performance improvement initiatives

**Objectives**
At the conclusion of this session, the participant will be able to:
- identify new findings about prediction of acute lung injury;
- describe new strategies to manage optimal timing of tracheostomy;
- identify new findings about critical care informatics.

The USCIIT Group fosters investigator initiated hypothesis testing and strategic planning at a national level. This year’s annual update highlights recent progress made on two clinical projects and one strategic initiative.

**Chairing:** J.P. Cobb, MD, Boston, MA

12:00 **Update 2011**
J.P. Cobb, MD, Boston, MA

12:05 **Lung Injury Prevention Studies**
O. Gajic, MD, Rochester, MN

12:20 **Benchmarking Tracheostomy Practice For Acute Respiratory Failure**
B.D. Freeman, MD, St. Louis, MO

12:35 **Critical Care Informatics**
J. Blum, MD, Ann Arbor, MI

12:50 **Speakers’ Panel Discussion**
J.P. Cobb, MD, Boston, MA
12:18 Diagnostic Agents For Bronchial Hyperresponsiveness  
A.C. Harry, MD, PhD, Silver Spring, MD

12:36 Role Of Phosphodiesterase Inhibitors In COPD  
A. Durmowicz, MD, Silver Spring, MD

12:54 Questions And Answers  
L.I. Gilbert-McClain, MD, Silver Spring, MD

ALA ASTHMA CLINICAL RESEARCH CENTERS

L11 STUDY OF ACID REFLUX THERAPY FOR CHILDREN WITH ASTHMA: SARCA

12:00 pm-1:00 pm

Target Audience  
Physicians, clinical scientists, nurses, paraprofessionals, educators, health care providers

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

• understand that reflux is a possible risk factor for asthma severity in children;

• understand how asthmatic children with pH probe documentation of GERD differ from asthma children without GERD;

• understand whether the presence or absence of GERD and its treatment with lansoprazole affects the magnitude of airways inflammation in asthma.

The ALA Asthma Clinical Research Centers’ (ACRC) purpose is to conduct clinical trials with practical importance to both adults and children with asthma. One of the trials was the SARCA Trial which tested the hypothesis that treatment of GER with lansoprazole, an approved proton pump inhibitor, would decrease the frequency of exacerbations in children with poorly controlled asthma. This session will be used to discuss the analyses of the SARCA Trial.

Chairing:  
R.A. Wise, MD, Baltimore, MD  
L. Bacharier, MD, St. Louis, MO

12:00 SARCA Background And Rationale  
M. Sockrider, MD, PhD, Houston, TX

12:15 SARCA Study Design And Baseline Characteristics  
J. Lang, MD, Jacksonville, FL

12:30 SARCA Main Results, Summary, And Conclusions  
W.G. Teague, MD, Charlottesville, VA

12:45 Discussion/Questions And Answers  
L. Bacharier, MD, St. Louis, MO

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES/NIH

L12 NIEHS NANOTECHNOLOGY ENVIRONMENTAL HEALTH AND SAFETY RESEARCH

12:00 pm-1:00 pm

Target Audience  
Basic researchers, clinician scientists and Fellows in environmental and occupational health

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

• gain fundamental understanding on the interaction of nanomaterials with biological materials;

• understand health effects of engineered nanomaterials due to unintentional exposures;

• understand potential pulmonary toxicity of fiber-like nanomaterials and related pathology.

The increased use of nanotechnology derived materials in diverse industrial and consumer products presents opportunities for unintentional environmental and occupational exposure to these materials. Engineered nanomaterials (ENMs), typically less than 100 nm at least in one dimension, acquire novel and unique physical and chemical properties related to their size, shape, surface charge, and surface area to mass ratio. The consequences of interaction of ENMs with biological systems is not clearly understood. The NIEHS is leading research efforts toward understanding potential environmental health
implications of ENMs to support nanotechnology environmental health and safety (nano-EHS).

**Chairing:** S. Nadadur, PhD, Morrisville, NC  
E. Crandall, MD, PhD, Los Angeles, CA

**12:00 Introduction To Nanotechnology Environmental Health Implications Research At NIEHS**  
S. Nadadur, PhD, Morrisville, NC

**12:06 Lung Interactions With Nanoparticles: Injury, Uptake And Trafficking**  
E. Crandall, MD, PhD, Los Angeles, CA

**12:23 Nanoparticle Activation Of The Macrophage NLRP3 Inflammasome**  
A. Holian, PhD, Missoula, MT

**12:40 Respiratory Effects Of Inhaled Single-Walled Carbon Nanotubes And The Role Of Nanomaterial Physicochemistry**  
K.E. Pinkerton, PhD, Davis, CA

**12:57 General Discussion**

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**DIVISION OF LUNG DISEASES/NATIONAL HEART, LUNG, AND BLOOD INSTITUTE**

**L13 EVE ASTHMA GENETICS CONSORTIUM AND BIOREPOSITORY FOR INTEGRATIVE GENOMICS RESEARCH**

**12:00 pm-1:00 pm**

**Target Audience**

Multiple groups (researchers, clinicians, fellows/trainees, and health care providers) with an interest in the genetic underpinning of asthma and the impact of this knowledge in understanding the genetic basis of asthma, disease pathogenesis and progression, and novel treatment and prevention strategies.

**Objectives**

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

- describe the research objectives, general organization, and latest findings of the EVE Asthma Genetics Consortium;
- discuss the role and interrelationship of genetics, genomics, and phenomics in understanding asthma causation and variations in response to therapy.

EVE is a consortium of U.S. investigators from 11 academic centers who had conducted genome-wide association studies (GWAS) of asthma. Objectives include: 1) combining results of individual studies to increase the power to identify asthma-susceptibility loci; examine gene-gene and gene-environment interactions; and develop novel statistical methods; 2) establish the Asthma BioRepository for Integrative Genomics Research, an open-access collection of immortalized cell lines, cDNA and DNA, and accompanying complementary dataset with genome-wide SNP data, gene expression, and methylation data from well-characterized subjects in on-going asthma genetic and genomic studies. This is an invaluable scientific resource to extend asthma genetics, genomics, and phenomics knowledge.

**Chairing:** C. Ober, PhD, Chicago, IL  
S. Banks-Schlegel, PhD, Bethesda, MD

**12:00 EVE Asthma Genetics Consortium**  
C. Ober, PhD, Chicago, IL

**12:12 The Asthma Biorepository For Integrative Genomic Research**  
B.A. Raby, MD, MPH, Boston, MA

**12:24 Linking Genetics, Genomics, And Phenomics To Better Understand Asthma**  
D.A. Meyers, PhD, Winston-Salem, NC

**12:36 Post-Asthma GWAS Analyses**  
D. Nicolae, PhD, Chicago, IL
L14  NHLBI ASTHMA CLINICAL RESEARCH NETWORKS: NEW FINDINGS
12:00 pm-1:00 pm

Target Audience
Clinicians, researchers, nurses and respiratory therapists

Objectives
At the conclusion of this session, the participant will be able to:
• learn new findings from the Tiotropium Bromide as an Alternative to Increased Inhaled Corticosteroid in Patients Inadequately Controlled on a Lower Dose of Inhaled Corticosteroid (TALC) trial;
• discuss the comparative benefits of intermittent versus daily inhaled steroid therapy in wheezing toddlers;
• describe the influence of viral infections on asthma treatment response in wheezing toddlers.

Study outcomes will be announced from an ACRN trial “Tiotropium Bromide As An Alternative To Increased Inhaled Corticosteroid in Patients Inadequately Controlled on a Lower Dose of Inhaled Corticosteroid (TALC)” and a CARE Network trial “Maintenance vs. Intermittent Inhaled Steroids in Wheezing Toddlers (MIST).” Impact of infection on episode severity and treatment response in wheezing toddlers will be presented.

Chairing:  L. Taussig, MD, Denver, CO
           R. Cherniack, MD, MS, Denver, CO

12:00  Tiotropium Bromide As An Alternative To Increased Inhaled Corticosteroid In Patients Inadequately Controlled On A Lower Dose Of Inhaled Corticosteroid (TALC) Trial: Main Outcomes
S.P. Peters, MD, Winston-Salem, NC

12:20  Maintenance vs Intermittent Inhaled Steroids in Wheezing Toddlers (MIST) Study Outcomes
R. Zeiger, MD, San Diego, CA

12:40  Impact Of Infection On Episode Severity And Treatment Response In Wheezing Toddlers
T.W. Guilbert, MD, Madison, WI

L15  THE NHLBI CHILDHOOD ADENOTONSILLECTOMY STUDY: INDICATORS OF PEDIATRIC OBSTRUCTIVE SLEEP APNEA SEVERITY
12:00 pm-1:00 pm

Target Audience
Sleep medicine practitioners and researchers; clinical investigators and trainees; and pediatricians, surgeons, psychologists, allergists and pulmonologists

Objectives
At the conclusion of this session, the participant will be able to:
• integrate data from anatomic, physiological and symptom-based assessments to manage pediatric sleep apnea;
• more appropriately refer children with signs and symptoms of sleep apnea for diagnostic testing;
• better discuss the behavior and neurocognitive co-morbidities of pediatric sleep apnea with parents.

This session will review baseline data from the ongoing multi-center NHLBI Childhood Adenotonsillectomy Trial (CHAT). CHAT is assessing the effectiveness of adenotonsillectomy (AT) among children referred for evaluation of sleep disordered breathing. The efficacy of AT is assessed with respect to changes in overall health and selected functions including learning, behavior, blood pressure, and growth. The report will highlight the relationship between baseline OSA severity subject characteristics (demographics, obesity, asthma/allergies), behavior, predictive models of OSA severity, and neurocognitive function. Findings address a significant gap in understanding of which children are at risk and the effectiveness of AT for OSA..

Chairing:  S. Redline, MD, MPH, Boston, MA
           D. Lewin, PhD, Bethesda, MD
12:00  Design Of A Pediatric Clinical Trial With A Surgical Arm  
S. Redline, MD, MPH, Boston, MA

12:10  Association Between Sleep Apnea Severity With Behavior And Neurocognitive Function  
R. Chervin, MD, Ann Arbor

12:25  Physical Examination And Questionnaires To Predict Sleep  
R. Mitchell, MD, St. Louis

12:40  Variation Of Sleep Apnea Severity With Age, Gender, Ethnicity, Obesity, And Asthma  
E.S. Katz, MD, Boston, MD

MEET THE PROFESSOR SEMINARS

Registration Fee: $70.00 (includes box lunch.)  
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

12:00 pm-1:00 pm

MP501  IL-13 AIRWAY HYPERRESPONSIVENESS AND CORTISONE RESISTANT ASTHMA  
R.G. Townley, MD, Omaha, NE

MP502  MASTERING TOBACCO DEPENDENCE TREATMENT: FROM INFANCY TO OLD AGE  
D.P.L. Sachs, MD, Palo Alto, CA  
H.J. Farber, MD, MSPH, Houston, TX

MP503  LUNG-DOMINANT CONNECTIVE TISSUE DISEASE: ADDRESSING AN INTERDISCIPLINARY ROADBLOCK  
A. Fischer, MD, Denver, CO

MP504  CYSTIC LUNG DISEASES: UNCOMMON DISORDERS COMMONLY MISDIAGNOSED  
R.M. Kotloff, MD, Philadelphia, PA

MP505  ADULT TRACHEOBRONCHOMALACIA  
A. Ernst, MD, Boston, MA

MP506  UPDATE IN LUNG CANCER CHEMOPREVENTION  
R.L. Keith, MD, Denver, CO

MP507  THE PATHOLOGY OF PULMONARY INFECTIONS: A REVIEW OF CURRENT CONCEPTS WITH AN UPDATE OF NEW MOLECULAR DIAGNOSTIC TECHNIQUES  
C.F. Farver, MD, Cleveland, OH

MP508  LUNG DISEASE ASSOCIATED WITH MONOCLONAL ANTIBODIES, NOVEL CHEMOTHERAPEUTIC AGENTS, AND OTHER BIOMOLECULES  
A.J. Polito, MD, Baltimore, MD

MP509  EMERGING TRENDS IN COPD MANAGEMENT  
N.A. Hanania, MD, MS, Houston, TX

MP510  HOW DID I LEARN EBUS?  
F. Sheski, MD, Indianapolis, IN
MP511 VENTILATOR WAVEFORMS: WHAT YOUR PATIENT’S VENTILATOR IS TRYING TO TELL YOU
H.L. Manning, MD, Lebanon, NH

MP512 LUNG FUNCTION TESTING FOR IMPAIRMENT AND DISABILITY ASSESSMENT
P.I. Harber, MD, MPH, Los Angeles, CA

MP513 CLINICAL AND RESEARCH OPPORTUNITIES IN AFRICA
S.B. Gordon, MD, Liverpool, United Kingdom

MP514 PALLIATIVE CARE AND CRITICAL CARE DELIVERY MODELS
M.L. Campbell, PhD, RN, Detroit, MI

MP515 PULMONARY FUNCTION DURING EXERCISE IN CHILDREN
D.M. Cooper, MD, Orange, CA

MP516 PULMONARY HYPERTENSION: CHALLENGES IN MANAGING COMPLEX CASES
M. Gomberg-Maitland, MD, Chicago, IL

MP517 CLOSING THE GAP: IMAGING LUNG TISSUE SLICES IN 3D
M. Königshoff, MD, PhD, Munich, Germany

MP518 IDIOPATHIC PULMONARY FIBROSIS (IPF): STAGING AND MANAGEMENT
M.P. Steele, MD, Durham, NC

MP519 SHOULD RESIDENT AND FELLOW WORK HOURS BE LIMITED? A PRO-CON DEBATE
N. Ayas, MD, Vancouver, Canada
A. Malhotra, MD, Boston, MA

VISIT THE EXHIBIT HALL
Take this opportunity between sessions to visit the Exhibit Hall to gain practical knowledge to advance care and research. Over 175 exhibitors will be on hand to provide information on pharmaceutical products, medical equipment, publications and research services.

CLINICAL IMAGES IN PEDIATRIC PULMONOLOGY
The Assembly on Pediatrics is hosting "Clinical Images in Pediatric Pulmonology" in conjunction with the Pediatric Clinical Chest Rounds scheduled for Monday, May 16, 2:00 pm-4:30 pm.

Interesting and instructive images of radiographs, pulmonary function tests, bronchoscopic images, sleep tracings, etc. of children with lung disease will be displayed along with the case synopses, diagnoses and discussions.
B81 NURSING YEAR IN REVIEW

Assemblies on Nursing
2:00 pm-4:30 pm

Target Audience
Researchers, nurses, physicians who are interested in research and quality care related to pulmonary health

Objectives
At the conclusion of this session, the participant will be able to:
• describe one way to use comparative effective research in nursing care of those with pulmonary, critical or sleep difficulties;
• understand and describe one way of incorporating health literacy research into their practice;
• describe one way of using QA data in research.

This session will provide cutting edge information related to Comparative effectiveness research, Health Literacy Research and using QA/QI data in Research.

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

Chairing: M.A. Carno, PhD, Rochester, NY
W.M. Gibson-Scipio, PhD, Detroit, MI

2:00 Comparative Effectiveness Research In Nursing
S.K. Hanneman, PhD, Houston, TX

2:45 Health Literacy Research in Nursing
M.R. George, PhD, RN, AE-C, Philadelphia, PA

3:30 QA/QI Data In Research In Relation To Nursing
G. Ingersoll, PhD, Rochester, NY
consortia of academic and industry labs, plus
government agencies, offer exciting opportunities to
speed development of new therapies through
presentations of the COPD Biomarker Qualification
Consortium, the NHLBI SPIROMICS (subpopulations
and surrogate markers study) and the MRC COPD
Consortium sharing data, consolidating existing cohorts,
facilitating hypothesis-driven research.

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

Chairing:  R.B. Fick, Jr., MD, Palo Alto, CA
          F.C. Sciurba, MD, Pittsburgh, PA

2:00  Opportunities For Novel Therapeutic Agents:
      Newly Described COPD Pathmechanisms
      S.I. Rennard, MD, Omaha, NE

2:25  Lessons Learned From Recent New Drug
      Applications
      F.J. Martinez, MD, MS, Ann Arbor, MI

2:50  Health Authority Review Of New Drugs: Part I.
      The FDA
      L.I. Gilbert-McClain, MD, Silver Spring, MD

3:10  Health Authority Review Of New Drugs: Part II.
      The EMEA
      Speaker To Be Announced

3:30  Collaborative Opportunities: The COPD
      Biomarker Qualification Consortium
      R. Tal-Singer, PhD, King of Prussia, PA

3:55  Collaborative Opportunities: The SPIROMICS
      COPD Study
      T. Croxton, PhD, MD, Bethesda, MD

4:20  General Discussion

Target Audience
Pediatric pulmonologists, fellows, nurses, respiratory
therapists and other healthcare practitioners caring for
children with lung disease

Objectives
At the conclusion of this session, the participant will be able to:
• describe diagnostic dilemmas in the area of Pediatric
  lung disease;
• discuss the pathophysiology and clinical
  manifestations of these difficult cases and identify the
  appropriate diagnostic studies;
• identify controversial management issues
  surrounding the care of these patients.

This session will present interesting diagnostic cases in
the area of pediatric respiratory disease. Five cases
will be presented, followed by an in depth discussion
from an expert. Additionally, an interactive format
consisting of questions within each presentation to
which the audience can respond with touch pads will
be used to enhance audience participation and
facilitate participant learning.

Chairing:  M.S. Woo, MD, Los Angeles, CA
          P.J. Robinson, MD, PhD, Melbourne,
          Parkville, Australia
          J. Debley, MD, Seattle, WA

2:00  Introduction
      P.J. Robinson, MD, PhD, Melbourne, Parkville,
      Australia

2:05  Case Reports 1-5
      S.D. Davis, MD, Chapel Hill, NC

2:55  Concluding Remarks
      M.S. Woo, MD, Los Angeles, CA

3:00  Discussants 1-5
      S.D. Davis, MD, Chapel Hill, NC

B83  PEDIATRIC CLINICAL CHEST ROUNDS

Assemblies on Pediatrics; Allergy, Immunology and
Inflammation; Clinical Problems; Critical Care; Nursing
2:00 pm-4:30 pm
B84  EXTRACORPOREAL GAS EXCHANGE: BEYOND MECHANICAL VENTILATION FOR ACUTE LUNG INJURY

Assemblies on Critical Care; Pediatrics
2:00 pm-4:30 pm

Target Audience
Multidisciplinary providers (e.g., physicians, nurses, allied health care), including trainees, caring for neonatal/pediatric and adult patients with acute respiratory failure; those with clinical and/or research interests in critical care and acute respiratory failure

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

- understand the rationale, physiology, and current evidence supporting the use of extracorporeal gas exchange in critically ill patients with acute respiratory failure;

- describe novel extracorporeal gas exchange techniques that are being developed for the management of acute respiratory failure in critically ill patients;

- understand the indications, target populations, and risks and benefits of extracorporeal gas exchange to manage critically ill patients with acute respiratory failure.

This session will provide an overview for the rationale for ECGE use in critically ill populations (neonatal/pediatric/adult) as well as critically review the state of current evidence for its efficacy in these patients. At the end of this session, critical care clinicians will have increased knowledge regarding the indications, target populations, and the risks and benefits of ECGE in critically ill patients. Finally, the session will introduce some novel ECGE technologies and provide suggestions for future research in ECGE in order to elucidate its place in the ICU clinician’s armamentarium.

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

Chairing:  E. Fan, MD, Baltimore, MD
I.M. Cheifetz, MD, Durham, NC
R. Brower, MD, Baltimore, MD

2:00  Introduction
E. Fan, MD, Baltimore, MD

2:10  Extracorporeal Gas Exchange: Nuts, Bolts, and Physiology
H. Dalton, MD, Phoenix, AZ

2:30  Extracorporeal Gas Exchange: The Neonatal-Pediatric Perspective
I.M. Cheifetz, MD, Durham, NC

2:55  Extracorporeal Gas Exchange: The Current Perspective For Acute Respiratory Failure In Adults
A. Davies, MBBS, Melbourne, Australia

3:20  Going Lower: Using ECGE to Extend The Limits Of Lung Protective Ventilation
V.M. Ranieri, MD, Turin, Italy

3:45  Novel Extracorporeal Gas Exchange Devices (e.g., NovaLung, Hemolung)
A. Batchinsky, MD, Fort Sam Houston, TX

4:10  New Technology, Old Standards: ECGE And The Role Of Evidence-Based Medicine
R. Brower, MD, Baltimore, MD

B85  THE ROLE OF THE AIRWAY SMOOTH MUSCLE IN THE ORIGIN AND PERSISTENCE OF ASTHMA

Assemblies on Respiratory Structure and Function; Allergy, Immunology and Inflammation; Pediatrics; Respiratory Cell and Molecular Biology
2:00 pm-4:30 pm

Target Audience
Basic and applied researchers, pediatricians, pulmonologists
Objectives
At the conclusion of this session, the participant will be able to:

- understand ASM development and how it can be early altered in asthma, the role of ASM in impaired lung function in asthma;

- identify the relations of ASM structure and disease progression in asthma, the genetic basis of ASM development and current treatments that target the ASM;

- more appropriately refer to the structural changes leading to asthma persistence.

The symposium will explore the role of ASM in asthma, in relation to the natural history of asthma, particularly the development of airway pathology, onset of asthma in early life, abnormal airway function and the persistence of asthma of varying severity. Current and new treatment approaches targeting the ASM will be discussed.

Chairing: A. James, MD, PhD, Perth, Australia
T. Mauad, MD, PhD, Sao Paulo, Brazil

2:00 The Embryological Development Of ASM - What Can Go Wrong: Concepts About ASM Embryology And Its Role In Asthma Development
K.R. Badri, PhD, Chicago, IL

2:25 How Can Abnormal (Airway) Structure Lead To An Inflammatory Disease?
J. Whitsett, MD, Cincinnati, OH

2:50 How Much Muscle Is Really There In Asthma?
A. James, MD, PhD, Perth, Australia

3:15 How Much Muscle Is Necessary To Cause Excessive Airway Narrowing?
P. Pare, MD, PhD, Vancouver, Canada

3:40 ASM In Relation To The Onset And Persistence Of Asthma And Abnormal Lung Function: What Do The Birth Cohort Studies Tell Us?
F. Martinez, MD, Tucson, AZ

4:05 Current And Innovative Approaches To Asthma Treatment Targeting The ASM
P.J. Sterk, MD, PhD, Amsterdam, Netherlands

B86 THE HUMAN MICROBIOME AND DEVELOPMENT OF ASTHMA AND ALLERGY

Assemblies on Allergy, Immunology and Inflammation; Clinical Problems; Microbiology, Tuberculosis and Pulmonary Infections; Pediatrics; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Those with clinical, research, or administrative responsibilities; those needing instruction in areas of medicine outside of their specialty.

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

- learn new findings about the role of the human microbiome in the origin of atopic disease.

Changes in the human microbiome are suspected to be associated with development of lifestyle associated diseases. Particularly, imbalance of the airway and intestinal mucosal bacterial eco-system has been suggested as a lifestyle related risk factor for asthma and allergy. Recent evidence suggests that the bronchial tree contains a characteristic microbiota that is disturbed in asthmatic airways. Disturbed colonization of the airways has been associated with the development of asthma, and reduced diversity of the intestinal microbiota has been associated with development of atopy. Together this suggests new avenues for the understanding of the origins of asthma and allergy.

Chairing: W.O. Cookson, MD, DPhil, London, United Kingdom
H.A. Boushey, MD, San Francisco, CA

2:00 The Microbiome In Asthma Patients
W.O. Cookson, MD, DPhil, London, United Kingdom

2:30 Gut Microbiota And Extra-Intestinal Disease
G.B. Huffnagle, MD, Ann Arbor, MI
3:00 Disturbed Human Microbiota In The Origins Of Asthma And Allergy
H. Bisgaard, MD, DMSci, Copenhagen, Denmark

3:30 The Human Microbiome: A Target For Disease Modification?
H.A. Boushey, MD, San Francisco, CA

4:00 Merging The Evidence For The Hygiene Hypothesis And The Human Microbiota In The Origins Of Asthma And Allergy
E. von Mutius, MD, Munich, Germany

**TRANSLATIONAL**

**SCIENTIFIC SYMPOSIUM**

**B87 THE AGING LUNG: CONSIDERATIONS IN DISEASE DEVELOPMENT AND EXPRESSION**

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

2:00 pm-4:30 pm

**Target Audience**
Clinicians, basic and translational scientists, providers of care for geriatric patients

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

- understand the anatomic and physiologic changes in the lung that associate with aging;
- describe the cellular and molecular features of organismal aging in the context of lung disease;
- appreciate the contribution of airway morphology, tissue fibrosis and immunosenescence to age-related pulmonary disease.

Despite the emerging science of aging, organ-specific aging as a context for common adult diseases has only recently been examined. Lung function decline, lung infections, airways disease and lung fibrosis in the elderly exact a significant quality-of-life and cost-of-care burden. Oxidative stress, cellular senescence and increased susceptibility to cell death converge onto compromised lung repair and regeneration. We review our current understanding of anatomic, physiologic, cellular and molecular features of the aging lung, focusing on how these narratives underscore susceptibility to lung disorders. This session will also consider the optimal use of aging animal models as probative tools.

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

**Chairing:** E. Neptune, MD, Baltimore, MD
K. Ito, PhD, London, United Kingdom

2:00 How The Lung Ages
C. Irvin, MD, Burlington, VT

2:20 The Aging Lung: Paradigms From Organismal Aging
D. Lombard, MD, PhD, Ann Arbor, MI

2:40 Immunosenescence And Pulmonary Defenses
K.C. Meyer, MD, MS, Madison, WI

3:00 Idiopathic Pulmonary Fibrosis: Age-Related Defect In Lung Regeneration
C.K. Garcia, MD, PhD, Dallas, TX

3:20 Use Of Animal Models To Explore Lung Aging
E. Neptune, MD, Baltimore, MD

3:40 Therapeutic Prospects For The Aging Lung
K. Ito, PhD, London, United Kingdom

**CLINICAL • TRANSLATIONAL**

**KENNETH MOSER MEMORIAL SYMPOSIUM**

**B88 RIGHT VENTRICULAR DYSFUNCTION: THE OTHER HEART FAILURE**

Assemblies on Pulmonary Circulation; Clinical Problems; Respiratory Cell and Molecular Biology

2:00 pm-4:30 pm

**Target Audience**
Physicians, nurses, trainees

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

- understand the mechanisms and management of RV failure;
• understand the clinical approaches to treating the patient with RV failure of various etiologies and improving clinical outcomes;

• identify the new directions of research in RV function.

This course will review the clinical implications and management of RV failure.

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

Chairing: S.M. Kawut, MD, Philadelphia, PA
A. Vonk-Noordegraaf, MD, Amsterdam, Netherlands

2:00 Mechanisms Of RV Failure
H.J. Bogaard, MD, PhD, Amsterdam, Netherlands

2:20 The RV And Outcomes In Health And Disease
S.M. Kawut, MD, Philadelphia, PA

2:40 The Image Of Failure: RV Dysfunction
A. Vonk-Noordegraaf, MD, Amsterdam, Netherlands

3:00 Mechanical Management Of RV Failure
F. Haddad, MD, Stanford, CA

3:20 Mechanical Circulatory Support For The Failing RV
M.M. Hoeper, MD, Hannover, Germany

3:40 Experimental Approaches To RV Failure
N.F. Voelkel, MD, Richmond, VA

4:00 The Future Of Clinical And Basic Investigation In RV Dysfunction
S. Archer, MD, Chicago, IL

Target Audience
Pulmonary, critical care and sleep medicine physicians, scientists and allied health professionals interested in providing care for obese patients with respiratory medical problems.

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

• understand pulmonary-, critical care-, and sleep-related complications of obesity;

• develop insight into mechanisms by which obesity contributes to dyspnea and alterations in lung function;

• integrate treatment approaches to the management of obesity to improve the health and quality of life of obese patients with or at risk of respiratory compromise.

The prevalence of obesity has increased to alarming levels in many countries around the world. The purpose of this symposium will be to develop an understanding of the respiratory-, critical care-, and sleep-related complications of obesity and therapeutic approaches to minimize these complications. Furthermore, the symposium will address potential mechanisms by which obesity contributes to respiratory compromise. Finally the symposia will examine the success of particular weight loss strategies and their effects on patients’ health.

Chairing: S.P. Patil, MD, PhD, Baltimore, MD
E.M. Clerisme-Beaty, MD, Baltimore, MD
A. El-Sohl, MD, MPH, Buffalo, NY

2:00 Obesity And The Lung: Effects On Structure And Function
G. King, MD, St. Leonards, Australia

2:25 COPD And Obesity: Physiological Implications And Management Approaches
D. O’Donnell, MD, Kingston, Canada

2:50 Effect Of Weight Loss On Pulmonary Inflammation In Asthma
A.E. Dixon, MD, Burlington, VT

3:15 Obesity And The Abdominal Compartment Syndrome
M. Cheatham, MD, Orlando, FL
2:00 Cigarette Smoking And Macrophage Immune Response To M. Tuberculosis
R.N. van Zyl-Smit, MBChB, MMED, Cape Town, South Africa

2:20 Cigarette Smoke And Susceptibility To Tuberculosis: Results Of In Vivo And In Vitro Studies Using Animal Models
E.D. Chan, MD, Denver, CO

2:40 Evidence For Active And Passive Smoke Exposure And Increased Risk Of TB Infection, TB Disease, And TB Mortality
J.E. Golub, MD, MPH, Baltimore, MD

3:00 Cigarette Smoking And Mortality From TB In India
V. Gajalakshmi, MD, Chennai, India

3:20 Smoking, Tuberculosis, And COPD: Synergistic Risk Factors For Chronic Lung Disease
M.D. Eisner, MD, San Francisco, CA

3:40 Responding To The Evidence: Clinical, Public Health, And Research Implications Of Immunologic And Epidemiologic Data Linking Cigarette Smoking And Tuberculosis
J. Samet, MD, Los Angeles, CA
4:00 Responding To The Evidence: Current U.S. And Global Efforts To Prevent Smoking Attributable Tuberculosis
S.A. Bialous, RN, MScN, DrPH, San Francisco, CA

4:20 General Discussion

CLINICAL SCIENTIFIC SYMPOSIUM

B91 THE PRACTICE OF MEDICINE: INSIGHTS AND UPDATES

Clinical Practice Committee; Clinicians Advisory Committee

2:00 pm-4:30 pm

Target Audience
Practicing clinicians (particularly those in practice less than 5 years), residents, fellows and office workers

Objectives
At the conclusion of this session, the participant will be able to:
• apply new codes for pulmonary, critical care and sleep medicine;
• understand how to best integrate electronic medical records and electronic tools into their practice;
• understand how eICUs can be used and the potential challenges of integrating eICUs.

The goal of this symposium is to provide information, insights and tools to be able to have an efficient, effective productive practice. This session will cover new issues related to coding and billing as well as new tools in information technology.

Program And Speakers To Be Announced.

2:00 pm-4:30 pm

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

The thirteen Assemblies are the primary groups of the American Thoracic Society. Each Assembly holds an annual Membership Meeting at the International Conference. All Assembly members and other interested individuals are invited to attend. These meetings provide the members several opportunities: 1) receive an update on the Assembly’s projects; 2) give input into the Assembly’s future directions; 3) hear the presiding chair’s message and agenda for the coming year; and 4) network with those colleagues you may have missed at sessions.

Each Assembly’s Nominating Committee has selected candidates for some or all of the following positions: Assembly Chair (2012-2014), Program Committee Chair-Elect (2011-2012), and two members of the Nominating Committee (2011-2012.)

The Assembly Membership Meetings will be held on Monday, May 16, 5:00 pm-7:00 pm, with the exception of the Assemblies on Behavioral Science and Pediatrics (see below.)

ALLERGY, IMMUNOLOGY AND INFLAMMATION
Chairing: S.C. Erzurum, MD, Cleveland, OH

BEHAVIORAL SCIENCE
Chairing: L.B. Gerald, PhD, MSPH, Tucson, AZ
This Assembly will meet on
Sunday, May 15, 6:30 pm-8:30 pm

CLINICAL PROBLEMS
Chairing: K.K. Brown, MD, Denver, CO

CRITICAL CARE
Chairing: J.B. Hall, MD, Chicago, IL

ENVIRONMENTAL AND OCCUPATIONAL HEALTH
Chairing: M.D. Eisner, MD, San Francisco, CA

MICROBIOLOGY, TUBERCULOSIS AND PULMONARY INFECTIONS
Chairing: L. Huang, MD, San Francisco, CA

NURSING
Chairing: L. Cicutto, PhD, RN, Denver, CO

PEDIATRICS
Chairing: T.W. Ferkol, MD, St. Louis, MO
This Assembly will meet on
Sunday, May 15, 6:30 pm-8:30 pm

PULMONARY CIRCULATION
Chairing: M.N. Gillespie, PhD, Mobile, AL

PULMONARY REHABILITATION
Chairing: S.C. Lareau, RN, MS, Aurora, CO

RESPIRATORY CELL AND MOLECULAR BIOLOGY
Chairing: L.M. Schnapp, MD, Seattle, WA

RESPIRATORY STRUCTURE AND FUNCTION
Chairing: A.J. Halayko, PhD, Winnipeg, Canada

SLEEP AND RESPIRATORY NEUROBIOLOGY
Chairing: A. Malhotra, MD, Boston, MA
TSS1  CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Registration Fee: $170.00 for the full series (includes continental breakfast.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

This is part 3 of a 4-part series. Those registering for this seminar series will be registered for all 4 parts.

Program for the full series is included with the Monday, May 16, 7:00 am program.

7:00 am-8:00 am

Beyond The Acute Event: Impact On Patient’s Life
M. Miravitlles, MD, Madrid, Spain

TSS2  INTERSTITIAL LUNG DISEASE

Registration Fee: $140.00 for the full series (includes continental breakfast.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

This is part 2 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts.

Program for the full series is included with the Monday, May 16, 7:00 am program.

7:00 am-8:00 am

Gastroesophageal Reflux And Microaspiration In Interstitial Lung Disease
J.S. Lee, MD, San Francisco, CA

TSS3  LUNG CANCER

Registration Fee: $140.00 for the full series (includes continental breakfast.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

This is part 2 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts.

Program for the full series is included with the Monday, May 16, 7:00 am program.

7:00 am-8:00 am

Update On Bronchoscopic And Modalities For Diagnosis, Staging And Therapeutic Interventions
P.N. Chhajed, MD, Mumbai, India
### SUNRISE SEMINARS

Registration Fee: $65.00 (includes continental breakfast.)
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

7:00 am-8:00 am

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<td>E. Melen, MD, PhD, Stockholm, Sweden, J.A. Lasky-Su, ScD, Boston, MA</td>
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C1  CLINICAL YEAR IN REVIEW
8:15 am-10:15 am

Target Audience
Providers of care for patients with diverse lung diseases

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

• have improved knowledge of recent articles for core pulmonary/critical care topics;

• apply recent advances in core pulmonary/critical care topics to the care of patients;

• have new strategies/treatment options to manage patients with pulmonary/critical care illnesses.

Clinical year in review sessions are presented each morning of the ATS meeting. A total of 16 pulmonary diseases areas are covered, 4 each morning. Each disease is presented by an invited expert in the field. Prior to the conference, the expert does an extensive literature search and also solicits feedback from peers. Four to six key articles from the previous year are presented for each disease. In addition, a detailed bibliography which contains summaries of the articles presented as well as additional articles of interest is provided to attendees.

Chairing: K.R. Flaherty, MD, MS, Ann Arbor, MI
M.S. Herridge, MD, Toronto, Canada
E.R. Sutherland, MD, Denver, CO

8:15 Mechanical Ventilation
N.D. Ferguson, MD, MSc, Toronto, Canada

8:45 ARDS
M.S. Herridge, MD, Toronto, Canada

9:15 Non-Pulmonary ICU
S.S. Carson, MD, Chapel Hill, NC

9:45 Quality Performance Assessment Metrics In Your Practice
R.C. Hyzy, MD, Ann Arbor, MI

C2  NON-IDIOPATHIC PULMONARY FIBROSIS INTERSTITIAL LUNG DISEASE: THE NEGLECTED ENTITIES

Assembly on Clinical Problems
8:15 am-10:45 am

Target Audience
Pulmonary physicians, advanced practice nurses, fellows in training, physician assistants, respiratory therapists

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

• recognize the importance of differences in clinical presentations, risk factors, prognosis, and therapies for some of the non-IPF ILDs (benefit competence and patient outcomes)

• diagnose some of the non-IPF ILDs based on radiographs, biopsies and clinical features (benefit all 3)

• improve the diagnostic approach to and therapy for non-IPD ILD

While Idiopathic Pulmonary Fibrosis is the most common interstitial lung disease seen by pulmonary practices, the differential is broad and includes many other disease entities. Practicing pulmnologists need to be familiar with these less well known disorders, including their appropriate diagnostic approach, risk factors, recognition and therapy. This session will focus on recent updates in these less well recognized disorders.

Chairing: L. Morrison, MD, Durham, NC
M. Kreider, MD, Philadelphia, PA
G. Tino, MD, Philadelphia, PA

8:15 Cryptogenic Organizing Pneumonia
Speaker To Be Announced

8:40 Connective Tissue Disease Associated-ILD
M. Kreider, MD, Philadelphia, PA

9:05 Chronic Hypersensitivity Pneumonitis
Speaker To Be Announced
9:30  Pulmonary Langerhans Cell Histiocytosis  
   Speaker To Be Announced

9:55  Lymphocytic Interstitial Pneumonia  
   Speaker To Be Announced

C3  BRONCHOSCOPY CLINIC:  CHALLENGES IN INTERVENTIONAL PULMONOLOGY!

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

8:15 am-10:45 am

Target Audience
Pulmonologists, pulmonary fellows, thoracic surgeons, nurses and respiratory therapists

Objectives
At the conclusion of this session, the participant will be able to:
• explain recent developments in interventional pulmonology and apply their use in actual patients;
• describe potential airway problems and how to try to solve them;
• systematically review diverse and unique airway problems.

Interventional pulmonology is developing and spreading at a rapid pace throughout the world. Awareness of recent developments and their clinical application in the management of actual cases will be discussed. There will be significant time to discuss the pro and con of management strategies. The application of new innovations in diseases encountered in routine clinical practice will be discussed using evidence based guidelines.

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

Chairing:  P.N. Mathur, MBBS, Indianapolis, IN
A.C. Mehta, MD, MBBS, Cleveland, OH

8:15  Hemoptysis: How Did I Get Into This Problem And What Do I Do To Get Out?  
   A.C. Mehta, MD, MBBS, Cleveland, OH

8:35  TE Fistula-Are There Any Options?  
   M. Noppen, PhD, Brussels, Belgium

8:55  Discoloration And Pills In The Airway  
   D. Sterman, MD, Philadelphia, PA

9:15  Recurrent Subglottis Stenosis: Do I Have Any Option?  
   C.T. Bolliger, MD, PhD, Tygerberg, South Africa

9:35  Unconscious After Routine Bronchoscopy; What Happened?  
   P.N. Chhajed, MD, Mumbai, India

9:55  Relapsing Polychondritis: What Options Do I Have?  
   E. Edell, MD, Rochester, MN

10:15  What Is Your Diagnosis?  
   A.C. Mehta, MD, MBBS, Cleveland, OH

C4  PREVENTING AND TREATING “THE DWINDLES” OF CHRONIC CRITICAL ILLNESS

Assembly on Critical Care

8:15 am-10:45 am

Target Audience
Clinicians (physicians, nurses, allied health professionals) who treat critically ill patients

Objectives
At the conclusion of this session, the participant will be able to:
• provide the definition, epidemiology, and burden of chronic critical illness;
• apply selected new nutritional and rehabilitation strategies to prevent and treat chronic critical illness;
• identify new findings related to prognosis and healthcare organization for the chronically critically ill.
Critical illness extends beyond initial resuscitation, yet preventive and therapeutic strategies are often lacking for patients who remain critically ill despite ongoing organ support. In this session, participants will learn the current state of the art regarding the definition and epidemiology of chronic critical illness and established and novel prevention strategies and treatments.

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

**Chairing:** N. Adhikari, MDCM, MSc, Toronto, Canada
M. Terblanche, MBChB FRCA EDIC, London, United Kingdom

**8:15** Chronic Critical Illness: What Is It And Is It A Problem?
S.S. Carson, MD, Chapel Hill, NC

**8:35** Modulating The Engine Of Chronic Inflammation Using Vitamins And Trace Elements
J. Carcillo, MD, Pittsburgh, PA

**8:55** Modulating The Engine Of Chronic Inflammation Using Statins
M. Terblanche, MBChB, FRCA, EDIC, London, United Kingdom

**9:15** Endocrinopathies Of Chronic Critical Illness: What Are They And Does Treatment Help?
H. Meggison, MD, Ottawa, Canada

**9:35** Rehabilitation Of Muscle With Early Mobilization And Electrical Stimulation
J.P. Kress, MD, Chicago, IL

**9:55** Prognosis And Decision-Making In Chronic Critical Illness
C.E. Cox, MD, MPH, Durham, NC

**10:15** Implications Of Chronic Critical Illness For Health Systems
J.M. Kahn, MD, MSc, Pittsburgh, PA

**10:35** General Discussion

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**BEHAVIORAL • CLINICAL • TRANSLATIONAL SCIENTIFIC SYMPOSIUM**

**C5 COMPARATIVE EFFECTIVENESS RESEARCH: WHY NOW?**

Assemblies on Behavioral Science; Allergy, Immunology and Inflammation; Clinical Problems; Critical Care; Environmental and Occupational Health; Nursing; Pediatrics; Pulmonary Rehabilitation; Sleep and Respiratory Neurobiology

**8:15 am-10:45 am**

**Target Audience**
Trainees and established clinical/translational research investigators

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

* define and describe comparative effectiveness research and clarify how it differs from traditional efficacy research paradigms;

* describe the role of comparative effectiveness research in the major areas of clinical research represented by the ATS membership: asthma, critical care, chronic obstructive lung disease, and sleep medicine;

* discuss the international and patient perspectives of comparative effectiveness research.

The U.S. Patient Protection and Affordable Care Act highlights the need to increase comparative clinical effectiveness research in the U.S. As a follow-up to the ATS 2010 Presidential Symposium on Comparative Effectiveness Research, the proposed scientific symposium will provide trainees and established investigators an opportunity to exchange ideas about the need for comparative effectiveness research in pulmonary, critical care, and sleep medicine. Discussions will include patient and international perspectives on comparative effectiveness research.

**Chairing:** J.P. Kiley, PhD, MS, Bethesda, MD
C.H. Goss, MD, MSc, Seattle, WA
K.A. Riekert, PhD, Baltimore, MD
8:15 Comparative Effectiveness Research: A N ALOGISM? J.A. Krishnan, MD, PhD, Chicago, IL
8:30 Comparative Effectiveness Research: A European Perspective J. Vestbo, MD, PhD, Manchester, United Kingdom
8:45 Panel Discussion
8:50 Comparative Effectiveness Research: A Patient’s Perspective J. Walsh, Washington, DC
9:05 Panel Discussion
9:10 Comparative Effectiveness Research In Asthma: What’s Needed Now? R.A. Wise, MD, Baltimore, MD
9:30 Panel Discussion
9:35 Comparative Effectiveness Research In Critical Care: What’s Needed Now? G.R. Bernard, MD, Nashville, TN
9:55 Panel Discussion
10:00 Comparative Effectiveness Research In Sleep Disorders: What’s Needed Now? S. Redline, MD, MPH, Boston, MA
10:15 Panel Discussion
10:20 Comparative Effectiveness Research In COPD: What’s Needed Now? R.A. Mularski, MD, MSHS, MCR, Portland, OR
10:35 Panel Discussion

TRANSLATIONAL
ALFRED FISHMAN MEMORIAL SYMPOSIUM

C6 HYPOXIC PULMONARY HYPERTENSION: A HALF CENTURY OF DISCOVERY

8:15 Patient Perspective Speaker To Be Announced
8:20 Early Studies In High Altitude Pulmonary Physiology B. Grover, MD, Arroyo Grande, CO

Target Audience
Health care providers or investigators with interest in the effects of high altitude or hypoxia on the lung, high altitude physiology, pulmonary hypertension, adaptive changes to hypoxia or chronic lung disease. Investigators interested in basic science mechanisms of pulmonary vascular responses to acute and chronic hypoxia may also be interested along with respiratory physiologists and individuals interested in mountaineering or caring for those who live or sojourn to high altitudes.

Objectives
At the conclusion of this session, the participant will be able to:
• identify findings about pulmonary vascular responses to acute and chronic hypoxia;
• apply mechanisms of physiologic and pathologic pulmonary vascular responses to diseases caused by chronic hypoxia;
• improve the quality of life/health status of patients with chronic hypoxic lung disease and healthy people who sojourn to high altitude.

Exposure to acute and chronic hypoxia causes a myriad of physiologic and pathologic changes in the pulmonary circulation. Many investigators from the American Thoracic Society 2011 host city of Denver, Colorado have played key roles in advancing our understanding of these changes and man’s acclimatization to high altitude. The purpose of this symposium is to review the physiologic, cellular and molecular mechanisms that modulate pulmonary hypertensive responses to hypoxia, describe the acclimatization of man to high altitude, and to highlight the advances that have been made in this field over the last half century.

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

Chairing: J.R. Klinger, MD, Providence, RI W.W. Wagner, PhD, Mobile, AL A. Peacock, MD, Glasgow, United Kingdom
Recent Advances In Mechanisms Of Hypoxic Pulmonary Vasoconstriction
I. McMurtry, PhD, Mobile, AL

Pulmonary Vascular Remodeling In Chronic Hypoxia
K. Stenmark, MD, Aurora, CO

Right Ventricular Adaptation To Chronic Hypoxic
N.F. Voelkel, MD, Richmond, VA

Hypoxic Pulmonary Hypertension In Man
P. Bartsch, MD, Heidelberg, Germany

Man At High Altitude
J. West, MD, San Diego, CA

8:15 am-10:45 am

Target Audience
Pulmonary rehabilitation professionals and students, pulmonary physicians, nurses, physical therapists, exercise scientists, behavioral scientists

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

• assess the quality of pulmonary rehabilitation programs based on the credentials of the staff;

• refer COPD patients to pulmonary rehabilitation through better knowledge of program goals and expected outcomes;

• tailor their program based on improved understanding of methodologies and treatment goals.

Pulmonary rehabilitation is at a crucial crossroads. Progress in recent years has improved the scientific basis of this discipline; the perception of pulmonary rehabilitation as the standard of care for those debilitated by lung disease is growing. Yet, despite prospects for improved funding, availability remains poor in many regions. For pulmonary rehabilitation to move forward, a number of choices will have to be made. This symposium focuses on four issues that have the potential to shape the future of pulmonary rehabilitation. The pro/con format will help highlight the consequences of these choices.

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

Chairing:  R. Casaburi, MD, PhD, Torrance, CA
           C.M. Garvey, FNP, MSN, MPA, AE-C, Daly City, CA

8:15  Formal Education In Pulmonary Rehabilitation Science Should Be Required For Program Leaders: PRO
      E. Hillegass, PT, PhD, Atlanta, GA

8:30  Formal Education In Pulmonary Rehabilitation Science Should Be Required For Program Leaders: CON
      C.M. Garvey, FNP, MSN, MPA, AE-C, Daly City, CA

8:45  General Discussion

8:52  The Home Rehabilitation Movement Will Destroy Traditional Rehabilitation Programs: PRO
      R.L. ZuWallack, MD, Hartford, CT

9:07  The Home Rehabilitation Movement Will Destroy Traditional Rehabilitation Programs: CON
      J. Bourbeau, MD, MPH, Montreal, Canada

9:22  General Discussion

9:29  The 6-Minute Walk Is An Inappropriate Exercise Test For Use In Pulmonary Rehabilitation: PRO
      R. Casaburi, MD, PhD, Torrance, CA

9:44  The 6-Minute Walk Is An Inappropriate Exercise Test For Use In Pulmonary Rehabilitation: CON
      B.R. Celli, MD, Boston, MA

9:59  General Discussion
The Main Focus Of Pulmonary Rehabilitation Should Be On Improving Survival And Physiological Function, Not Quality Of Life: PRO
B.J. Make, MD, Denver, CO

The Main Focus Of Pulmonary Rehabilitation Should Be On Improving Survival And Physiological Function, Not Quality Of Life: CON
P. Jones, MD, London, United Kingdom

General Discussion

BASIC • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

C8 DAMAGE-ASSOCIATED MOLECULAR PATTERNS IN LUNG DISEASE AND CRITICAL ILLNESS: THE ENEMY WITHIN

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

8:15 am - 10:45 am

Target Audience
Basic scientists, clinical scientists, and clinicians interested in understanding a new class of molecular targets (‘damage-associated molecular patterns’) produced during tissue injury that act to promote lung inflammation and repair through activating the innate immune response.

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

• understand that the innate immune response is not restricted to infectious non-self insults, but also plays a critical role in both the pathogenesis and repair that follows a variety of aseptic injuries to the lung and other organs;

• understand how several endogenous molecules, such as hyaluronan, oxidized phospholipid, and mitochondrial components sustain the inflammatory response to organ injury;

• understand that certain injury-elicited self molecules may represent novel targets for the treatment of lung disease and sepsis.

Initially described as a response system for infection, the Toll-like Receptor family of innate immune receptors has recently also been shown to respond to a variety of endogenous molecules, such as hyaluronan, oxidized phospholipids, and mitochondrial contents (i.e., damage-associated molecular patterns [DAMPs]), that are elicited during aseptic organ injury. Emerging literature suggests that the innate immune response may indeed play an unexpectedly pivotal role in both pathogenesis and repair following a variety of non-infectious injuries to the lung. This session will develop this extended paradigm of innate immunity and speculate on its therapeutic implications for lung disease and critical illness.

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

Chairing: M.B. Fessler, MD, Research Triangle Park, NC
S. Garantziotis, MD, Research Triangle Park, NC

8:15 Novel Roles For Innate Immunity In The Epithelial Response To Mechanical Stretch: Implications For Ventilator-Induced Lung Injury
S. Garantziotis, MD, Research Triangle Park, NC

8:40 Oxidized Phospholipid-TLR Interactions As A Final Common Pathway In The Pathogenesis Of Acute Lung Injury
J. Penninger, PhD, Vienna, Austria

9:05 Mitochondrial DAMPs In Trauma-Induced SIRS
C. Hauser, MD, Boston, MA

9:30 Programming Of Cell Fate And Repair By Hyaluronan-TLR Interactions In Acute Lung Injury
P.W. Noble, MD, Durham, NC

9:55 Innate Immunity As Homeostatic Second Messenger: Coupling Between Cholesterol Transport and Inflammation By MyD88
M.B. Fessler, MD, Research Triangle Park, NC

10:20 Role of TLR4 In Oxidative Pulmonary Injury
P. Lee, MD, New Haven, CT
CLINICAL ROBERT ROGERS MEMORIAL SYMPOSIUM

C9 QUANTITATIVE THORACIC IMAGING, THE PAST, THE PRESENT, AND THE FUTURE

Assemblies on Respiratory Structure and Function; Clinical Problems; Sleep and Respiratory Neurobiology

8:15 am-10:45 am

Target Audience
Those with clinical and research interests in thoracic medicine

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

• identify the imaging modalities available for pulmonary research;
• explain the strengths and weaknesses of the imaging modalities;
• describe new findings from applications of imaging in lung disease.

The purpose of this session is to provide an overview of the evolution of chest imaging in disease and to have the audience gain insight into the current and upcoming modalities for diagnosis and assessing therapeutic response. Future directions of quantitative thoracic imaging will also be discussed.

Chairing: G.R. Washko, MD, Boston, MA
                  H.O. Coxson, PhD, Vancouver, Canada

8:15 Quantitative Imaging Of The Lung: How We Got To Where We Are
              H.O. Coxson, PhD, Vancouver, Canada

8:35 Micro-CT Correlations With Histology And Insights Into Pathology
              J.C. Hogg, MD, PhD, Vancouver, Canada

8:55 Hyperpolarized Helium-3 Magnetic Resonance Imaging Of COPD: Is There Clinical Value Beyond The Research Hype
              G.E. Parraga, MD, London, Canada

9:15 Computed Tomographic Imaging Of The Lung: Current And Future Applications
              G.R. Washko, MD, Boston, MA

9:35 Imaging of The Airway Using Optical Coherence Tomography
              P.R. Eastwood, PhD, Perth, Australia

9:55 Quantitative Thoracic Imaging: Clinical Applications And The Need For A Better Understanding Of Pathogenesis
              F.C. Sciurba, MD, Pittsburgh, PA

BASIC  CLINICAL  TRANSLATIONAL SCIENTIFIC SYMPOSIUM

C10 FUNCTIONAL MODELING OF THE PEDIATRIC UPPER AIRWAY

Assemblies on Pediatrics; Respiratory Structure and Function; Sleep and Respiratory Neurobiology

8:15 am-10:45 am

Target Audience
Providers of lung health interested in modeling of the pediatric airway and lung as a mode for diagnosis and management (Pediatric Pulmonologists, Radiologists, Otolaryngologists, Nurses, Respiratory Therapists, Fellows). Researchers conducting studies in the developing airway and lung through functional modeling.

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

• identify novel modes of functional modeling that will improve diagnosis and management of airflow limitation;
• understand genetic predictors of upper airway obstruction;
• understand the usefulness of imaging and optical coherence tomography in the management of pediatric upper airway disorders.

Limited tools are available that effectively evaluate flow limitation, obstruction and dynamic collapse in children with upper airway disorders. Recent advances in imaging, data acquisition, genomics and modeling will be discussed during this session. A recent NHLBI-supported program
consisting of multidisciplinary research teams that are developing novel functional models of pediatric upper airway disorders will be presented.

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

**Chairing:**  
S.D. Davis, MD, Chapel Hill, NC  
R. Arens, MD, Bronx, NY

**8:15 Introduction**  
S.D. Davis, MD, Chapel Hill, NC

**8:25 Modeling The Pediatric Upper Airway Using Novel MRI Technology**  
R. Arens, MD, Bronx, NY

**8:50 Recent Advances In Imaging To Evaluate The Child With Down Syndrome**  
R.S. Amin, MD, Cincinnati, OH

**9:15 Optical Coherence Tomography In The Child With Upper Airway Obstruction**  
B. Wong, MD, Irvine, CA

**9:40 Genetic Determinants Of The Developing Upper Airway**  
R. Elluru, MD, PhD, Cincinnati, OH

**10:05 Creating A Virtual Pediatrics Airway Model**  
R. Superfine, PhD, Chapel Hill, NC

**10:30 The NHLBI Functional Modeling Of The Pediatric Upper Airway Program**  
C.J. Blaidell, MD, Bethesda, MD

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**CLINICAL**

**C11 GLOBAL HEALTH AND PULMONARY MEDICINE: VOICES FROM THE FIELD**

International Lung Health Committee; Assemblies on Allergy, Immunology and Inflammation; Behavioral Science; Critical Care; Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections

8:15 am-10:45 am

**Target Audience**  
Physicians, fellows/residents and nurses interested in Pulmonary/Critical Care Global Health.

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

- identify the existing ATS Global Health Initiatives;
- describe the burden of Lung Disease and Critical Illness in low-resource settings;
- identify opportunities to contribute to global health through volunteering, research and education, including in ATS projects.

The course will describe existing programs and opportunities for Global Health activities within the ATS. Special emphasis will be given to practical topics relating to the experience of ATS members who have successfully developed global health programs. Finally, we will discuss two special challenges: the role of Critical Care in low income countries, and the burden of disease in Africa

**Chairing:**  
G. Matute-Bello, MD, Seattle, WA  
W.J. Martin, MD, Rockville, MD

**8:15 Introduction: ATS And Global Health**  
D. Schraufnagel, MD, Chicago, IL

**8:25 Overview Of Current ATS International And Global Activities**  
G. Matute-Bello, MD, Seattle, WA

**8:40 Critical Care In The Developing World: Setting Priorities For Research And Action**  
N. Adhikari, MDCM, MSc, Toronto, Canada

**9:05 The Burden Of Lung Disease In Africa: An African Perspective**  
J. Ong’ang’o, MD, Nairobi, Kenya

**9:30 Volunteering In Post-Disaster Settings: The Need To Be Flexible**  
W.J. Martin, MD, Rockville, MD

**9:55 The Challenges Of Doing Research Across Continents: A Personal Experience**  
S.B. Gordon, MD, Liverpool, United Kingdom

**10:20 Teaching And Mentoring: A Two-Way Street In The Developing World**  
A.S. Buist, MD, Portland, OR
Beyond Genome-Wide Association Studies: Genomic and Epigenetic Approaches to Understanding Lung Diseases

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

8:15 am-10:45 am

Target Audience
Clinicians and scientists interested in the study of the underlying genetic and epigenetic factors predisposing to lung disease. Everyone interested in learning about the wide array of state-of-the-art high-throughput approaches currently being employed to identify drug targets and risk factors.

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

• understand novel high-throughput methods for genomic analysis in lung disease;

• understand novel mechanisms of pulmonary disease identified by high-throughput genomic approaches;

• understand the interplay of genetic and epigenetic factors in the development of lung disease.

Lung diseases such as asthma, COPD, and lung cancer are caused by the interplay of genetic, epigenetic and environmental factors. While genome-wide association studies have helped identify many responsible genetic factors, advances using high-throughput technologies in the fields of massively parallel sequencing, gene expression analysis, epigenetic mapping and integrative genomics are piecing together how genetic predisposition ultimately leads to complex disease phenotypes. In this session, we will explore these exciting developments, highlighting novel insights related to the role of rare variants, microRNAs, DNA methylation, chromatin remodeling, and the genetic regulation of gene expression in the pathogenesis of common lung diseases.

Chairing:
P. Woodruff, MD, MPH, San Francisco, CA
B.A. Raby, MD, MPH, Boston, MA
M.M. Wurfel, MD, PhD, Seattle, WA

8:15 Do Rare Coding Variants Play A Major Role In Complex Lung Disease?
M.M. Wurfel, MD, PhD, Seattle, WA

8:35 Genomic Signatures Of Disease Progression In Precancerous Lesions Of The Lung
C. Mascaux, MD, PhD, Aurora, CO

8:55 Molecular Phenotyping Of COPD
A. Spira, MD, MSc, Boston, MA

9:15 Insights From Gene And miRNA Expression Studies In Asthma
P. Woodruff, MD, MPH, San Francisco, CA

9:35 DNA Methylation As A Risk Factor For Asthma
J.W. Hollingsworth, MD, Durham, NC

9:55 Haplotype-Specific Epigenetic Marks At Asthma-Associated Loci
A. Naumova, PhD, Montreal, Canada

10:15 Integrative Genomics: Putting It All Together
B.A. Raby, MD, MPH, Boston, MA

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.
11:30 am-1:00 pm

ATS PRESIDENT’S LECTURE
ATS MEMBERSHIP MEETING

2011 PRESIDENT’S LECTURE
The President’s Lecture was established to provide a unique perspective on medicine and science from the vantage point of distinguished scientists, physicians, and academicians. As their messages would not usually be heard in the scientific sessions of the International Conference, this special forum has been provided for the benefit of all Conference participants.

Steven Weinberger, MD, Executive Vice President and CEO of the American College of Physicians, will deliver the 2011 President’s Lecture.

MEMBERSHIP MEETING
The Membership Meeting is the annual business meeting of the American Thoracic Society. All members and interested non-members are encouraged to attend. Information on the current state of the Society and the incoming President’s plan for the future will be reported. The officers for the 2011-2012 year will be introduced.

Chairing: D.E. Schraufnagel, MD, Chicago, IL

President’s Remarks: D.E. Schraufnagel, MD, Chicago, IL

Installation of New ATS President: D.E. Schraufnagel, MD, Chicago, IL

Incoming Presidential Remarks: N.S. Hill, MD, Boston, MA

Nominating Committee Report: M.L. Osborne, MD, PhD, Portland, OR

ATS 2011 • Denver, Colorado

TUESDAY MID-DAY, MAY 17
11:30 am - 1:00 pm

THEMATIC SEMINAR SERIES

TSS1  CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Registration Fee: $170 for the full series (includes continental breakfast and box lunch.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

This is part 4 of a 4-part series. Those registering for this seminar series will be registered for all 4 parts. Program for the full series is included with the Monday, May 16, 7:00 am program.

Tuesday, May 17, 12:00 pm-1:00 pm

When Should I Use Antibiotics And/Or Steroids?
A. Anzueto, MD, San Antonio, TX

WS5  MASTER CLINICIANS: PLEURAL DISEASE

Registration Fee: $75.00 (includes box lunch.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

Assembly on Clinical Problems
11:30 am-1:00 pm

Target Audience
Trainees in pulmonary and critical care medicine, practicing pulmonologists, intensivists, and related health care professionals including surgeons and nurses.

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

• improve appropriate differential diagnosis for common pleural syndromes;
• apply knowledge of strengths and limitations of diagnostic tests to clinical practice;
• identify new strategies to investigate and manage the patient with pleural disease.

Three cases of pleural disease with an educational message centering on diagnosis and management will be presented to the Master Clinicians who will be unaware of the cases to be presented. The Master Clinicians will discuss the cases at defined points within each presentation in terms of differential diagnosis, investigation and suggested treatment options, and will debate the relative merit of each approach. Questions from the audience will be encouraged and welcomed.

Chairing: R.J.O. Davies, DM, Oxford, United Kingdom
D.J. Feller-Kopman, MD, Baltimore, MD
R.W. Light, MD, Nashville, TN

11:30 Pleural Case Presentation
R.J.O. Davies, DM, Oxford, United Kingdom

11:50 Pleural Case Presentation
D.J. Feller-Kopman, MD, Baltimore, MD

12:10 Pleural Case Presentation
Y.C.G. Lee, MD, PhD, Perth, Australia

12:30 Master Clinicians Panel Discussion
R.W. Light, MD, Nashville, TN

WS6 MYCOBACTERIAL AND FUNGAL DIAGNOSTICS

Registration Fee: $75.00 (includes box lunch.)
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

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

11:30 am-1:00 pm

Target Audience
Clinicians, trainees and other providers of lung health, particularly those who are interested in mycobacterial and fungal infections. The symposium will focus on diagnostic tools including interferon gamma release assays, fungal antigens and serologies and cytopathologic examination of respiratory samples. The symposium will be of particular interest to members of the assemblies on Microbiology, Tuberculosis and Pulmonary Infections, Clinical Problems and Critical Care.

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

• apply IGRA to the diagnostic workup of latent and active tuberculosis;
• understand the significance and indications of various fungal diagnostic tests;
• utilize new diagnostic methods and strategies to make a timely diagnosis of mycobacterial and invasive fungal infections of the lung.

Mycobacterial and invasive fungal infections of the lungs continue to be a major problem in today’s pulmonary medicine. Mycobacterium tuberculosis, the endemic mycoses (histoplasmosis, blastomycosis and coccidioidomycosis) and Aspergillosis are particularly relevant to pulmonary critical care practitioners. Many new diagnostic tools are now available. In this seminar, experienced investigators and clinicians will provide updates on the new and old mycobacterial and fungal...
diagnostic tests in a practical format that helps clinicians use and interpret results from these tests.

Chairing: C.A. Hage, MD, Indianapolis, IN  
D. Lewinsohn, MD, Portland, OR

11:30 Interferon Gamma Release Assays  
D. Lewinsohn, MD, Portland, OR

11:50 Break

11:55 Fungal Antigens And Serologies  
C.A. Hage, MD, Indianapolis, IN

12:15 Break

12:20 Direct Microscopy And BAL For Rapid Diagnosis  
K.S. Knox, MD, Tucson, AZ

12:40 Break

12:45 Panel Discussion

MEET THE PROFESSOR SEMINARS

Registration Fee: $70.00 (includes box lunch).  
Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

12:00 pm-1:00 pm

MP601 USE AND VALUE OF GENOMICS RESEARCH AT THE BEDSIDE: A PRIMER FOR THE PRACTITIONER  
B.A. Raby, MD, MPH, Boston, MA

MP602 NEW CHALLENGES IN DRUG INDUCED LUNG DISEASE  
A.H. Limper, MD, Rochester, MN

MP603 CASE BASED REVIEW OF ADULT NON-CYSTIC FIBROSIS BRONCHIECTASIS  
G. Tino, MD, Philadelphia, PA

MP604 PITFALLS AND PEARLS FOR PULMONOLOGISTS’ PATIENTS WITH PULMONARY NODULES  
D.A. Arenberg, MD, Ann Arbor, MI

MP605 ACUTE EXACERBATIONS OF FIBROSING INTERSTITIAL LUNG DISEASES: STATE OF THE FIELD  
S.K. Frankel, MD, Denver, CO

MP606 EVOLVING CONCEPTS IN THE PATHOGENESIS AND TREATMENT OF BRONCHIOBLITIS OB LiterANS SYNDROME  
S.M. Bhorade, MD, Chicago, IL

MP607 MALIGNANT PLEURAL EFFUSION. WHAT ARE MY OPTIONS?  
P.N. Mathur, MBBS, Indianapolis, IN

MP608 A PRAGMATIC GUIDE TO INSTALLING AND RUNNING A CRITICAL CARE PROCEDURE SERVICE  
W.D. Schweickert, MD, Philadelphia, PA

MP609 ADIPOKINES AND ASTHMA: A TALE OF MICE AND MEN  
A. Sood, MD, MPH, Albuquerque, NM

MP610 CONTROVERSIES IN THE MANAGEMENT OF HEALTHCARE ASSOCIATED AND HOSPITAL ACQUIRED PNEUMONIA  
M.S. Niederman, MD, Mineola, NY

MP611 NURSE AS PI: ROLE AND BEST PRACTICES IN INTENSIVE CARE UNIT RESEARCH  
L.L. Chlan, PhD, RN, Minneapolis, MN

MP612 QUALITY IMPROVEMENT IN PULMONARY MEDICINE  
M.S. Schechter, MD, MPH, Atlanta, GA

MP613 CASE-BASED GUIDE TO GROUP V PULMONARY HYPERTENSION  
M.M. Chakinala, MD, St. Louis, MO

MP614 A PRIMER ON SYSTEMS BIOLOGY RESEARCH  
T.J. Mariani, PhD, Rochester, NY

MP615 CHRONIC OBSTRUCTIVE PULMONARY DISEASE: STAGING AND MANAGEMENT  
N.R. MacIntyre, MD, Durham, NC

MP616 THE PHYSIOLOGY AND THE PROGRESSIVE NATURE OF EMPHYSEMA  
B. Suki, PhD, Boston, MA
MP617 MULTI CENTER SLEEP TRIALS: ADVANTAGES, CHALLENGES AND KEY QUESTIONS
F. Barbé, MD, Llieda, Spain
R.D. McEvoy, MD, Adelaide, Australia
J.R. Stradling, MD, MPH, Oxford, United Kingdom
T.E. Weaver, PhD, RN, FAAN, Philadelphia, PA

MP618 GOING FROM GUIDELINES TO QUALITY METRICS AND PRACTICE IMPROVEMENT
R.A. Mularski, MD, MSHS, MCR, Portland, OR
J.A. Krishnan, MD, PhD, Chicago, IL

VISIT THE EXHIBIT HALL
Take this opportunity between sessions to visit the Exhibit Hall to gain practical knowledge to advance care and research. Over 175 exhibitors will be on hand to provide information on pharmaceutical products, medical equipment, publications and research services.

C81 SCIENTIFIC BREAKTHROUGHS OF THE YEAR: PROGRESS IN LUNG TISSUE ENGINEERING
Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Environmental and Occupational Health; Microbiology, Tuberculosis and Pulmonary Infections; Pediatrics; Pulmonary Rehabilitation; Respiratory Structure and Function
2:00 pm-4:30 pm
Target Audience
Physicians, scientists, trainees.

Objectives
At the conclusion of this session, the participant will be able to:
• identify the latest scientific breakthroughs in bioengineering and lung tissue engineering;
• identify the potential for complex tissue microcultures (“lung on a chip”) to advance lung disease research;
• identify the of outstanding basic and translational research in bioengineering and lung tissue engineering being conducted by ATS members.

This annual symposium focuses upon a broad area of lung biology and disease research where exceptional progress over the past year is highlighted. Two keynote lectures, by internationally renowned scientists, complement the presentation of outstanding abstracts submitted by young ATS investigators. The topic of this year’s session is Tissue Engineering: Rebuilding a lung.

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

Chairing: S. Guttentag, MD, Philadelphia, PA
A. Panoskaltsis-Mortari, PhD, Minneapolis, MN
T.M. Murphy, MD, Durham, NC

2:00 A Human Breathing Lung-On-A-Chip For Drug Screening And Nanotoxicology Applications
D. Ingber, PhD, Boston, MA

2:35 Featured Abstract Presentations
Speaker To Be Announced

3:55 Engineering Functional Lung Tissue: Progress And Challenges
L. Niklason, MD, PhD, New Haven, CT

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CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C82 MANAGEMENT OF SARCOIDOSIS

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation

2:00 pm-4:30 pm
C83 COPD: BIOLOGICAL PATHWAYS, PHENOTYPES AND THEIR CLINICAL IMPLICATIONS

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Respiratory Cell and Molecular Biology
2:00 pm-4:30 pm

Target Audience
Basic scientists with interest in the application of basic concepts to the clinical arena; health care practitioners aiming to understand the rational behind the treatments for specific patient's phenotypes; anyone interested in the field of COPD and its new advances

Objectives
At the conclusion of this session, the participant will be able to:
- better understand the role of inflammation in COPD;
- recognize the role of elastase and anti-elastase balance as a cause of COPD;
- review the role of repair after injury in COPD.

The symposium will review three potential mechanisms partaking in the genesis of the pulmonary and systemic manifestations of COPD. These presentations in COPD linking the mechanism to a clinical phenotype and its therapeutic implications. A. Inflammation: Pathobiological evidence, its markers and importance. B. Is anti-inflammatory therapy effective? What is the evidence? C. Alpha 1 antitripsyn: theory and practice of its importance. D. Why screening, who to treat, what to expect? E. Autophagy, apoptosis, autoimmunity, how much is real? F. The new therapeutic frontiers.

Chairing: B.R. Celli, MD, Boston, MA
P.J. Barnes, DM, DSc, London, United Kingdom

2:00 Introduction
B.R. Celli, MD, Boston, MA

2:10 Inflammation: Its Pathobiological Evidence And Importance
S.I. Rennard, MD, Omaha, NE

2:30 Is Anti-inflammatory Therapy Effective?
A. Agusti, MD, Barcelona, Spain

2:50 Alpha 1 Antitripsin; Why And Who To Screen. Role Of The Elastase-Antielastase Imbalance
R. Stockley, MD, Liverpool, United Kingdom

3:10 Therapy With Anti-Proteases Today And Tomorrow
J. Stoller, MD, Cleveland, OH

3:30 Autophagy, Apoptosis And Autoimmunity: Their Role In COPD
A. Choi, MD, Boston, MA

3:50 Therapies To Improve Cell And Tissue Repair
P.J. Barnes, DM, DSc, London, United Kingdom

C84 THE CONSEQUENCES OF FIVE IMPORTANT PAPERS: FROM THE AUTHOR (AND THE EDITOR)

Assemblies on Critical Care; Clinical Problems; Nursing; Pediatrics
2:00 pm-4:30 pm

Target Audience
All clinicians and scientists interested in critical care

Objectives
At the conclusion of this session, the participant will be able to:
- appreciate the importance of landmark papers;
- describe new findings about clinical papers and outcomes;
- understand the importance of expert insight in the appraisal of important papers.

This reviews 5 classic papers in the following format: (a) a presentation of the rationale and key findings, as well as a statement of what they would do different if
repeating the study today; (b) a brief perspective from an expert colleague to provide a broad perspective of how this paper has contributed, and what changes in thinking and in practice have resulted; (c) a brief discussion, including questions from the floor, to synthesize the issue.

Chairing: N.D. Ferguson, MD, MSc, Toronto, Canada
B.P. Kavanagh, MD, Toronto, Canada

2:00  30 Years Of Auto-Peep
J.J. Marini, MD, Minneapolis, MN

2:30  20 Years Of Weaning: The Frequency-Tidal Volume Index
M. Tobin, MD, Hines, IL

3:00 A Decade (And A Half) After The PA Catheter Propensity Analysis
A. Connors, MD, Cleveland, OH

3:30 A Decade Of Sepsis-Prowess And Activated Protein C
G.R. Bernard, MD, Nashville, TN

4:00  10 Years Of Early Goal-Directed Therapy
Speaker To Be Announced

• examine the potential relationship among the structural features, the biological mechanism and the different COPD phenotypes;
• discuss treatment possibilities for COPD.

COPD is characterised by a progressive lung function decrease with different phenotypes and onset. Reduced responsiveness to the anti-inflammatory action of corticosteroids is still a major barrier in the treatment of COPD. This symposium will review the recent advances in disease mechanisms, and their relation with COPD phenotypes and potential diagnostic and therapeutic targets for COPD.

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

Chairing: W.I. de Boer, PhD, Amersfoort, Netherlands
B. Camoretti-Mercado, PhD, Chicago, IL

2:00  Risk Factors And Causes Of COPD
D.M. Mannino, MD, Lexington, KY

2:25 Novel Insights In The Pathology Of COPD
J.C. Hogg, MD, PhD, Vancouver, Canada

2:50 Why Genetics Is A Good Basis For Defining COPD
S.T. Weiss, MD, MS, Boston, MA

3:15 Inflammation: Cause Or Consequence Of COPD?
H.S. Sharma, PhD, Amsterdam, Netherlands

3:40 Advances In COPD Therapy In The Age Of Personalized Medicine
S.D. Shapiro, MD, Pittsburgh, PA

4:05 COPD And Physiological Consequences For Patients
Speaker To Be Announced
C86 SLEEP IN CHRONIC LUNG DISEASE: CHALLENGES OF SLEEPING AND BREATHING

Assemblies on Sleep and Respiratory Neurobiology; Allergy, Immunology and Inflammation; Clinical Problems; Pulmonary Circulation; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Scientists, clinicians, trainees and other health care professionals with interests in lung diseases and circadian biology, sleep and sleep disorders

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

- identify new findings related to the interaction between sleep and major lung diseases;
- improve their strategies of diagnosing and caring for patients with chronic lung disease and coexistent sleep complaints/disorders;
- improve the quality of life and overall health status of their patients with chronic lung disease.

Sleep is a basic physiologic process. Although its functions remain unknown, accumulating evidence reveals complex interactions with circadian factors and the innate immune system. The particular focus will be to review the growing body of knowledge concerning the reciprocal relationships between sleep and its disorders with chronic inflammatory lung diseases. Presenters will take a bench-to-bedside approach in relating basic science and physiology to clinical and epidemiologic data and will highlight challenges in managing these patients as well as priorities for further investigation.

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

Chairing: M. Teodorescu, MD, MS, Madison, WI  
A. Malhotra, MD, Boston, MA  
R.D. McEvoy, MD, Adelaide, Australia

2:00 Sleep And Circadian Modulation Of Respiratory Function
R.L. Owens, MD, Boston, MA

2:25 Sleep And Asthma: Much More Than Nocturnal Asthma
M. Teodorescu, MD, MS, Madison, WI

2:45 Sleep In Chronic Obstructive Pulmonary Disease
H. Schneider, MD, PhD, Baltimore, MD

3:05 Sleep In Cystic Fibrosis
L. D’Andrea, MD, Milwaukee, WI

3:25 Sleep In Interstitial Lung Disease
R.P. Baughman, MD, Cincinnati, OH

3:45 Sleep And Pulmonary Hypertension
R.D. McEvoy, MD, Adelaide, Australia

C87 THE ENVIRONMENT AND THE HOST: CROSSROADS OF NONTUBERCULOUS MYCOBACTERIA AND BRONCHIECTASIS

Assemblies on Microbiology, Tuberculosis and Pulmonary Infections; Clinical Problems; Environmental and Occupational Health; Pediatrics

2:00 pm-4:30 pm

Target Audience
Clinicians who manage patients with idiopathic bronchiectasis and nontuberculous mycobacterial infections and researchers interested in the epidemiology and pathogenesis of these conditions. It will emphasize environmental and host factors that contribute to the questions often asked by patients with these diseases, “Why do I have this?” The potential influence of environmental reservoirs for the ubiquitous nontuberculous mycobacteria, the bioaerosols that facilitate delivery to the lower airway, and genetic susceptibility to the environmental organisms overlap with research interests of the Assembly on Environmental and Occupational Health. The epidemiology of nontuberculous mycobacteria and bronchiectasis and the prevention and management of these overlapping conditions

Chairing: M. Teodorescu, MD, MS, Madison, WI  
A. Malhotra, MD, Boston, MA  
R.D. McEvoy, MD, Adelaide, Australia
is in line with key areas of focus of the Assembly on Microbiology, Tuberculosis, and Pulmonary Infections. Learners will have clinical, microbiological, and clinical research responsibilities.

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

- acquire increased awareness of bronchiectasis and NTM;
- gain a broader consideration of the links between environmental organisms, potential host susceptibility factors, and bronchiectasis;
- better recognize NTM and bronchiectasis as part of a differential diagnosis for their patients presenting with specific symptoms. They will also acquire increased awareness of treatment options to discuss with patients presenting with NTM and bronchiectasis.

Bronchiectasis and nontuberculous mycobacteria (NTM) may have a bidirectional cause and effect relationship. Prevalence and risk factors for these conditions have not been widely available. Molecular studies linking environmental organisms with associated bronchiectasis and studies exploring genetic susceptibility factors for bronchiectasis are emerging. Management questions from minimizing environmental exposure to maximizing host defenses are posed alongside infection management strategies. This symposium will span from environmental microbiology and host immunology to treatment of bronchiectasis and NTM.

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

Chairing: K.N. Olivier, MD, MPH, Bethesda, MD
C.S. Rose, MD, MPH, Denver, CO

2:00 Linking The Environment With The Disease: A Patient’s Perspective
F. Leitman, BA, Coral Gables, FL

2:10 Changing Epidemiology Of Bronchiectasis And Nontuberculous Mycobacteria
D.R. Prevots, PhD, MPH, Bethesda, MD

2:30 The Spectrum Of NTM Lung Disease: Infection, Hypersensitivity Pneumonitis or Both?
C.S. Rose, MD, MPH, Denver, CO
prematurity with emphasis on the mechanisms that operate at different stages of development (i.e., fetus, NICU, infancy, childhood, and adulthood). A global approach to the pathophysiology will be provided including up-to-date information on epigenetics, genetic modifiers, and environmental factors that influence disease phenotypes.

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

Chairing:  S. McGrath-Morrow, MD, Baltimore, MD  
J.M. Collaco, MD, MBA, Baltimore, MD

2:00 Introduction And Patient Perspective  
S. McGrath-Morrow, MD, Baltimore, MD  
Speaker To Be Announced

2:10 Etiology Of Bronchopulmonary Dysplasia: Before Birth  
S.H. Abman, MD, Denver, CO

2:35 Bronchopulmonary Dysplasia: Development And Progression In The NICU  
A. Jobe, MD, PhD, Cincinnati, OH

3:00 The Transition From Bronchopulmonary Dysplasia To Childhood Chronic Lung Disease  
S. McGrath-Morrow, MD, Baltimore, MD

3:20 Chronic Lung Disease Of Childhood: Sleep And Control Of Breathing  
J.L. Carroll, MD, Little Rock, AK

3:45 Chronic Lung Disease Of Childhood: Genetic And Environmental Modifiers  
J.M. Collaco, MD, MBA, Baltimore, MD

4:05 Chronic Lung Disease Of Childhood: Similar To COPD?  
E. Neptune, MD, Baltimore, MD

C89 USING A JOB-EXPOSURE MATRIX TO ASSESS EXPOSURE IN EPIDEMIOLOGIC STUDIES OF ASTHMA

Assemblies on Environmental and Occupational Health; Allergy, Immunology and Inflammation; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Researchers and clinicians who read journal articles that report findings from epidemiologic studies of adult asthma; researchers and clinicians who want a better understanding of occupational exposure assessment for epidemiologic research; researchers who conduct epidemiologic research on adult asthma

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

- understand the challenges of assessing occupational exposures for asthma;
- understand how a job-exposure matrix is developed and tested for validity and reliability;
- distinguish the merits of a task-exposure matrix when investigating asthma.

Occupation makes a substantial contribution to the onset and exacerbation of asthma among adults. Epidemiologic studies can improve our understanding of this occupational contribution if the assessment of exposure is accurate. Although job-exposure matrices are often used to characterize occupational exposures in studies of asthma, many researchers and clinicians do not understand how these exposure-assessment tools are constructed and tested. This scientific symposium describes the challenges of assessing exposures for asthma, the development and testing of job-exposure matrices that have been used in asthma studies, the elements of a task-exposure matrix, and strategies for improving future job-exposure matrices for asthma.
There will be a 5-minute discussion after each talk.

Chairing: P.K. Henneberger, DSc, Morgantown, WV

2:00 Introduction
P.K. Henneberger, DSc, Morgantown, WV

2:10 The Challenges And Options When Assessing Occupational Exposures In Studies Of Asthma
D. Heederik, PhD, Utrecht, Netherlands

2:35 Development And Testing Of A Job-Exposure Matrix For A Population-Based Study Of Asthma
N. Le Moual, PhD, Villejuif, France

3:00 Development And Testing Of An Industry-Specific Asthma Job-Exposure Matrix
G.L. Delclos, MD, PhD, Houston, TX

3:25 Development Of A Task-Exposure Matrix For Asthma In Healthcare
A. Virji, PhD, Morgantown, WV

3:50 Moving Forward: Strategies For Maximizing The Usefulness Of A Job-Exposure Matrix For Asthma
K. Teschke, PhD, Vancouver, Canada

4:15 Summary And Perspective
P.K. Henneberger, DSc, Morgantown, WV

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

- appreciate the importance of sex-related differences in asthma, chronic obstructive pulmonary disease, and interstitial lung disease;
- describe potential explanations for known sex-related differences in asthma, chronic obstructive pulmonary disease, and interstitial lung disease;
- improve the quality-of-life of patients with asthma, chronic obstructive pulmonary disease, and interstitial lung disease by developing specific treatment and educational programs targeting sex-related differences in disease.

Epidemiologic studies of asthma and chronic obstructive lung disease illustrate important differences in morbidity and mortality between men and women. However, research explaining these sex related disparities is in its infancy. Similar sex-related patterns of disease prevalence are seen in the interstitial lung diseases. This symposium will highlight some of these differences, the hypotheses that have been proposed to explain them, and the potential clinical relevance of these sex-related disparities.

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

Chairing: J.G. Mastronarde, MD, Columbus, OH
J.W. McCallister, MD, Columbus, OH

2:00 Sex Differences In Asthma: Why It Matters
J.W. McCallister, MD, Columbus, OH

2:20 The Menstrual Cycle And Asthma
S. Farha, MD, Cleveland, OH

2:40 Murine Models Of Sex Specific Asthma And Interstitial Lung Disease Pathogenesis
B. Melgert, PhD, Groningen, Netherlands

3:00 Impact Of Gender On Presentation And Progression Of Idiopathic Pulmonary Fibrosis
M.L.K. Han, MD, MS, Ann Arbor, MI

3:20 Is Gender A Risk Factor For Chronic Obstructive Pulmonary Disease?
A.S. Buist, MD, Portland, OR
3:40 Genetics And Sex Disparities In Obstructive Lung Diseases
D. Postma, MD, Groningen, Netherlands

4:00 Cooking With Biomass Fuels In The Developing World And Risk Of Chronic Obstructive Pulmonary Disease In Women
W.J. Martin, MD, Rockville, MD

4:20 General Discussion
J.G. Mastronarde, MD, Columbus, OH

2:00 pm-4:30 pm

Oral And Poster Presentations Of Scientific Research And Case Reports. Abstract Sessions Will Be Published In The Final Program.
**ATS 2011 • Denver, Colorado**

**WEDNESDAY MORNING, MAY 18**

7:00 am - 10:45 am

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**THEMATIC SEMINAR SERIES**

**TSS2 INTERSTITIAL LUNG DISEASE**

Registration Fee: $140.00 for the full series (includes continental breakfast.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

This is part 3 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts. Program for the full series is included with the Monday, May 16, 7:00 am program.

7:00 am-8:00 am

Idiopathic Pulmonary Fibrosis: What Every Trainee Needs To Know And An Update On Familial IPF

A.U. Leahy, MBBS, Bristol, United Kingdom

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**TSS3 LUNG CANCER**

Registration Fee: $140.00 for the full series (includes continental breakfast.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

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This is part 3 of a 3-part series. Those registering for this seminar series will be registered for all 3 parts. Program for the full series is included with the Monday, May 16, 7:00 am program.

7:00 am-8:00 am

Update On Chemoradiotherapy And Surgical Approach

P.N. Mathur, MD, Indianapolis, IN

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**SUNRISE SEMINARS**

Registration Fee: $65.00 (includes continental breakfast.)

Attendance is limited. Pre-registration is required and on a first-come, first-served basis.

7:00 am-8:00 am

**SS301 TH-WHAT? IMMUNOLOGY FOR TRANSPLANT RESEARCHERS**

R.A. Shilling, MD, Indianapolis, IN

**SS302 CLINICAL PROTOCOLS EVERY ICU NEEDS: THE GOOD, THE BAD, AND A PRACTICAL GUIDE**

M. Prasad, MD, Philadelphia, PA

**SS303 BEST TRANSFUSION PRACTICE: INCORPORATING THE LATEST EVIDENCE**

G. Netzer, MD, Baltimore, MD

**SS304 APPROACH TO AND MANAGEMENT OF EXTRA-THORACIC SARCOIDOSIS**

N.Y. Hamzeh, MD, Denver, CO

**SS305 PULMONARY HYPERTENSION: EVALUATION AND MANAGEMENT**

J.R. Runo, MD, Madison, WI

**SS306 BRONCHIOLITIS OBLITERANS SYNDROME: THE ROLE OF CO-INFECTION**

M.P. Goldklang, MD, New York, NY

**SS308 EVALUATION AND TREATMENT OF PRIMARY GRAFT DYSFUNCTION FOLLOWING LUNG TRANSPLANTATION**

J.C. Lee, MD, Philadelphia, PA

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ADVANCE PROGRAM
SS309  EARLY ACUTE LUNG INJURY: PARADIGM SHIFT TOWARD RECOGNITION PRIOR TO RESPIRATORY FAILURE  
J.E. Levitt, MD, San Francisco, CA

SS310  FLUOROQUINOLONE USE IN THE DEVELOPING WORLD: IMPLICATIONS FOR TB CONTROL  
A. Gardner, MD, MPH, Providence, RI

SS311  QUALITATIVE RESEARCH METHODS AND APPLICATIONS  
A. Caress, DN, PhD, RN, Manchester, United Kingdom  
M. Cooke, PhD, Manchester, United Kingdom

SS312  PULMONARY COMPLICATIONS OF SICKLE CELL DISEASE  
R.M. Kato, MD, Los Angeles, CA

SS313  PULMONARY EMBOLISM IN PREGNANCY  
G.R. Bourjeily, MD, Providence, RI

SS314  IMMUNOTHERAPY FOR THE TREATMENT OF LUNG CANCER  
G.E. Holt, MD, PhD, Seattle, WA

SS315  PHYSIOLOGY AND PATHOBIOLOGY OF EPITHELIAL CELLS  
J. Koo, MS, PhD, Houston, TX

SS316  OBESITY AND ASTHMA: EPIDEMIOLOGY, POTENTIAL MECHANISMS, AND THERAPEUTIC STRATEGIES  
R.A. Johnston, PhD, Houston, TX

SS317  SIMPLIFIED MODELS OF CARE FOR OSA  
N.A. Antic, MD, MBBS, Adelaide, Australia

D1  CLINICAL YEAR IN REVIEW 4

8:15 am-10:15 am

Target Audience
Providers of care for patients with diverse lung diseases

Objectives
At the conclusion of this session, the participant will be able to:
• describe recent articles for core pulmonary/critical care topics;
• apply recent advances in core pulmonary/critical care topics to the care of patients;
• identify new strategies/treatment options to manage patients with pulmonary/critical care illnesses.

Clinical year in review sessions are presented each morning of the ATS meeting. A total of 16 pulmonary diseases areas are covered, 4 each morning. Each disease is presented by an invited expert in the field. Prior to the conference the expert does an extensive literature search and also solicits feedback from peers. Four to six key articles from the previous year are presented for each disease. In addition, a detailed bibliography which contains summaries of the articles presented as well as additional articles of interest is provided to attendees.

Chairing:  K.R. Flaherty, MD, MS, Ann Arbor, MI  
M. Herridge, MD, Toronto, Canada  
E.R. Sutherland, MD, Denver, CO

8:15  Asthma  
E. Israel, MD, Boston, MA

8:45  COPD  
D. Sin, MD, Vancouver, Canada

9:15  Host-Microbe Interactions In Airway Disease  
S.L. Johnston, MD, PhD, London, United Kingdom

9:45  Pulmonary Vascular  
T.M. Bull, MD, Aurora, CO
D2 REVISION OF THE ATS/ERS CLASSIFICATION OF IDIOPATHIC INTERSTITIAL PNEUMONIAS

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology
8:15 am-10:45 am

Target Audience
Pulmonologists, radiologists, pathologists, molecular biologists and fellows in training

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

• better diagnose the Idiopathic Interstitial Pneumonias and understand the importance of the Dynamic Integrated Approach to Clinical-Radiologic-Pathologic correlation;

• manage challenging interstitial lung disease cases that are difficult to classify;

• describe how molecular evaluation may help advance diagnosis and therapy for IIP patients in the future.

This symposium will present an update of the 2002 ATS/ERS International Multidisciplinary Classification of Idiopathic Interstitial Pneumonias (IIP). The 2002 ATS/ERS IIP Classification defined the perplexing entities that belong in this category of diffuse parenchymal lung disease, as well as their terminology and diagnostic criteria. Thus, one decade later, much valuable information has accumulated regarding the IIP’s that will be summarized in this symposium. New aspects of this classification include a novel approach based on clinical phenotypes, updating concepts of smoking related disorders, and review of the rapidly emerging molecular data which may improve diagnosis and lead to targeted therapies.

Chairing: W.D. Travis, MD, New York, NY
T.E. King, Jr., MD, San Francisco, CA
A. Wells, MD, London, United Kingdom

8:15 Introduction to Classification
W.D. Travis, MD, New York, NY

8:35 Pathology of Idiopathic Interstitial Pneumonias
A.G. Nicholson, MD, London, United Kingdom

8:55 Radiologic Aspects Of The Classification
D.A. Lynch, MBBS, Denver, CO

9:15 Molecular Aspects Of Idiopathic Interstitial Pneumonias
M. Selman, MD, Mexico City, Mexico

9:35 Clinical Aspects And Implications Of The New Classification
T.E. King, Jr., MD, San Francisco, CA

9:55 Pragmatic Clinical Classification
A. Wells, MD, London, United Kingdom

10:15 Group Discussion
W.D. Travis, MD, New York, NY

D3 CYSTIC FIBROSIS: FROM BASIC RESEARCH TO THE BEDSIDE

Assemblies on Clinical Problems; Pediatrics
8:15 am-10:45 am

Target Audience
Pediatric and adult pulmonologists, nurses, scientists, respiratory technicians, and other medical personnel interested in current approaches to the treatment of children and adults with CF

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

• describe new findings about basic mechanisms in disease pathogenesis in cystic fibrosis and be able to apply new therapies to the treatment of CF lung disease;

• recognize the importance of the CFF Registry and how the registry can be used to improve patient care;

• better understand the guidelines for the care of CF patients and how these can help formulate new strategies to improve care of CF patients and to
become familiar with new treatment options and clinical trials of promising therapies.

This session will identify and review evolving concepts in CF lung disease pathogenesis and discuss the Cystic Fibrosis Foundation (CFF) Registry and CFF guidelines and how these resources can be used to standardize therapies, improve patient care, quality of life, and survival.

Chairing: K.C. Meyer, MD, MS, Madison, WI
F.A. Ratjen, MD, PhD, Toronto, Canada

8:15 What Are The Important New Developments In Basic Research?
R. Boucher, MD, Chapel Hill, NC

8:40 Lung Infection And Inflammation: Recent Advances
N. Hoiby, MD, Copenhagen, Denmark

9:05 Advanced CF Lung Disease: What Are The Therapeutic Options?
K.C. Meyer, MD, MS, Madison, WI

9:30 The CFF Therapeutic “Pipeline”: Where Are We Now, And What Is On The Horizon?
F.A. Ratjen, MD, PhD, Toronto, Canada

9:55 How Do CFF Clinical Guidelines Improve Care?
P. Flume, MD, Charleston, SC

10:20 What Is The CFF Registry, And How Can We Use It To Improve Practice?
B. Marshall, MD, Bethesda, MD

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

- discuss the tools, methods and pitfalls in evaluating long-term outcomes after ICU stays;
- appraise the indications, costs and benefits of long term acute care hospitals and review the long term outcomes of specific ICU population, i.e. after long-term mechanical ventilation, ARDS and cancer and hematology patients;
- discuss interventions to enhance physical rehabilitation of critically ill patients and explore what should be the research agenda for the next decade.

The outcomes after critical illness are very heterogeneous and the pathophysiology of these physical and neuropsychological lesions is largely unknown. This session will focus on the tools and methods for long term outcomes evaluation, will appraise the indications, costs and benefits of long term acute care hospitals, will review the long term outcomes of specific ICU populations, discuss interventions to enhance physical rehabilitation and will explore what should be the research agenda for the next decade.

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

Chairing: A. Combes, MD, PhD, Paris, France
G. Rubenfeld, MD, MSc, Toronto, Canada

8:15 Patient Perspective
Speaker To Be Announced

8:20 Tools, Methods And Pitfalls In Evaluating Long-Term Outcomes After An ICU Stay
H. Wunsch, MD, MSc, PhD, New York, NY

8:40 Long Term Acute Care Hospital Utilization After Critical Illness
J.M. Kahn, MD, MSc, Pittsburgh, PA

9:00 How To Enhance Physical Rehabilitation Of Critically Ill Patients?
D.M. Needham, MD, PhD, Baltimore, MD

9:20 Long-Term Outcomes After Prolonged MV In The ICU
A. Combes, MD, PhD, Paris, France

9:40 Long-Term Outcomes For ARDS Survivors
M. Herridge, MD, Toronto, Canada
10:00 In Cancer And Hematology Patients
E. Azoulay, MD, PhD, Paris, France

10:20 What Should Be The Research Agenda For The Next Decade?
G. Rubenfeld, MD, MSc, Toronto, Canada

BASIC • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

D5 (NON)PERMISSIVE HYPERCAPNIA: BENCH TO BEDSIDE

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

8:15 am-10:45 am

Target Audience
Clinicians and basic scientists

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

• describe new findings about the effect of hypercapnia on inflammation, pulmonary infection and alveolo-capillary barrier function in acute lung injury and sepsis;

• appreciate the importance of CO2 levels in immune status of COPD patients;

• identify new strategies to manage the care of patients with acute lung injury and COPD with hypercapnia.

The aim of this session is to update the audience and provide a forum for discussion on key recent advances in our understanding of both positive and negative effects of hypercapnia on pulmonary infections, immunity and alveolo-capillary barrier function in acute lung injury and COPD as well as outcomes of mechanically ventilated patients. Better understanding of these mechanisms may lead to novel therapeutic approaches in the treatment of lung diseases that are associated with poor alveolar ventilation.

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

Chairing: J.I. Sznajder, MD, Chicago, IL
B.P. Kavanagh, MD, Toronto, Canada

8:15 Therapeutic Hypercapnia: Lessons From Animal Models Of Acute Lung Injury
E.R. Swenson, MD, Seattle, WA

8:40 The Effects Of Hypercapnia And Acidosis In Non-Septic Versus Septic Models
J.G. Laffey, MD, Galway, Ireland

9:05 The Effects Of Hypercapnia On Cell Membranes
R.D. Hubmayr, MD, Rochester, MN

9:30 Effects Of Elevated CO2 Levels On The Alveolar Epithelium
I. Vadasz, MD, Giessen, Germany

9:55 Hypercapnia, Innate Immunity And Lung Host Defense
P.H.S. Sporn, MD, Chicago, IL

10:20 Effect Of Hypercapnia On Outcomes Of Mechanically Ventilated Patients
N. Nin, MD, Madrid, Spain

CLINICAL
SCIENTIFIC SYMPOSIUM

D6 OCCUPATIONAL LUNG DISEASES IN U.S. MILITARY PERSONNEL DEPLOYED TO IRAQ AND AFGHANISTAN

Assemblies on Environmental and Occupational Health; Clinical Problems

8:15 am-10:45 am

Target Audience
Pulmonologists and other lung health providers; occupational health providers; clinical, translational and laboratory-based researchers; policy leaders; military and civilian health care providers for post-deployment personnel

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

• describe new findings about lung disease in deployed US military personnel;

• better diagnose and manage deployment-related lung disease;

• improve understanding of deployment inhalational exposures and their role in lung disease causation.

Chairing: J.I. Sznajder, MD, Chicago, IL
B.P. Kavanagh, MD, Toronto, Canada
There is emerging evidence that US military personnel deployed to southwest Asia are at risk for respiratory symptoms and diseases including asthma and constrictive bronchiolitis. Exposures to airborne contaminants including desert dust and particulate matter as well as emissions from burn pits and industrial fires have been causally implicated. This session reviews the state-of-the art for deployment-related inhalational exposures, environmental epidemiology, respiratory clinical outcomes, animal models of exposure risk, and recommendations for medical surveillance, diagnosis and prevention of these adverse pulmonary outcomes.

Chairing: C.S. Rose, MD, MPH, Denver, CO
A.M. Szema, MD, Stony Brook, NY

8:15 Overview Of Exposures And New Onset Asthma In Soldiers Serving In Iraq And Afghanistan
A.M. Szema, MD, Stony Brook, NY

8:35 J.H. Abraham, ScD, MS, Aberdeen Proving Ground, MD
J.H. Abraham, ScD, MS, Aberdeen Proving Ground, MD

8:55 Constrictive Bronchiolitis Among Soldiers Exposed To Burn Pits, Desert Dust And Fires In Southwest Asia
R. Miller, MD, Nashville, TN

9:15 Animal Models Of Pulmonary Toxicity From Southwest Asia Inhalational Exposures
D.A. Jackson, PhD, Ft. Detrick, MD

9:35 Clinical Research On Post-Deployment Lung Disease: Findings From The Army's STAMPEDE Study
L.L. Zacher, MD, Ft. Sam Houston, TX

9:55 Medical Surveillance, Diagnosis And Prevention Of Post-Deployment Occupational Lung Disease
C.S. Rose, MD, MPH, Denver, CO

10:15 Analysis Of Desert Dust From Southeast Asia: What Does This Tell Us About Lung Risk?
Speaker To Be Announced

D7 CUTTING-EDGE TECHNOLOGY FOR DIAGNOSIS AND MANAGEMENT OF PNEUMONIA

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

8:15 am-10:45 am

Target Audience
Clinicians and clinical and laboratory investigators; health care professionals involved in patient care; physicians, trainees, physician assistants, nurse practitioners and nurses

Objectives
At the conclusion of this session, the participant will be able to:
• understand the scientific basis behind new diagnostic tests for lung infections;
• understand the benefits and limitations of new diagnostic tests for pneumonia and understand where future study is needed;
• apply knowledge to the clinical use of new molecular diagnostic tests to improve outcomes in the care of lung infections.

Studies suggest that timely therapy of pneumonia can significantly impact patients’ clinical course and outcome. Rapid diagnostic tests employing new technologies are emerging to diagnose pneumonia more quickly and accurately than sputum culture or standard serology, and to identify drug-resistant organisms early. This session will explore the state of the art in diagnosis and evaluation of different causes of pneumonia, including tuberculosis, influenza, bacterial, and fungal pneumonias.

Chairing: K.A. Crothers, MD, Seattle, WA
N. Patel, MD, Boston, MA
G. Waterer, MD, PhD, Perth, Australia
In this session, international recognized cancer scientists will focus on fundamental and evolving areas of lung cancer knowledge. Dr. Yatabe will address the role of developmental pathways in driving lung adenocarcinoma morphology and progression. Dr. Mariani will discuss similarities between lung development and lung carcinogenesis. Dr. Borczuk will present new in vivo data establishing the role of TGF-Beta signaling in the repression of tumor invasion and metastasis. Dr. Kim will present data addressing the roles of stem and progenitor cells in lung cancer. Dr. Abastado will challenge the dogma that tumor metastasis is a late phenomenon.

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

Chairing: C.A. Powell, MD, New York, NY
          Y. Yatabe, MD, PhD, Nagoya, Japan

8:15  It’s Tru!: Role of TTF-1 and EGFR Developmental Pathways In Lung Adenocarcinoma
     Y. Yatabe, MD, PhD, Nagoya, Japan

8:45  Mouse And Man: Overlap In Lung Cancer Development And Progression
     T.J. Mariani, PhD, Rochester, NY

9:15  TGF-Beta Signaling: Having It Both Ways
     A.C. Borczuk, MD, New York, NY

9:45  Role Of BASC And Other Progenitor Cells In Lung Repair And Cancer
     C. Kim, PhD, Boston, MA

10:15 Sneaking Out: Early Tumor Cell Dissemination
      J.P. Abastado, PhD, Singapore, Singapore
Target Audience
We would expect this symposium to appeal to a broad audience including: pulmonary and sleep physicians, clinical researchers in sleep medicine, health policy decision makers, geneticists, and epidemiologists.

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

• describe new findings about the various patient factors that may influence cardiovascular susceptibility in patients with OSA;

• describe new findings about mechanisms by which sleep apnea predisposes to cardiovascular disease;

• risk stratify patients with sleep apnea regarding their cardiovascular risk.

It has been well demonstrated that patients with untreated obstructive sleep apnea (OSA) are at increased risk of incident cardiovascular events including heart attacks and strokes. However, the reality is that many patients with OSA will not suffer from cardiovascular disease (CVD), suggesting that there is substantial individual variability to susceptibility. Recently, basic, translational, genetic and epidemiologic studies have made progress towards identifying patient characteristics that may modify disease risk. This symposium will highlight recent advances related to this issue. This symposium is truly translational in nature, spanning from basic science (genetics and biomarkers) to public health and epidemiology.

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

Chairing: N. Ayas, MD, Vancouver, Canada
S. Patel, MD, MS, Cleveland, OH
K. Chin, MD, PhD, Kyoto, Japan

8:15 OSA And Cardiovascular Pathophysiology
V. Somers, MD, Rochester, MN

8:40 Genetic Modulation Of CVD Risk In OSA
L. Palmer, PhD, Toronto, Canada

9:05 Modification of CV Risk In OSA By Gender
S. Redline, MD, MPH, Boston, MA

9:30 Impact of Age On The OSA-CVD Relationship
A. Malhotra, MD, Boston, MA

9:55 Interaction Of OSA And Obesity On CVD
N. Punjabi, MD, PhD, Baltimore, MD

10:20 Does Sleepiness Predict CVD Risk In OSA?
J.R. Stradling, MD, MPH, Oxford, United Kingdom
that will contribute to better identification of progenitor cells and their potential use for therapeutic applications.

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

**Chairing:** D.F. Alvarez, MD, PhD, Mobile, AL  
N.W. Morrell, MD, Cambridge, United Kingdom  
S. Majka, PhD, Denver, CO

**8:15** Vascular Progenitor Cells: An Overview  
D.M. McDonald, MD, PhD, San Francisco, CA

**8:40** Endothelial Progenitor Cells In Adult Vascular Beds  
S. Ergun, MD, Essen, Germany

**9:05** Endothelial Progenitor Cells: Significance In The Progression And Resolution Of Pulmonary Hypertension  
D.J. Stewart, MD, Ottawa, Canada

**9:30** Pulmonary Smooth Muscle Cell Progenitor Cells  
J.D. West, MD, Nashville, TN

**9:55** Mesenchymal Progenitors And Their Relation With The Pulmonary Circulation  
S. Majka, PhD, Denver, CO

**10:20** Generation of Induced Pluripotent Stem Cell-Derived Vascular Progenitor Cells  
D.N. Kotton, MD, Boston, MA

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**BASIC • CLINICAL**

**SCIENTIFIC SYMPOSIUM**

**D11** PUTTING THE BRAKES ON TH17-MEDIATED INFLAMMATION IN THE LUNG

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

8:15 am-10:45 am

**Target Audience**

Providers of care to individuals with asthma or with bacterial or fungal infections of the lung. Researchers interested in the mechanisms that control the extent of ongoing Th17 inflammation in the lung.

**Objectives**

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

- understand that Th17 cells can have both protective and pathogenic actions in the lung;
- understand the cellular and molecular pathways that control Th17-mediated inflammation in the lung;
- identify molecules that might be therapeutically targeted to ameliorate ongoing Th17-mediated inflammation and tissue damage.

**8:15** Regulation Of Allergic Airway Inflammation And Airway Hyperactivity  
C.M. Lloyd, PhD, London, United Kingdom

**8:40** Pathological Versus Protective Functions Of IL-22 In Airway Inflammation Are Regulated By IL-17A  
D. Artis, PhD, Philadelphia, PA

**9:05** A Functional IL-13 Receptor Is Expressed On Th17 Cells And IL-13 Signaling Negatively Regulates IL-17A Expression  
D. Newcomb, MD, Nashville, TN

**9:30** ICOS-B7h Interactions Reversibly Suppress Allergen-Induced IL-17 Secretion And Airway Hyperresponsiveness  
D.N. Cook, PhD, Research Triangle Park, NC
D12 UNDERSTANDING AND IDENTIFYING NON-ADHERENCE TO BETTER TREAT ASTHMA, COPD AND OBSTRUCTIVE SLEEP APNEA

Assemblies on Behavioral Science; Pediatrics; Pulmonary Rehabilitation; Sleep and Respiratory Neurobiology

8:15 am-10:45 am

Target Audience
Those providing clinical care to patients and in clinical research.

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

• understand the impact of non-adherence on respiratory disease;

• identify causes and types of non-adherence;

• incorporate strategies into clinical practice to improve rates of non-adherence amongst their patients.

This session will review the prevalence, impact and causes of medication non-adherence among various patient populations (asthma, COPD, OSA). Practical clinical strategies to identify and address non-adherence in these populations will also be reviewed.

Chairing:
S. Okelo, MD, Baltimore, MD
K. Ross, MD, Cleveland, OH
A.S. Jordan, PhD, BSc, Melbourne, Australia

8:15 Understanding Cases And Types Of Medication Non-Adherence
Speaker To Be Announced
The workshop will begin with a presentation on the methodology for advanced modes of noninvasive positive pressure ventilation such as adaptive servo-ventilation and volume assured ventilation. Then two cases associated with difficult positive pressure management will be presented. The discussants will then discuss the cases in terms of their approach to the initiation and management of positive pressure therapy for the patients. The 2 cases represent conditions frequently managed by pulmonary and sleep physicians: opioid induced central sleep-disordered breathing and post-stroke sleep-disordered breathing.

Chairing:
J.A. Rowley, MD, Detroit, MI
V. Kapur, MD, Seattle, WA

11:30 The ABCs Of NIPPV
S. Parthasarathy, MD, Tucson, AZ

12:00 Management Of Opioid CSA
S. Javaheri, MD, Cincinnati, OH

12:30 Management Of OSA In Stroke Patients
H.K. Yaggi, MD, New Haven, CT

Target Audience
Practicing pulmonologists and sleep physicians

Objectives
At the conclusion of this session, the participant will be able to:
• increase familiarity with the various non-invasive positive pressure therapy modalities available for sleep-disordered breathing syndromes;
• understand the management of PAP therapy in opioid induced central sleep apnea;
• implement a practical approach to the management of OSA in patients with ischemic stroke.
• diagnose and recognize NTM disease in patients with pre-existing lung disease;
• understand the international aspects of this disease.

This session will review the diagnosis and treatment of patients with NTM lung disease.

Chairing: A.E. O’Donnell, MD, Washington, DC
T. Aksamit, MD, Rochester, NY

11:30 Evaluating Who And When To Treat NTM Lung Disease
T. Aksamit, MD, Rochester, NY

11:50 Nodular Bronchiectasis: The Growing Epidemic
K.N. Olivier, MD, MPH, Bethesda, MD

12:10 Evaluation And Treatment of NTM Infection Superimposed On Chronic Lung Disease
D. Griffith, MD, Tyler, TX

12:30 The European NTM Experience: Organisms And Treatment
J. van Ingen, MD, PhD, Bilthoven, Netherlands

12:50 Panel Discussion
A.E. O’Donnell, MD, Washington, DC

CENTERS FOR DISEASE CONTROL AND PREVENTION

L16 UPDATE FROM CDC’S TB TRIALS CONSORTIUM (TBTC) AND TB EPIDEMIOLOGIC STUDIES CONSORTIUM (TBESC)

12:00 pm-1:00 pm

Target Audience
Practicing physicians, clinical researchers, laboratorians and public health workers

Objectives
At the conclusion of this session, the participant will be able to:
• understand and learn how expanding and enforcing current guidelines for the identification and treatment of LTBI can reduce TB incidents among the foreign-born whose illness is currently not prevented by government-based immigration screening practices;
• gain relevant information on the use of IGRAs in the diagnosis of LTBI in health-care workers and understand key findings and challenges overcome by a large clinical trial for LTBI treatment;
• understand key findings from a pilot study of MDR TB treatment, including treatment-limiting toxicities, microbiologic impact, and factors affecting the ability to conduct such studies in this setting.

This session will provide an update on recent research conducted by CDC’s two TB research consortia, the TB Trials Consortium and the TB Epidemiologic Studies Consortium. The session will include a discussion of opportunities for prevention of TB among the foreign-born, and a presentation of key findings from a study on the use of low-dose linezolid in patients with multidrug-resistant TB. The session will also show results of an evaluation of interferon-gamma release assays in the diagnosis of LTBI in health-care workers, and discuss the major aspects of a large clinical trial of therapy for latent TB infection.

Chairing: E. Villarino, MD, Atlanta, GA
D. Garrett, MD, Atlanta, GA
T. Navin, MD, Atlanta, GA

12:00 Task Order #9: Opportunities For Prevention Of TB Among The Foreign-Born
A. Davidow, PhD, Newark, NJ

12:15 PREVENT TB: A 10-Year Multinational Effort To Enroll 8000 Patients In A Clinical Trial Of LTBI Treatment
T.R. Sterling, MD, Nashville, TN

12:30 Task Order #18 - Interferon-Gamma Release Assays In Health-Care Workers
C.L. Daley, MD, Denver, CO

12:45 TBTC Study 30: Studying Low-Dose Linezolid In A Pilot Clinical Trial Of Patients With MDRTB
W. El-Sadr, MD, New York, NY
GENES, BIOMARKERS AND QUANTITATIVE TRAITS: GOING BEYOND CASE-CONTROL STUDIES IN THE MULTI-ETHNIC STUDY OF ATHEROSCLEROSIS (MESA) AND CORONARY ARTERY RISK DEVELOPMENT IN YOUNG ADULTS (CARDIA) PROSPECTIVE COHORT STUDIES

Target Audience
Pulmonologists, geneticists, physiologists, radiologists, nurse practitioners; epidemiologists, cardiologists

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

• describe the MESA and CARDIA studies, available data, research opportunities, and foster collaborations;

• understand why analyses of quantitative traits are often biased in the case-control studies but yield less biased results in cohort studies;

• provide insight into the genetics of quantitative traits for emphysema using genome-wide association and linkage studies and to examine candidate genes and related biomarkers for right ventricular structure/function and lung function.

Analyses of quantitative traits in case-control studies are often biased. Prospective cohort studies such as the Multi-Ethnic Study of Atherosclerosis (MESA) and Coronary Artery Risk Development in Young Adults (CARDIA) provide an alternative. MESA has extensive quantitative traits including percent emphysema and right ventricular measures. CARDIA has five measures of pulmonary function. The session will describe biases in case-control studies and examine genes and biomarkers related to quantitative traits related to pulmonary disease in these large cohort studies.

Chairing: R.G. Barr, MD, PhD, New York, NY
L.J. Smith, MD, Chicago, IL

12:00 Quantitative Traits In The MESA Lung Studies And CARDIA Studies, And Where We Go Wrong With Case-Control
R.G. Barr, MD, PhD, New York, NY

12:15 Genome-Wide Association Study Of Percent Emphysema On CT Scan: The MESA-Lung-SHARE Study
Speaker To Be Announced

12:30 Adhesion Molecules And Lung Function In CARDIA
Speaker To Be Announced

12:45 Let's Talk About Sex Hormones And The Right Ventricle
Speaker To Be Announced

NEW U.S. GUIDELINES FOR THE DIAGNOSIS AND MANAGEMENT OF FOOD ALLERGY

Target Audience
Providers of primary and specialty health care

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

• define food allergy;

• better diagnose and manage patients with food allergy;

• improve the quality of life and health status of patients by applying evidence-based recommendations for patient care.

The NIAID has recently led an effort by 34 professional societies, advocacy groups, NIH Institutes, and Federal Agencies to develop clinical practice guidelines for the diagnosis and management of food allergy. A new ATS session will include two oral presentations on the (1) the
development of these evidence-based clinical guidelines, and (2) highlights of the new clinical recommendations.

Chairing: M.J. Fenton, PhD, Bethesda, MD

12:00 Development Of The New U.S. Food Allergy Guidelines
M.J. Fenton, PhD, Bethesda, MD

12:30 Highlights Of The New U.S. Food Allergy Guidelines
M. Kraft, MD, Durham, NC

12:50 General Discussion

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

L19 REGULATION OF FLAVORING EXPOSURES AND MEDICAL SURVEILLANCE

12:00 pm-1:00 pm

Target Audience
Providers of lung health; occupational health practitioners; those needing instruction in public health, epidemiology, medical surveillance, and occupational lung diseases; those with research and clinical interests in obstructive lung diseases.

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

• improve recognition of preclinical fixed obstruction in flavoring workers;
• learn new findings about quantitative risks of flavoring chemical;
• improve quality of life/health of flavoring-exposed workers by early recognition and advising reduction or elimination of exposure.

The attendee will learn how bronchiolitis obliterans in flavoring-exposed workers was recognized in 2000 and what knowledge has been used to support a quantitative risk assessment and proposed exposure limit for diacetyl and related chemicals. Existing challenges of using serial spirometry to detect excessive declines within the normal FEV1 range require changes in pulmonary practice which may be reflected in regulation.

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

12:00 Evolution Of Knowledge About Flavoring-Related Lung Diseases
K. Kreiss, MD, Morgantown, WV

12:20 Risk Assessment And Regulatory Update
L.T. McKeman, DrPH, Cincinnati, OH

12:40 Medical Surveillance With Serial Spirometry
P. Enright, MD, Tuscon, AZ

DIVISION OF LUNG DISEASES/NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

L20 GENOMICS RESEARCH: HIGH THROUGHPUT PROJECTS FUNDED BY ARRA

12:00 pm-1:00 pm

Target Audience
Clinicians and scientists interested in the study of genetics, genomics, and epigenomics of COPD, ALI, Sarcoidosis, and BPD.

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

• be familiar with the new results of the large NHLBI genomic initiatives;
• understand the scope and application of the new technologies and methods: Exome-sequencing, RNA-sequencing, GWAS, and integrative Genomics;
• be aware of the newly generated datasets and their availability to the public.

The "Grand Opportunities" RFA (GO grants) from NIH was supported by the ARRA (American Recovery and Reinvestment Act) funds. It provided opportunities for lung research community to apply next-generation sequencing technology, GWAS, and systems biology
approach to study genetics, genomics, and epigenetics of many lung diseases, including COPD, IPF, Asthma, ALI, CF, BPD, PAH, and Sarcoidosis. Speakers will present the initial findings from GWAS of BPD and Sarcoidosis, exome sequencing of many lung diseases, and integrative genomics study of IPF and COPD. In addition, they will introduce new datasets as resources for the scientific community, including exome-sequencing and genotyping data.

**Chairing:**  
D.A. Schwartz, MD, Denver, CO  
W. Gan, PhD, Bethesda, MD

12:00 Lung Genome Research Consortium For COPD And IPF  
N. Kaminski, MD, Pittsburgh, PA

12:12 NHLBI Lung Cohorts Exome Sequencing Project  
R.A. Mathias, ScM, ScD, Baltimore, MD

12:24 Genomic Influences On Bronchopulmonary Dysplasia: A Population-Based Study (GWAS)  
H. O'Brodovich, MD, Stanford, CA

12:36 Genome-Wide Association In African Sarcoidosis  
C.G. Montgomery, PhD, Oklahoma City, OK

**DIVISION OF LUNG DISEASES/NATIONAL HEART, LUNG, AND BLOOD INSTITUTE**

L21  
**NHLBI SEVERE ASTHMA RESEARCH PROGRAM (SARP): NEW FINDINGS**

12:00 pm-1:00 pm

**Target Audience**  
Clinicians, researchers, nurses and respiratory therapists

**Objectives**  
At the conclusion of this session, the participant will be able to:  
• learn new findings about lung gene expression signatures in mild to severe asthma.  
Asthma is a complex disease associated with intermediate biological and physiological phenotypes. The NHLBI funded Severe Asthma Research Program (SARP) employs genetic and genomic approaches to investigate features of asthma phenotypes to increase the understanding of pathophysiology and disease progression to improve diagnosis and response to treatment. This program will present new findings of this effort and provide novel insights regarding the design of mechanism-based diagnostic, prognostic and treatment strategies for severe asthma in children and adults.

**Chairing:**  
W.W. Busse, MD, Madison, WI

12:00 Genetics Of Asthma Severity Versus Asthma Susceptibility  
D.A. Meyers, PhD, Winston-Salem, NC

12:20 Lung Gene Expression Profiles In Mild To Severe Asthma  
S.E. Wenzel, MD, Pittsburgh, PA

12:40 Integrating Genetics And Genomics To “Personalize” The Approach To Treatment Of Severe Asthma  
E.R. Bleecker, MD, Winston Salem, NC

**DIVISION OF LUNG DISEASES/NATIONAL HEART, LUNG, AND BLOOD INSTITUTE**

L22  
**REPORT FROM THE NHLBI PULMONARY VASCULAR SCCOR PROGRAMS**

12:00 pm-1:00 pm

**Target Audience**  
Lung vascular disease care providers, particularly pulmonary arterial hypertension (adult and pediatric) and scleroderma; investigators conducting translational research.

**Objectives**  
At the conclusion of this session, the participant will be able to:  
• understand about lung vascular research supported by NHLBI;
know about emerging clinical measures to assess lung vascular/right ventricular disease status and progression;

understand novel basic science research emerging in the field of lung vascular biology.

The NHLBI-sponsored Specialized Centers of Clinically Oriented Research (SCCOR) Program in Pulmonary Vascular Disease has supported two research sites since 2006. Data from these programs are emphasizing the importance of right ventricular function in the pathogenesis of lung vascular disease, particularly in the settings of scleroderma pulmonary hypertension and the pediatric population. Each research program is providing support to advance novel end-point measures, such as pulmonary vascular impedance and tricuspid annular plane systolic excursion (TAPSE) for use in future lung vascular clinical trials. The programs are also generating novel pathogenesis data germane to lung vascular biology and disease.

Chairing: T.M. Moore, MD, PhD, Bethesda, MD

12:00 Molecular Determinants Of Pulmonary Arterial Hypertension
P.M. Hassoun, MD, Baltimore, MD

12:15 HIMF/FIZZ1 In Pulmonary Hypertension/Right Heart Failure
R. Johns, MD, Baltimore, MD

12:30 Lung Vascular Disease In Infants And Children: Mechanisms Of Treatment
K.R. Stenmark, MD, Aurora, CO

12:45 Advanced Imaging And Diagnostics For Pediatric Pulmonary Hypertension
R. Shandas, PhD, Aurora, CO

Chairing: G. Toews, MD, Ann Arbor, MI

12:00 Introduction
G. Toews, MD, Ann Arbor, MI

12:04 Status of IPFNET Clinical Trials
K.K. Brown, MD, Denver, CO
12:18  Relationship Between Right Ventricular Dysfunction And Response To Slidenafil In The STEP-IPF Trial
M.L.K. Han, MD, MS, Ann Arbor, MI

12:32  Phenotyping Fibrocytes And Circulating Leukocytes In IPF
B.B. Moore, PHD, Ann Arbor, MI

12:46  Evaluating Quality Of Life In The Step-IPF Trial
E. Eisenstein, DBA, Durham, NC
pay-for-performance and integration with patient-centered medical homes, and to contrast this with international models for health delivery;

• explain how U.S. healthcare reform legislation will require integration of measurement and reporting of evidence-based diagnostic and treatment approaches to improve quality and outcomes of care, and to contrast this with international strategies for quality improvement;

• assess and evaluate the impact of U.S. healthcare reform on scarce resource allocation and reimbursement with a focus on critical care and end-of-life care.

The passage of healthcare reform law in the US (Patient Protection and Affordable Care Act; PPACA) is transforming the financing, delivery affordability and access to health care for most Americans. However, the consequences for providers of pulmonary, critical care and sleep (P/CC/S) medicine and the ATS have only been partially explored. This symposium highlights key aspects of PPACA with particular emphasis on access and delivery, financing, resource allocation and quality reporting/improvement relevant to ATS membership. International context and consideration of missed opportunities and future priorities for advancing policy to improve delivery, quality and manage cost for P/CC/S will be discussed.

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

Chairing: C. Gries, MD, MSc, Pittsburgh, PA
I.S. Douglas, MD, Denver, CO

2:00 Association Between Health Insurance Status And Access, Care Delivery, And Outcomes For Patients Who Are Critically Ill
Speaker To Be Announced

2:20 Pay-For-Performance: A US Perspective
Speaker To Be Announced

2:40 Structures And Processes For Measuring And Improving Quality Of Patient Care
I.S. Douglas, MD, Denver, CO

3:00 Specialists/Subspecialists And The Patient-Centered Medical Home
Speaker To Be Announced

3:20 Implications Of HCR For Allocation Of Scarce Resources, Access And Cost Containment
Speaker To Be Announced

3:45 Achieving Universal Coverage: An International Perspective
Speaker To Be Announced

4:10 Opportunities Missed/Challenges Still To Be Addressed In The HCR Process
Speaker To Be Announced

D83 STEM CELLS AND REGENERATIVE MEDICINE IN LUNG DISEASE AND TRANSPLANTATION

Assemblies on Clinical Problems; Pulmonary Circulation; Respiratory Cell and Molecular Biology

2:00 pm-4:30 pm

Target Audience
Providers of lung health; those with clinical, research, or administrative responsibilities.

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

• define new findings about the role of stem cells in lung disease;

• define new findings about regenerative medicine in lung disease;

• integrate new treatment options in discussing innovative experimental therapies.

The development of effective therapies for lung diseases require a greater understanding of the role of stem cells in lung health and disease. There have been recent advances in tissue engineering of human airway and rat lung. This session will present the limits of transplantation and other available therapeutic options for advanced lung disease and the development of novel stem cell-based therapies that may soon be available.

There will be a 5-minute discussion after each talk.
Neurocritical care is a relatively young subspeciality whose evidence base is proliferating rapidly. The areas for this session have been selected as examples of extremely relevant questions that have been asked and then explored. The topics are diverse, ranging from administration to multimodal clinical monitoring. This session will be appreciated by any professional caring for patients with neurological critical illness.

**Chairing:** M.G. Chapman, BM, Toronto, Canada J. Hutchison, MD, Toronto, Canada

2:00 **Therapeutic Hypothermia And Traumatic Brain Injury**
   Speaker To Be Announced

2:25 **Decompressive Craniectomy For Traumatic Brain Injury And Stroke**
   Speaker To Be Announced

2:50 **Neuro-Prognostication In The Era Of Therapeutic Hypothermia**
   B. Young, MD, London, Canada

3:15 **EEG Monitoring: Why Should We And Why Don't We?**
   Speaker To Be Announced

3:40 **Open To Closed: Critical Organisation For Neurological Emergencies**
   Speaker To Be Announced

4:05 **Clinical Integration Of Brain Tissue Oxygenation**
   Speaker To Be Announced

**Target Audience**
Neurointensivists and general critical care physicians

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

- Integrate up to date management strategies for brain injury;
- Discuss appropriateness of various systems for caring for neurological patients.
- Critically examine and discuss modes of monitoring for neurological injury.
Target Audience
Providers of lung health, those needing instruction in areas of medicine outside their specialty, patients affected by non-smoking related COPD.

Objectives
At the conclusion of this session, the participant will be able to:
- identify about new findings on the epidemiology of non-smoking related COPD and the burden that this is placing on patient health and global health resources;
- apply the new knowledge regarding identification and prevention of exposures such as biomass fuels;
- use the information presented to improve the quality of life/health status of his/her patients by preventing exposure to known environmental factors responsible for non-smoking related COPD.

COPD is a global epidemic and although cigarette smoking is the most common cause in developed countries, in developing counties, the majority of COPD is not associated with smoking but with other risk factors such as exposure to biomass fuels in poorly ventilated homes as well as various occupational exposures. Even in developed countries, 20-30% of COPD patients in the community are nonsmokers. There is an urgent need for more research to understand how non-smoking COPD differs from smoking COPD in terms of inflammatory mechanisms, physiology, natural history, response to therapy and links to co-morbid diseases.

Chairing:
P. Barnes, DM, DSc, London, United Kingdom
G.P. Downey, MD, Denver, CO
D.M. Mannino, MD, Lexington, KY

2:00 Introduction And Overview Of Non-Smoking Related COPD And Patient Perspective
G.P. Downey, MD, Denver, CO
Speaker To Be Announced

2:05 Global Prevalence of COPD: The BOLD Study
P. Barnes, DM, DSc, London, United Kingdom

2:30 Non-Smoking COPD In Developed Countries
D.M. Mannino, MD, Lexington, KY

2:55 Non-Smoking COPD In India
S. Salvi, MD, Pune, India
There will be a 5-minute discussion after each talk.

Chairing: P.G. Holt, MD, PhD, Perth, Australia
          A. Bush, MD, London, United Kingdom

2:00  Early Life Viral Infections And Asthma Inception  
P. Sly, MBBS, Perth, Australia

2:25  Microbial Exposures And Asthma: Exacerbating Or Protective?  
F.D. Martinez, MD, Tucson, AZ

2:50  The Role Of Host Microbiota And Fungi In Increasing Asthma Susceptibility  
G.B. Huffnagle, MD, Ann Arbor, MI

3:15  Atopy And Infection: Important Interactions In Asthma Inception And Exacerbation  
M. Kabesch, MD, PhD, Hannover, Germany

3:40  Altered Immune Responses And Development Of, Or Protection Against, Asthma  
P.G. Holt, MD, PhD, Perth, Australia

4:05  Therapeutic Strategies In Asthma Prevention: Importance Of Regulation And Resolution  
C.M. Lloyd, PhD, London, United Kingdom

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

Chairing: A.M. Tager, MD, Charlestown, MA
          M.A. Olman, MD, Cleveland, OH
          S. Idell, MD, PhD, Tyler, TX

D87  WHAT GOES WRONG IN IDIOPATHIC PULMONARY FIBROSIS? WHY INJURY LEADS TO FIBROSIS, NOT REPAIR

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation; Clinical Problems; Pulmonary Circulation; Respiratory Structure and Function

2:00 pm-4:30 pm

Target Audience
Basic researchers, clinical researchers and clinicians interested in the pathogenesis of idiopathic pulmonary fibrosis (IPF) will benefit from this session. The session will review how aberrant or over-exuberant wound healing processes initiated in response lung injury are now thought to contribute to the development and progression of IPF, and how manipulating these processes may provide effective therapeutic strategies for this disease. Attendees will need no specific expertise to benefit from this session, but clinicians and investigators involved in the area of interstitial lung diseases in general, and in IPF specifically, may find the session to be of particular interest. After attending this session, clinicians will be able to better discuss the rationale for new therapies that are being developed, or that are currently in clinical trials, for IPF.

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

- identify aberrant wound-healing responses now thought to contribute to pulmonary fibrosis, including alveolar epithelial cell death, vascular leak, coagulation cascade activation, abnormal fibroblast persistence and impaired re-epithelialization;
- understand the evidence implicating these aberrant repair processes in the pathogenesis of IPF;
- understand the rationale for emerging pharmacological strategies for IPF, including anti-oxidant and anti-coagulation therapies, which target these aberrant repair processes to lung injury, or lung injury itself.

Tissue injury initiates a complex series of host wound healing responses. If successful, these responses restore normal tissue structure and function. If not, they lead to tissue fibrosis and loss of function. In the lung, aberrant repair responses to injury are thought to contribute to IPF pathogenesis. This symposium will review the repair processes that are abnormal or over-exuberant when lung injury leads to fibrosis, including excessive alveolar epithelial cell apoptosis, vascular leak, activation of the coagulation cascade, abnormal fibroblast persistence and impaired re-epithelialization. The symposium will also identify potential strategies to treat IPF by targeting these abnormal repair processes.

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

Chairing: A.M. Tager, MD, Charlestown, MA
          M.A. Olman, MD, Cleveland, OH
          S. Idell, MD, PhD, Tyler, TX
2:00 Introduction To The Symposium: Aberrant Wound-Healing Processes Implicated In Pulmonary Fibrosis
A.M. Tager, MD, Charlestown, MA

2:10 Patient Perspective
Speaker To Be Announced

2:15 Stressed To Death: Endoplasmic Reticulum Stress As A Cause Of Epithelial Cell Death In IPF And NSIP
A. Guenther, MD, Giessen, Germany

2:35 Alveolar Epithelial Injury And Pulmonary Fibrosis: Demonstrating A Causal Connection
T.H. Sisson, MD, Ann Arbor, MI

2:55 Coagulation Cascade Proteases In Pulmonary Fibrosis: Not For Clotting Only
R.C. Chambers, MD, London, United Kingdom

3:15 Worsening Pulmonary Fibrosis By Worsening Vascular Leak: Inhibition of SIP Signaling After Lung Injury
B.S. Shea, MD, Boston, MA

3:35 Prostaglandin E2: Anti-Fibrotic Mediator For All Reason
M. Peters-Golden, MD, Ann Arbor, MI

3:55 What Happens After Apoptosis? The Aberrant Reaction Of The Remaining Epithelial Cells During Fibrotic Lung Remodeling
M. Selman, MD, Mexico City Mexico

Target Audience
Clinicians caring for patients with lung disease or critical illness and researchers interested in communication or patient care.

Objectives
At the conclusion of this session, the participant will be able to:
• define new findings regarding communication strategies to improve patient and family outcomes;
• define new findings about teaching communication skills to trainees and practicing clinicians;
• understand new findings to increase patient and family understanding of clinical information.

Communication is a core skill for clinicians providing healthcare to patients with lung disease, critical illness, and sleep disorders. This symposium will review recent advances that can enhance communication between clinicians, patients, and family members and improve quality of care and patient and family outcomes. Areas of focus include patient self-management, family care-giving, prognosis and advance care planning, and surrogate-decision-making as well as innovative models for teaching communication skills. The speakers will also discuss future research needs to further enhance communication.

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

Chairing: J.R. Curtis, MD, MPH, Seattle, WA
T.R. Barnes, Memphis, TN

2:00 Patient Perspective
T.R. Barnes, Memphis, TN

2:05 PAR Awards
T.R. Barnes, Memphis, TN

2:15 Communication With Patients About Self-Management And Adherence To Treatment
C.S. Rand, PhD, Baltimore, MD

2:40 Communication With Patients And Families About The Burdens Of Family Care-Giving During Chronic Illness
J. Kutner, MD, Aurora, CO
3:05 Communication With Patients And Families About Prognosis And Advance Care Planning
D.B. White, MD, Pittsburgh, PA

3:30 Communication With Families About Surrogate Decision-Making In The ICU
J.R. Curtis, MD, MPH, Seattle, WA

3:55 Novel Ways To Teach The Full Spectrum Of Communication Skills To Clinicians
A.L. Back, MD, Seattle, WA

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

Chairing: C. Garvey, FNP, MSN, MPA, Daly City, CA
S.S. Jacobs, RN, MS, Stanford, CA
S.K. Danoff, MD, PhD, Baltimore, MD

2:00 Patient Perspective
Speaker To Be Announced

2:29 2010 ATS Idiopathic Pulmonary Fibrosis Guidelines: Evidence-Based Treatment
G. Raghu, MD, Seattle, WA

2:53 Optimizing Function With Pulmonary Rehabilitation: Education, Exercise, Oxygenation
C. Garvey, FNP, MSN, MPA, Daly City, CA

3:17 Management Of Common Co-Morbidities
C.D. Fell, MD, Calgary, Canada

3:41 Symptom Management: Cough And Dyspnea
K.O. Lindell, PhD, RN, Pittsburgh, PA

4:05 Difficult Conversations: Lung Transplant And Palliation For End Stage Interstitial Lung Disease
J. Egan, MD, Dublin, Ireland

Interstitial lung diseases (ILD) are a complex, heterogeneous group of disorders that challenge clinicians and scientists regarding accurate diagnosis and effective, evidence-based management. This course will address new ATS/ERS IPF guidelines, a multidisciplinary approach to diagnosis and management of ILD and include several integrative management strategies.
Objectives
At the conclusion of this session, the participant will be able to:

- describe the various relationships that exist between ATS members, the ATS as a professional medical society, the pharmaceutical, device and biotech industry as well as why these relationships are in the public interest. Understand that COI includes other categories of competing interests, in addition to financial;

- understand the consequences of COI guidelines that are too strong or too weak;

- understand the strategies involved in maintaining an appropriate and productive relationship between medical professionals, medical societies and industry. Understand mechanisms used to manage COI within these relationships.

This session addresses the importance of partnerships between ATS (both its members and the organization itself) and the pharmaceutical and device industry. In this symposium we will develop the key conceptual distinction between industry-sponsored marketing and scientific research and discuss specific COIs, duties and obligations. Conflict of interest other than financial will be highlighted. Examples of existing successful partnerships including how such collaborations benefit ATS as a professional medical organization will be described. Scientific collaboration for the discovery and development of new therapies is in the public interest and within the ATS mission.

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

Chairing:  J.A. Gold, MD, Portland, OR  
T.F. Reiss, MD, Princeton, NJ  
L. Sicilian, MD, Boston, MA  
M. Osborne, MD, PhD, Portland, OR

2:00 COI And The ATS: Framing The Discussion  
M. Osborne, MD, PhD, Portland, OR

2:10 The COI Debate: Issues And Consequences  
L. Sicilian, MD, Boston, MA

2:30 Discovery And Development: A Collaborative Effort  
T.F. Reiss, MD, Princeton, NJ

2:50 NIH And Industry Partnerships: Issues And Actions  
J. Moss, MD, PhD, Bethesda, MD

3:10 ATS Foundation: Collaboration To Successfully Fund Research  
J.F. Donohue, MD, Chapel Hill, NC

3:30 Industry-Academic Collaboration: An Example Of Success  
L.J. Rubin, MD, La Jolla, CA

3:50 General Discussion

2:00 pm-4:30 pm

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

Denver International Airport
Denver International Airport (DEN) is located approximately 20 miles from the Stapleton Area and approximately 27 miles from Downtown Denver. For more information please visit www.flydenver.com.

Airport Shuttle
As the official ground transportation provider for the Denver International Airport, “Super Shuttle” offers transportation to and from downtown Denver hotels. The cost for roundtrip service to the downtown area hotels is $32.00 per person, one-way for $19.00 per person; fares exclude gratuity. For more details or to make a reservation, call 1-800-BLUE VAN or visit their website at www.supershuttle.com. The American Thoracic Society group code is RNX99. Some Stapleton Area hotels provide complimentary airport transportation upon request.

Taxicab
A cab ride costs a “flat-rate” of $54.50 to the downtown Denver area.

Car Rental
For car rental information, see page 158.

Public Bus
The Regional Transportation District has buses running throughout the area. A one-way fare is $2.00. Downtown Denver also offers a complimentary 16th Street bus. Stops are located at every intersection on the 16th Street Mall between RTD’s Civic Center Station and Union Station. Visit www.rtd-denver.com for more information.

Train Station
Denver Union Station with Amtrak-Denver train services is one mile from the Colorado Convention Center located at: 1701 Wynkoop Street, Denver, CO 80202.

Denver B-Cycle
Denver has a unique form of transportation available to all guests, a bicycle. Located all around the Central Business District Area you will find B Stations where you can rent a bicycle for 24 hours for the low cost of $5.00. You can also rent the bicycle in thirty minute intervals for a lower price. For further information, check out their website at www.Denver.Bcycle.com.

Transportation to Convention Center
Shuttle Bus: In an effort to run a more environmentally friendly conference, the ATS will be running a limited shuttle bus service. Shuttles will service the hotels that are not within walking distance of the Colorado Convention Center. (Walking distance is defined as approximately a 15-20 minute one way walk.) We plan to have shuttle stops at a select number of hotels in the downtown area. The shuttle bus schedule and walking maps of the downtown area will be available at the Colorado Convention Center and at selected ATS hotels.

By Foot: We estimate the following hotels to be a 15-20 minute walk or less to the Colorado Convention Center: Hyatt Regency Denver Convention Center, Embassy Suites Downtown, Four Seasons, Comfort Inn Downtown, Courtyard Marriott Denver Downtown, Crowne

SESSION LOCATIONS
Most ATS 2011 sessions will be held in the Colorado Convention Center. Additional sessions, committee meetings, and assembly meetings will be held at the Hyatt Regency Denver at Colorado Convention Center Hotel, Grand Hyatt Denver Hotel, Embassy Suites Downtown Denver Hotel and Sheraton Denver Downtown Hotel.

SOCIAL MEDIA TOOL FOR THE CONFERENCE
The ATS is offering a social networking tool for 2011 conference attendees: My ATS 2011. Powered through Zerista, My ATS 2011 enables attendees to see who is attending the conference, know when attendees are presenting at the conference, use attendee-to-attendee chat to set up meetings, and participate in conference-wide conversations about the conference. You may also build your own personal calendar of sessions through My ATS 2011.

ABSTRACTS ON CD
The full abstracts presented at the conference will be available on CD for pick up in Denver. The CD of abstracts is supported by Pfizer, Inc.

MEETING SPACE APPROVAL
The ATS International Conference presents an ideal opportunity for exhibiting companies, ATS corporate partners, universities and/or participating non-profit member organizations to hold meetings and private functions in conjunction with the International Conference. That's why the ATS now offers a number of options to accommodate these needs, whether you're holding a reception for fifty guests or a medical marketing meeting for senior staff, you can choose from among our on-site and off-site locations to make it happen.

INTERNET ACCESS
The ATS Internet Booths will provide complimentary internet access for conference participants. The booths will be open during the main hours of the conference, and a time limit of 15 minutes will be enforced. There are three locations: one near registration, one in the ATS Exhibit Hall and the other in the Foundation Suite. For more extensive computer needs, please see the business center located in the red carpeted corridor off of Lobby A at the Colorado Convention Center or check with your hotel.

INTERNATIONAL CURRENCY EXCHANGE
International currency exchange services can be found in the airport at World Wide Money Exchange, located in Jeppesen Terminal to the right as you exit the international arrivals area. There are additional locations at A Gates and at B Gates, on the gate level above the train station. Automated teller machines (ATMs) are located throughout the airport. The Colorado Convention Center offers three ATM machines conveniently located in B-Lobby, D-Lobby and F-Lobby. The Colorado Convention Center does not offer international currency exchange, but some ATS hotels have currency exchange through the hotel's front desk.
CHILD CARE
Child care services are available, see page 164 for more details.

INSURANCE
Registrants should check that their personal health, liability, and casualty insurance coverage is up to date while attending the Conference.

CLIMATE
Denver has a semi-arid, continental climate. May has an average high temperature of 71º F (22 º C) and a low of 45º F (7 º C).

ALTITUDE
Drinking plenty of water is the number one way to help your body adjust easily to Denver’s higher altitude. The low humidity in Colorado keeps the air dry, like the desert, so you need about twice as much water here as you would drink at home. It is also recommended that you drink less alcohol in the mountains and in Denver, as it’s effects will be stronger. The effects of exercise are more intense as well. If you normally run 10 miles a day at home, you might try 6 miles in Denver.

PASSPORTS AND VISAS

PASSPORTS

By air
All persons traveling by air outside of the United States (U.S.) are required to present a passport or other valid travel document to enter or re-enter the U.S.

Immigration agents will examine your passport and other required government documentation. You will collect your baggage and enter a line for a U.S. Customs officer, who will ask whether you have any merchandise or currency to declare before you enter the United States. You can find more information on U.S. Customs and Immigration at www.dhs.gov.

By land or by sea
Effective June 1, 2009, all persons traveling by land and sea outside of the U.S. are required to present documents denoting identity and citizenship that comply with the Western Hemisphere Travel Initiative (WHTI) to enter or re-enter the U.S. For a complete list of WHTI-compliant documents, visit www.dhs.gov/files/crossingborders/travelers.shtm

VISA APPLICATION PROCESS
Before traveling to the U.S., a citizen of a foreign country must generally obtain a nonimmigrant visa for temporary stay. However, most Canadian citizens and many citizens from Visa Waiver Program (VWP) countries can come to the U.S. for tourism or business for stays of 90 days or less without a visa if they meet certain requirements. Travelers from all 35 VWP countries are required to have a valid authorization through the Electronic System for Travel Authorization (ESTA) prior to travel, are screened at the port of entry into the United States, and are enrolled in the Department of Homeland Security’s US-VISIT program.

If a visa is required, applicants should apply at the U.S. Embassy or Consulate with jurisdiction over their place of permanent residence. Although visa applicants may apply at any U.S. consular office abroad, it may be more difficult to qualify for the visa outside the country of permanent residence. The visa process will require an interview; required documentation, including a Nonimmigrant Visa Application (Form DS-156) or new Online Nonimmigrant Visa Electronic Application (DS-160); a processing fee; and possibly further administrative processing. **Visa applications are now subject to a greater degree of review than in the past, so it is important to apply for a visa well in advance of your travel departure date.**
Other helpful websites include:
List of U.S. Embassies and Consulates
www.usembassy.gov/
Nonimmigrant Visa Application (Form DS-156)
http://evisaforms.state.gov/

Having a U.S. visa allows you to travel to a port-of-entry (airport, for example) and request permission of the Department of Homeland Security to enter the U.S. **A visa does not guarantee entry into the U.S.**

For more information on passports, visas, and the Visa Waiver Program please visit http://travel.state.gov/


**Note:** A Letter of Invitation is supplementary information that explains a visa applicant’s intended purpose of travel to the U.S. A Letter of Invitation is often useful but is not decisive in determining an applicant’s eligibility for a visa. Visa officers look at the totality of an applicant’s personal situation in determining visa eligibility, and visas are granted on a case-by-case basis. Mere possession of a Letter of Invitation does not guarantee that the holder will receive a visa.

**Safe Travels International**

Safe Travels International is an independent agency that has had tremendous success with assisting in the processing for U.S. entry of citizens from Visa Waiver Program (VWP) countries, citizens covered under the Western Hemisphere Travel Initiative, as well as those arriving with permanent residence from countries that require a visa. Safe Travels International can assist with the following:

- obtain valid authorization through the Electronic System for Travel Authorization
- provide you with the guidance to complete all required documentation, including a Nonimmigrant Visa Application and the new Online Nonimmigrant Visa Electronic Application
- prepare you for the U.S. Embassy or Consulate interview
- have representatives available to meet you at most major U.S. port of entry International airports to assist you through the administrative processing

For more information about Safe Travels please visit: www.safetravelsinternational.com.
### ATS – ACCOMMODATIONS

#### DOWNTOWN HOTELS
1. Brown Palace Hotel and Spa
2. Burnsley, The
3. Comfort Inn
4. Courtyard by Marriott Downtown Denver
5. Crowne Plaza Denver
6. Curtis, a Doubletree Hotel
7. Denver Marriott City Center
8. Embassy Suites Downtown Denver
9. Four Seasons
10. Grand Hyatt Denver
11. Hampton Inn & Suites Denver Downtown
12. Hilton Garden Inn Downtown Denver
13. Hotel Monaco
14. Hotel Teatro
15. Hotel VQ

16. Hyatt Regency Denver at CCC (HQ)
17. Magnolia Hotel
18. Oxford, The
19. Ramada Downtown Denver
20. Residence Inn Denver City Center
21. Residence Inn Denver Downtown Hotel
22. Sheraton Denver Downtown
23. Townplace Suites Denver
24. Warwick Hotel
25. Westin Denver Downtown

#### STAPLETON- 7 MILES FROM CCC
26. Doubletree Hotel Denver Stapleton
27. Holiday Inn Denver East-Stapleton
28. Red Lion Hotel Denver Central
29. Renaissance Hotel

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**Map of Denver**

- **A**: U.S. Mint
- **B**: Denver City & County Building
- **C**: Civic Center Park
- **D**: Denver Art Museum
- **E**: Denver Public Library
- **F**: Colorado History Museum
- **G**: Colorado State Capitol Building
- **H**: Visitor Information Center
- **I**: Tabor Center Shopping
- **J**: Larimer Square Shopping
- **K**: Pavilions Shopping
- **L**: Cherry Creek Shopping
### HOTEL INFORMATION

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Single Rate</th>
<th>Double Rate</th>
<th>ADA Accessible</th>
<th>Business Center</th>
<th>Fitness Center</th>
<th>Pool</th>
<th>Restaurant</th>
<th>Room Service</th>
<th>Parking</th>
<th>Distance from Convention Center (approximate)</th>
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<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X</td>
<td></td>
<td>4 blocks</td>
</tr>
<tr>
<td>Crowne Plaza Denver ¹</td>
<td>$159.00</td>
<td>$159.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X</td>
<td></td>
<td>12 blocks</td>
</tr>
<tr>
<td>Curtis - a Doubletree Hotel ¹</td>
<td>$185.00</td>
<td>$185.00</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td></td>
<td>2 blocks</td>
</tr>
<tr>
<td>Denver Marriott City Center ¹</td>
<td>$205.00</td>
<td>$225.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>3.5 blocks</td>
</tr>
<tr>
<td>Embassy Suites Downtown Denver ¹</td>
<td>$224.00</td>
<td>$234.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td></td>
<td>Adjacent</td>
</tr>
<tr>
<td>Four Seasons Hotel ¹</td>
<td>$285.00</td>
<td>$285.00</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X</td>
<td></td>
<td>4 blocks</td>
</tr>
<tr>
<td>Grand Hyatt Denver ¹</td>
<td>$210.00</td>
<td>$210.00</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X</td>
<td></td>
<td>4 blocks</td>
</tr>
<tr>
<td>Hampton Inn &amp; Suites Denver Downtown ²</td>
<td>$159.00</td>
<td>$159.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>8 blocks</td>
</tr>
<tr>
<td>Hilton Garden Inn Downtown Denver ¹</td>
<td>$199.00</td>
<td>$199.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>1 block</td>
</tr>
<tr>
<td>Hotel Monaco ¹</td>
<td>$265.00</td>
<td>$265.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>5 blocks</td>
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<tr>
<td>Hotel Teatro ¹</td>
<td>$199.00</td>
<td>$219.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>4 blocks</td>
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<tr>
<td>Hotel VQ ²</td>
<td>$109.00</td>
<td>$119.00</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>2.2 miles</td>
</tr>
<tr>
<td>Hyatt Regency Denver at CCC (HQ) ¹</td>
<td>$210.00</td>
<td>$210.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>.5 block</td>
</tr>
<tr>
<td>Magnolia Hotel ¹</td>
<td>$209 Std</td>
<td>$209 Std</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>4 blocks</td>
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<tr>
<td>Oxford, The ³</td>
<td>$237.00</td>
<td>$237.00</td>
<td>X</td>
<td>X seasonal</td>
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<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
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<td>8 blocks</td>
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<tr>
<td>Ramada Downtown Denver ²</td>
<td>$109.00</td>
<td>$109.00</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>1.3 miles</td>
</tr>
<tr>
<td>Residence Inn Denver City Center ¹</td>
<td>$219.00</td>
<td>$219.00</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
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<td>5 blocks</td>
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<tr>
<td>Residence Inn Denver Downtown ²</td>
<td>$155 studio</td>
<td>$155 studio</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X孤立</td>
<td></td>
<td>2 miles</td>
</tr>
<tr>
<td>Sheraton Denver Downtown Hotel ¹</td>
<td>$203.00</td>
<td>$213.00</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>5.5 blocks</td>
</tr>
<tr>
<td>Towneplace Suites Denver ²</td>
<td>$199.00</td>
<td>$199.00</td>
<td>X</td>
<td>X seasonal</td>
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<td>X</td>
<td>X isolated</td>
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<td>1.3 miles</td>
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<tr>
<td>Warwick Hotel ²</td>
<td>$189 Std</td>
<td>$189 Std</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
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<td>9.5 blocks</td>
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<tr>
<td>Westin Denver Downtown ¹</td>
<td>$214.00</td>
<td>$214.00</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>7.5 blocks</td>
</tr>
<tr>
<td>Doubletree Hotel Denver Stapleton ²</td>
<td>$179.00</td>
<td>$179.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
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<td>5.5 miles</td>
</tr>
<tr>
<td>Holiday Inn Denver East Stapleton ²</td>
<td>$149.00</td>
<td>$149.00</td>
<td>X seasonal</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
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<td>7 miles</td>
</tr>
<tr>
<td>Red Lion Hotel Denver Central ²</td>
<td>$139.00</td>
<td>$139.00</td>
<td>X seasonal</td>
<td>X seasonal</td>
<td>X</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
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<td>8 miles</td>
</tr>
<tr>
<td>Renaissance Hotel ²</td>
<td>$189.00</td>
<td>$189.00</td>
<td>X</td>
<td>X</td>
<td>X seasonal</td>
<td>X</td>
<td>X isolated</td>
<td>X isolated</td>
<td></td>
<td>6 miles</td>
</tr>
</tbody>
</table>

¹ Hotels estimated within a 15-20 minute walk to Colorado Convention Center.
² Hotels with Shuttle Bus stop (subject to change) Shuttle Flyers available at front desk of hotel.

Prices listed above are commissionable, do not include portage or meals, and are subject to 14.85% per night (subject to change).

Additional charges will apply for twin, triple and quadruple occupancy or room upgrades, such as suites. Please contact Travel Planners about suites, as they are limited in availability and are on a first-come, first-served basis.

Specific bed types are available upon request only. Availability will be confirmed by your hotel at check-in.

Refer to your registration and hotel confirmation for the hotel’s address, telephone number, and cancellation policy.

The information above is accurate at the time of printing. The information on this page does not constitute any warranty, implied or otherwise, on the part of the ATS as to the quality of accommodations or services available.
OFFICIAL TRAVEL COORDINATOR
World Travel, Inc. will serve as the official travel coordinator for the ATS 2011 International Conference. World Travel, Inc. will provide custom itineraries with the lowest applicable air fares and best journey time and has arranged discounts with American Airlines and with Hertz Car Rental.

To receive exclusive discounts, contact World Travel, Inc. from 9:00 am–5:30 pm EST, Monday through Friday:

in the U.S. & Canada: 888-239-2461
outside the U.S. & Canada: 484-948-2181
E-mail: tlaubach@worldtravelinc.com

Identify yourself as an ATS International Conference attendee.
*Note: There is a $36.00 service fee per airline ticket issued.*

SPECIAL DISCOUNTS

**American Airlines**
Fly on American Airlines and save on special discounts exclusive to attendees and guests of the ATS 2011 International Conference. A percentage discount will be taken off published fares for qualifying travel originating in the U.S. and in Canada. Savings are obtained when you book and ticket 30 days or more in advance.

Contact World Travel, Inc. or call American Airlines at 800-221-2255.
Book on-line at [www.aa.com/group](http://www.aa.com/group)
Telephone promotional code: A5551BL
Website promotional code: 5551BL

**Hertz Car Rental**
Hertz is the official car rental company for the ATS 2011 International Conference. Make reservations with World Travel, Inc. or call Hertz at 800-654-2240 or 405-749-4434.

Use reference code 04AC0002.

*Meeting rates are guaranteed from one week prior through one week after the meeting dates and are subject to availability. Advance reservations are recommended, blackout dates may apply. Government surcharges, taxes, tax reimbursement, airport related fees, vehicle licensing fees and optional items, such as refueling or additional driver fees, are extra. Minimum rental age is 25 (exceptions apply). Standard rental conditions, qualifications and return restrictions apply. In the continental U.S. and Canada weekend rentals are available for pick-up between noon Thursday and noon Sunday and must be returned no later than Monday at 11:59 pm. Thursday pick-up requires a minimum three-day keep. Friday pick-up requires a minimum two-day keep, and Saturday and Sunday pick-up require a one day keep. Weekly rentals are from five to seven days. Extra day rate for Weekly rentals will be charged at 1/5 of the Weekly Rate.*

OFFICIAL HOUSING COMPANY

Travel Planners is the designated housing company for the ATS International Conference. As such, the ATS is not responsible for reservations or bookings made with individuals, agents, websites, or entities other than Travel Planners.
You must be registered for the ATS 2011 International Conference to obtain housing. ATS hotels will not accept reservations directly, and Travel Planners will not make a hotel reservation for you unless they can confirm that you have already registered. To register and request housing, please follow the instructions on Page 167.

Note: In order to reserve a hotel room, you must provide a credit card valid through June 2011, or your housing request will not be processed. Travel Planners will send you confirmation of your accommodations.

IMPORTANT HOUSING DEADLINE
Monday, April 18, 2011
Travel Planners must receive your request for housing by April 18, 2011 in order to confirm housing at special convention rates. After this date, hotels and rates are subject to availability. Changes and cancellations should be referred to Travel Planners up until three days prior to your arrival date.

Remember to always look for the Exclusive Official Hotel Services Seal whenever you make hotel arrangements for ATS. The Seal lets you know that your reservations are safe, secure and officially part of ATS.
Explore the Wonders of Colorado!

Friday, May 13 – Wednesday, May 18, 2011

COMPLIMENTARY WELCOME TO DENVER ORIENTATION
Denver boasts a thriving culinary and cultural scene, an environmentally-friendly bike share program, over 100 parks and trails, as well as world-class museums all within 45 minutes of the majestic Rocky Mountains where more adventures await!

WELCOME TO THE MILE HIGH CITY
Starting with a drive through Denver’s downtown, this tour includes an exterior visit of the Capitol building as well as an interior exploration of the Brown Palace Hotel.

MILE HIGH HISTORIC HOMES
Explore Denver’s historic homes, including Ninth Street Park, the Molly Brown House Museum, and Byers-Evans Mansion.

COLORADO’S CASTLE
Cherokee Ranch and Castle in Sedalia, Colorado will offer an in-depth look at the Castle’s history with one of its guides.

CELESTIAL DAY IN BOULDER
Enjoy tea at Dushanbe Tea House, a tour of Celestial Seasonings, and free time along Boulder’s popular Pearl Street.

GORGEOS GOLDEN COUNTRY
Revel in a picture-perfect moment at Red Rocks Amphitheatre, stop at the final resting place of the legendary Buffalo Bill, enjoy lunch in Golden, and finish the day with a tour and tasting at MillerCoors Brewery.

AN EVENING AT THE THEATER
Based on the international smash-hit film of a boy who dreams of becoming a dancer, Billy Elliot is brought to life by a phenomenal cast and Tony award-winning creative team.

PLATTE RIVERWALK
Get a unique glimpse of the city with a walk through lower downtown and along the Platte Riverwalk.

“LODO” GHOST TOUR
This walking tour of Lower Downtown (LoDo) will include historic haunts such as the Oxford Hotel, Union Station, and more!
GRAND GEORGETOWN
A tour to this mountain town will offer a visit to the Hotel de Paris, free time, and a ride on the Georgetown Loop Railroad!

A D'VINE EXPERIENCE
Whether you’re a novice or connoisseur, tonight will be a treat as you enjoy a private wine tasting at D’vine Winery.

THE SWEET LIFE
Experience the “sweet” life of Colorado with a visit to Hammond’s Candies, followed by a tasting at Balistreri Vineyards.

ROCKY MOUNTAIN HIGH
A scenic drive to Estes Park will offer a tour of the historic Stanley Hotel, free time to shop and dine in this quaint town, and a memorable venture into Rocky Mountain National Park.

BOOT SCOOTIN’ DENVER
Tap into your western roots with dancing lessons and a BBQ buffet at one of Denver’s hottest country western venues!

BEAR CREEK BIKE TOUR
Experience Colorado’s outdoors with a scenic tour along the primarily downhill and flat Bear Creek bike path.

For more tour and activity details or to register, click here.

5K LUNG RUN & WALK
Sunday, May 15, 2011 6:30 am–8:00 am

GET OFF TO A HEALTHY START AT THE 2011 INTERNATIONAL CONFERENCE 5K LUNG RUN & WALK!

Denver’s focus on fitness can be seen everywhere with its plethora of city parks, paths, and trails! Join us for the 2011 5K Lung Run & Walk in the heart of downtown at Cuernavaca Park complete with spectacular views of the city as well as the Rocky Mountains. The entry fee is $30 and all participants will receive an official 5K t-shirt and refreshments. Awards will be given to the top finishers.

Sign up for the Lung Run and Walk on the registration form or by clicking here.

Participants will be required to sign a waiver.

2010 1st Place Winners Stacie Bell and Brock Baker
Photos from the 2010 5K Lung Run & Walk in New Orleans
THE EXHIBIT HALL

Don't miss the opportunity to see the latest in pharmaceutical products, medical equipment, publications and research services in the ATS Exhibit Hall! More than 175 exhibitors will be on hand to provide a comprehensive look at recent advances in pulmonary, critical care, and sleep medicine and to discuss products and services related to the prevention and treatment of respiratory diseases. Visit www.thoracic.org for a complete list of exhibitors.

Exhibits are located in Halls A and E on the Upper Level of the Colorado Convention Center.

COME CHECK OUT WHAT’S HAPPENING IN THE EXHIBIT HALL FOR 2011!

My ATS 2011

My ATS 2011 is your gateway to enhanced networking at the ATS 2011 International Conference. Create your profile and begin searching for attendees with similar interests, speakers you’d like to meet, former colleagues from your training program, or if your international-attendees from your country. Add in your Facebook, Linked in, or Twitter accounts to be even more connected. Begin dialogues and discussions, plan reunions or just plan to meet for coffee during the conference. My ATS 2011 takes the “chance” out of networking during the conference.

Use My ATS 2011 to build your conference agenda for each day. Sessions can be searched by topic, by speaker, by track or by day. Once sessions are added to your agenda you can review the other attendees that are going to be at that session.

The ATS Networking Lounge

Use My ATS 2011 to pre-set appointments with other attendees prior to arriving at the conference and plan to meet at the ATS Networking Lounge. The ATS Networking Lounge is conveniently located in the Exhibit Hall. The ATS Networking Lounge provides a comfortable place to meet in a relaxed setting.

International Pavilion

The International Pavilion is provided as a service to our international attendees, so that they have the opportunity to learn about products and services available in their respective countries but that are not approved in the United States. This area includes the International Participants Center so you can meet friends or associates in a relaxing lounge, check email or grab a cup of coffee.

Alumni Lounge

U.S. attendees are able to meet and network with fellow alumni from their training programs in these relaxing lounge areas. Use My ATS 2011 to plan your reunion now! Contact Stacy Blackshaw, CEM, Exhibit Sales Manager sblackshaw@thoracic.org or 212-315-8699 for more details.

Exhibit Hall Hours

Sunday, May 15, 10:00 am–4:00 pm
Monday, May 16, 10:00 am–3:00 pm
Tuesday, May 17, 10:00 am–3:00 pm

Daily Product Theaters with complimentary boxed lunch provided by ATS (while quantities last)
**PRODUCT AND MINI-THEATERS**
Have lunch while listening to the latest information on products or services related to pulmonary, critical care, or sleep medicine. Look for more information on Product and Mini-Theaters in the onsite newspaper, the *ATS Daily Bulletin*, and the *ATS Exhibit Guide*.

**JOB RECRUITMENT CENTER**
If you’re searching for a new job or want to know what job advancement opportunities are out there, come visit the Job Recruitment Center. Here you can meet one-on-one with HR recruiters from hospitals, medical centers, group practices and placement services or you can review all of the available positions on the ATS Online Job Board. A special onsite job placement bulletin board for companies seeking candidates is also available. Interview rooms are available so bring your CV.

**DISCOVERY ZONE**
Learn more about the exhibitors and reward yourself in the process by participating in the Discovery Zone. Correctly answer a question about a participating exhibitor’s product or service to complete the game card. Completed game cards are entered into a drawing for one of 2 prizes per day.

**NEW EXHIBITOR PAVILION**
First-time exhibitors are showcased in this designated area on the exhibit floor. A “must visit” area for attendees looking for brand new products and services never before seen at the ATS International Conference.

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*CHILDREN UNDER 12 YEARS OF AGE WILL NOT BE ALLOWED IN THE EXHIBIT HALL AT ANY TIME,* unless the child is under 1 year of age and is being carried by an adult registered to attend the Conference. Strollers are not permitted at any time. The use of cameras and audio recording equipment (including, but not limited to, cellular phones, film, digital, and video) by set-up/dismantle staff, exhibiting staff, or attendees is prohibited on the exhibit hall floor at all times, including move-in, show days/ hours, and move-out. Credentialed members of the press who have received a special badge from ATS are permitted on the exhibit hall floor.
Hey Moms and Dads!

Give your children an exciting, entertaining experience, and bring them with you to Denver!

While you’re attending meetings, your children can enjoy their own Convention Camp, organized by ACCENT on Children’s Arrangements, Inc., a national company specializing in children’s activities. Convention Camp is a complete morning to early evening entertainment program packed with activities for children ages six months to 12 years. Children participate in age-appropriate activities, including arts and crafts projects and active games, in a safe, nurturing, and educational environment. The high ratio of caregiver to child (1:2 for children 6-12 months, 1:3 for children 13 months-2 years, 1:5 for children 3-5 years, and 1:8 for children 6-12 years) ensures campers receive lots of personal attention. Program costs include morning and afternoon snacks and juice, entertainment, and craft materials. Lunch is not included, however it can be purchased when registering, or parents can send/bring lunch to the Convention Camp.

Register online at www.accentregister.com/register/ATS11, and the $10 per child administrative fee will be waived.

You can also complete the registration form on the next page and return it by fax or mail to:

Camp ATS/ACCENT on Children’s Arrangements, Inc.
615 Baronne Street, Suite 303
New Orleans, LA 70113
Phone: (504) 524-0188
Fax: (504) 524-1229
E-mail: registration@accentoca.com

ATS reserves the right to cancel this program should a minimum number of children not be met. Should cancellation occur, you will be notified by April 29, 2011.

Please Register Early!
Space in this program is limited.
CAMP ATS Welcomes children ages 6 months - 12 years. Children participate in age-appropriate activities including arts and crafts projects, active games, and much more in a safe, nurturing environment. Meals are not included in the camp fees. Parents can purchase meals to be provided on-site via this registration form at $15 per meal. Parents can also send or bring lunch.

REGISTRATION: To assure that your child has a place, please pre-register by April 29, 2011. Your child(ren) is not registered until payment is received. We will assume your child will attend during the hours registered. If your schedule changes, we need as much notice as possible. We will accommodate you as best we can, based on availability. You will receive a refund for a cancellation received in writing at ACCENT’s offices no later than April 29, 2011. No refunds will be issued after that date. “No shows” receive no refund. This policy is to insure proper staffing, which is in the best interest of your child(ren).

NOTE: For the safety and security of your child(ren), ATS/ACCENT has the right to refuse care to any child based on space availability and appropriateness. ATS/ACCENT also has the right to refuse care to any child unable to adapt to group situations as well as any child whose presence or behavior may disrupt the program or endanger the health or safety of other children. ACCENT staff does not administer medication and any child who is ill will not be admitted to the center.

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**Day/Date** | **Times** | **Session** | **3 Years & Under** | **3 Years & Over** | **Check-in Time** | **Check-out Time** | **# of Children** | **# of Meals @ $15 ea.** | **TOTAL**
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Sunday 5/15 | 7:30 am – 12:30 pm | Half Day | $60.00 | $45.00 | | | | | $
12:30 pm – 5:30 pm | Half Day | $60.00 | $45.00 | | | | | | $
7:30 am – 5:30 pm | Full Day | $100.00 | $75.00 | | | | | | $
Monday 5/16 | 7:30 am – 12:30 pm | Half Day | $60.00 | $45.00 | | | | | $
12:30 pm – 5:30 pm | Half Day | $60.00 | $45.00 | | | | | | $
7:30 am – 5:30 pm | Full Day | $100.00 | $75.00 | | | | | | $
Tuesday 5/17 | 7:30 am – 12:30 pm | Half Day | $60.00 | $45.00 | | | | | $
12:30 pm – 5:30 pm | Half Day | $60.00 | $45.00 | | | | | | $
7:30 am – 5:30 pm | Full Day | $100.00 | $75.00 | | | | | | $
Wednesday 5/18 | 7:30 am – 12:30 pm | Half Day | $60.00 | $45.00 | | | | | $
12:30 pm – 5:30 pm | Half Day | $60.00 | $45.00 | | | | | | $
7:30 am – 5:30 pm | Full Day | $100.00 | $75.00 | | | | | | $

Non-refundable Registration Fee of $10 per child: ___ children @ $10/ea = $ ___ TOTAL $ ___

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Child's Name: ___________________________ Age: ________ Sex: ________ Birthdate: ________
Child's Name: ___________________________ Age: ________ Sex: ________ Birthdate: ________
Child's Name: ___________________________ Age: ________ Sex: ________ Birthdate: ________

☐ Check here if your child has needs under the Americans with Disabilities Act. We will contact you.

Does your child have experience with group care?  ☐ Frequently  ☐ Seldom  ☐ Never

The child(ren) named above will be released ONLY to the person(s) signing this application.

Parent/Guardian Full Name: ___________________________ Signature: ___________________________
Parent/Guardian Full Name: ___________________________ Signature: ___________________________
Address: ___________________________ City: ___________________________ State/Country: ___________________________ Zip: ___________________________
Daytime Phone ( ) ___________________________ Fax ( ) ___________________________ Email: ___________________________

PAYMENT METHOD: U.S. Funds Only. Make checks payable to ACCENT on Children’s Arrangements, Inc.

Visa/MasterCard: ___________________________ Credit Card Number: ___________________________ Exp. Date: ___________________________ Check #: ___________________________

I agree that a fax or photocopy of my/our signature(s) on this form shall be deemed original and shall not affect the validity of this form.

ACCENT Reserves the right to substitute programs of same or greater value or to cancel programs based on enrollment. Please print and keep a copy for your records. Confirmations will not be mailed out. DO NOT SEND THIS FORM TO ATS.

MAIL TO: Camp ATS/ACCENT on Children’s Arrangements, Inc. • 615 Baronne Street, Suite 303, New Orleans, LA 70113
Phone: 504-524-0188 ■ Fax: 504-524-1229 ■ E-mail: registration@accentoca.com or Register ON-LINE at www.accentregister.com/register/ATS11
Click here to register online.
Click here to download a PDF version of the registration form.

PART 1
NAME, ADDRESS, & OTHER INFORMATION
Please print or type clearly and provide all information as requested. Your badge(s) will be printed from this information.

Indicate if you wish your email address be withheld from exhibitors in this section.

SPECIAL SERVICES:
Americans with Disabilities Act. If you have special needs under the Americans with Disabilities Act, please check the box in part 1 of the registration form. We will call you to discuss your particular needs.

Dietary Needs. Indicate special dietary needs in this section. Selections are for meals served at Postgraduate Courses, Meet the Professor Seminars and Workshops only. Special dietary requests can not be guaranteed after April 18.

PART 2
PROFESSIONAL ACTIVITIES
This is an important section for the ATS. The information collected in this section will help the Society know who is attending the conference and will be used to plan the sessions for future conferences.

Degree information will be taken from this section for your badge. Please indicate the order in which you wish degrees to be displayed.

PART 3
GENERAL REGISTRATION FEE
Registration fees vary according to your membership or non-membership category and the date by which you register. Please review specific fees in part 3 on page B of the registration form.

Full Conference Registrants:
The general registration fee, offered at a reduced rate to members and non-members who register on or before March 15, allows you to attend over 90 percent of the meeting events without additional fees or tickets. It also entitles you to attend social events and the Exhibit Hall. Non-member post-doctoral trainees and students from any discipline must provide information about their training program as indicated in order to obtain the much reduced student conference registration rates.

ATS members receive a discount when registering. To become a member, click here. Upon completing the online membership application, a username and password will be emailed to you. Ninety minutes after receipt of this email, you will be able to register for the Conference as a member and receive a reduced registration rate. Full members receive a larger discount than affiliate members. Non-members receive no discount based on membership status.

Research Assistants/ Administrators/Association Executives:
This category is provided for those individuals who attend for reasons other
than obtaining CME, or who are not healthcare professionals working clinically in pulmonary, critical care or sleep medicine. For instance, research assistants, research administrators, research coordinators, executive staff of related professional organizations, or other individuals with an organizational but not clinical interest in the ATS Conference would register under this category. Registrants in this category may attend sessions that do not require additional registration, but may not register for postgraduate courses, seminars or workshops. Registrants in this category are not eligible to receive continuing medical education credits. If CME or other professional recognition is desired, then a member or non-member registration is required.

**Spouses/partners/guests:** Registrants in this category must be accompanying a full Conference registrant and may attend only the Exhibit Hall, special lectures and open receptions. Those registering in this category are not eligible to receive continuing medical education credits or attend postgraduate.

Members Of The Press
The ATS offers a full press room at the International Conference. Members of the Press need to register for the Conference through the ATS Media Relations Unit. Please contact Susan Logan to register:

slogan@thoracic.org
212-315-8631

*Please do not use the Registration Form.*

**PART 4 HOTEL RESERVATION**
You must register for the Conference in order to receive hotel accommodations. If you are using a paper form, please provide your first, second and third choice of hotel (see page 157). In order to confirm your hotel reservation, you must include a credit card with an expiration date valid through June 2011. A hotel reservation will not be made if a valid credit card is not supplied.

Individual hotel cancellation policies will apply after April 18. Many hotels allow cancellations up to 72 hours prior to your arrival date, but check your confirmation for your hotel’s policy.

**PART 5 REGISTRATION FOR TICKETED SESSIONS**
Advance registration and additional fees are required for these sessions. Registration is limited and on a first-come, first-served basis. There is no advance registration or fee required for Scientific Symposia, Clinical Topics in Pulmonary Medicine Sessions or Critical Care Track Sessions.

**PART 6 REGISTRATION FOR NON-TICKETED SESSIONS**
Advance registration is required for these sessions and events to obtain an audience count. There are no additional fees. Tickets will not be issued. Space is limited and admittance at the door will be on a first-come, first-served basis.

**FOUNDATION OF THE AMERICAN THORACIC SOCIETY**
The Funds for the Future is the Foundation’s annual giving campaign. It is very similar to the annual campaigns of your college or university, medical center, church or synagogue, and local...
Click here to register online.
Click here to download a PDF version of the registration form.

charities. Our campaign supports the ATS Foundation Research Program, assembly projects, clinical training and education, and the MECOR (Methods in Epidemiologic, Clinical and Operations Research) courses. As the philanthropic arm of the ATS focused on research and clinical education and training, the Foundation actively seeks gifts to support new initiatives and current programs to benefit ATS members and their patients. All gifts are tax deductible within the limits of the law.

The Research Program Reception and Dinner on Saturday, May 14, 2011 benefit the ATS Foundation Research Program. The ATS Foundation Research Program awards grants to junior investigators seeking to establish themselves in careers in pulmonary, critical care and sleep medicine. To sign up for the dinner, visit http://www.thoracic.org/go/2011-foundation-dinner.

Members contributing $250 or more have access to the Foundation’s Hospitality Suite and its many amenities at ATS 2011. Members contributing $1,000 or more receive their choice of one of their three preferred hotels. Members contributing $2,500 or more will receive their first choice hotel at ATS 2011.

REGISTRATION TRANSFERS
The transfer of registration fees is allowed if the following criteria are met:
• transfer is to a colleague or co-worker from the same institution or company
• transfer is for someone eligible for the same Registration Category
• a written request for the transfer is faxed to CDS along with a completed registration/housing form for the replacement attendee

A $50.00 (USD) processing fee will apply to all requests until April 18. From April 19 through May 18, a $75.00 (USD) processing fee will apply.

AIR TRAVEL
For information on travel to the International Conference, see page 158.

REGISTRATION HOURS
Pick up your registration materials at the Colorado Convention Center during these times:

Postgraduate Course Registration
Fri., May 13, 6:30 am – 5:00 pm
Sat., May 14, 6:30 am – 12:00 pm

General Conference Registration
Sat., May 14, 12:00 pm – 6:00 pm
Sun., May 15, 7:00 am – 6:00 pm
Mon., May 16, 6:30 am – 4:30 pm
Tues., May 17, 8:00 am – 4:30 pm
Wed., May 18 8:00 am – 3:00 pm
IMPORTANT DEADLINES

Registration
- March 15: Early-Bird deadline
- March 16-April 18: Registration will be accepted at the higher registration fees indicated in part 3, column 2.
- April 19-May 18: Registration will be accepted at the higher registration fees indicated in part 3, column 3.

Confirmation
- Registration and hotel confirmation will be sent within one week of the receipt of your registration form and payment.

Badges
Badges will not be mailed prior to the Conference. Registrants will pick up badges and event tickets at the Registration Desk in the Colorado Convention Center. See previous page for Registration Desk hours.

Cancellation Policy
- April 18: Cancellation requests received in writing by this date will be eligible for a complete refund minus an administrative fee of $75.
- Requests should be sent to: International Conference Denver 2011 c/o Convention Data Services 107 Waterhouse Road Bourne, MA 02532 or thoracic@expressreg.net
- Cancellations (including session/events) after April 18 or no shows are not eligible for a refund.

FOUR WAYS TO REGISTER!

Online
Open 24 hours a day, 7 days a week. A convenient way to register, secure courses, and reserve a hotel room.

Mail
Complete the registration form, including hotel reservation, session and events sections. Enclose full payment (check or credit card) and mail to:
ATS 2011
c/o Convention Data Services
107 Waterhouse Road, Bourne, MA 02532

Phone
Register for the Conference, sessions and events and make hotel reservations by phoning Convention Data Services, Monday through Friday, 9:00 am–5:00 pm EST:
U.S./Canada: 866-635-3582
Outside U.S./Canada: 508-743-8518
International groups of 10 or more: 508-743-8519

Fax
Fax the completed registration form including hotel reservation, session and events sections along with credit card information to Convention Data Services: 508-743-9673

Sessions
D'Ann Brown
dbrown@thoracic.org

Press
Susan Logan
slogan@thoracic.org

Member Information
membership@thoracic.org

Exhibit Program
Stacy Blackshaw
sblackshaw@thoracic.org

Support Opportunities/Advertising
Michelle Turenne
mturenne@thoracic.org

Research Reception/Dinner
Lydia Neumann
ineumann@thoracic.org

QUESTIONS?
### NAME/Badge AND ADDRESS INFORMATION

- **First/Given Name**
- **Mi**
- **Last/Family Name**
- **Date of Birth**
- **Gender**

**Mailing Address**

- **City**
- **State/Country**
- **Zip/Postal Code**

**Office Telephone**

**E-mail Address**

**Member ID Number** (if applicable)

**Name of Spouse/Partner/Guest (for Badge)** (See Part 3 for registration fee.)

- Check if attending the International Conference for the first time.
- Check if you do not want your contact information available to exhibitors.

### PROFESSIONAL ACTIVITIES

- **Education/Credentials** (Indicate up to 3 in preferred order for badge)
  - 01 APRN
  - 02 BA
  - 03 BSc
  - 04 SParm
  - 05 BS
  - 06 DDS
  - 07 DO
  - 08 D Phil
  - 09 DrPH
  - 10 DVM
  - 11 JD
  - 12 MA
  - 13 MBA
  - 14 MBBS
  - 15 MChB
  - 16 MD
  - 17 MHS
  - 18 MPH
  - 19 MS
  - 20 MSN
  - 21 PharmD
  - 22 PhD
  - 23 PT
  - 24 RN
  - 25 RRT
  - 26 ScD
  - 27 Other: 

- **Specialties** (check all that apply)
  - 01 Allergy/Immunology
  - 02 Anesthesiology
  - 03 Basic Microbiology
  - 04 Behavioral Science
  - 05 Biochemistry
  - 06 Biomedical Engineering
  - 07 Biophysics
  - 08 Biostatistics
  - 09 Business Management
  - 10 Cardiology (Adult)
  - 11 Cardiology (Pediatric)
  - 12 Cardiology (Other)
  - 13 Cell & Molecular Biology
  - 14 Clinical Microbiology
  - 15 Critical Care (Adult)
  - 16 Critical Care (Pediatric)
  - 17 Critical Care (Other)
  - 18 Environmental Medicine
  - 19 Epidemiology
  - 20 Family Medicine
  - 21 Genetics
  - 22 Geriatrics
  - 23 Hospitalist
  - 24 Immunology
  - 25 Infectious Disease
  - 26 Informatics/Info Systems
  - 27 Internal Medicine
  - 28 Journalism
  - 29 Law
  - 30 Neonatology
  - 31 Neuroscience
  - 32 Nursing
  - 33 Occupational Medicine
  - 34 Oncology
  - 35 Pathology
  - 36 Pediatrics
  - 37 Pharmacology
  - 38 Pharmacy
  - 39 Physical Therapy
  - 40 Physician Assistant
  - 41 Physiology, Cellular
  - 42 Physiology, Integrative/Organ System
  - 43 Preventive Medicine
  - 44 Psychiatry
  - 45 Psychology
  - 46 Public Health
  - 47 Pulmonary (Adult)
  - 48 Pulmonary (Pediatric)
  - 49 Radiology
  - 50 Rehabilitation
  - 51 Respiratory Therapy
  - 52 Sleep Medicine
  - 53 Social Sciences
  - 54 Surgery
  - 55 Veterinary Medicine
  - 56 Other:

- **Professional Activities** (check all that apply)
  - 01 Administration/Management
  - 02 Clinical Practice
  - 03 Health Policy
  - 04 Health Regulation
  - 05 Marketing
  - 06 Quality Assurance
  - 07 Research, Basic Science
  - 08 Research, Clinical
  - 09 Research, Epidemiology
  - 10 Teaching/Education
  - 11 Technical/Technician
  - 12 Other:

- **Indicate how much of your time is spent seeing patients (check one)**
  - <30%
  - 30-39%
  - 40-49%
  - 50-59%
  - 60-69%
  - 70-79%
  - 80-89%
  - 90-100%
  - None

### METHODS OF PAYMENT

- **Check or Money Order**: Make check or money order payable to American Thoracic Society. NO VOUCHERS, PURCHASE ORDERS OR WIRE TRANSFERS ACCEPTED. (Any checks received drawn on an overseas bank will be returned.)

- **Credit Card**: Credit Card information required to confirm hotel reservation.
  - MC
  - AmEx
  - VISA
  - Discover
  - JCB
  - Diner’s Club

**Register & Reserve Hotel**

**By Internet**: [http://www.thoracic.org/go/international-conference](http://www.thoracic.org/go/international-conference)

**By Mail**:

ATS 2011
C/o Convention Data Services
107 Waterhouse Road, Bourne, MA 02532

**By Telephone**:

Credit Cards Only
866-635-3582 (9am – 5pm Eastern Time)
508-743-8518 (outside the U.S. & Canada)
508-743-8519 (International groups of 10 or more)

**By Fax**:

24 Hours, Credit Cards Only
508-743-9673

### SPECIAL SERVICES

- **Special Needs** under the Americans with Disabilities Act.
- **Dietary Needs** for Postgraduate Courses, Meet the Professor Seminars, and Workshops only.
  - Kosher
  - Vegetarian

### PAYMENT

All fees must be paid in U.S. Dollars

**Total Registration Fees** $ (FROM PART 3)

**Service Charge** $10.00 (REQUIRED)

**Total Payment** $
### General Registration Fee

**Member Registration Fees.** If you are a member of the American Thoracic Society, check one category in the Members section.

**Non-Member Registration Fees.** If you are not a member of the ATS or are attending a Postgraduate Course only, check one category in the Non-Members section.

Pre-registration fees received by March 15 are discounted. See below.

<table>
<thead>
<tr>
<th>CHECK APPROPRIATE REGISTRATION CATEGORY*</th>
<th>ON OR BEFORE MARCH 15</th>
<th>MARCH 16-APRIL 18</th>
<th>APRIL 19-MAY 18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATS MEMBERS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ A Full Member</td>
<td>$615</td>
<td>$650</td>
<td>$715</td>
</tr>
<tr>
<td>☐ B Affiliate Member</td>
<td>790</td>
<td>825</td>
<td>890</td>
</tr>
<tr>
<td>☐ C In-Training Member</td>
<td>190</td>
<td>225</td>
<td>290</td>
</tr>
<tr>
<td>☐ D Senior/Emeritus Member</td>
<td>190</td>
<td>225</td>
<td>290</td>
</tr>
<tr>
<td>☐ F One Day Only</td>
<td>315</td>
<td>350</td>
<td>415</td>
</tr>
<tr>
<td>☐ Sun ☐ Mon ☐ Tue ☐ Wed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NON MEMBERS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ K Non-Member</td>
<td>$1,015</td>
<td>$1,050</td>
<td>$1,115</td>
</tr>
<tr>
<td>☐ L In Training Non-Member+</td>
<td>265</td>
<td>300</td>
<td>365</td>
</tr>
<tr>
<td>☐ M One Day Only</td>
<td>415</td>
<td>450</td>
<td>515</td>
</tr>
<tr>
<td>☐ Sun ☐ Mon ☐ Tue ☐ Wed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

+Those registering in this category must supply the following:

- Program Director's Name
- Program Director's Email Address
- University/Institution
- Program Start Date (mm/dd/yyyy)
- Program End Date (mm/dd/yyyy)

**NON-CME CATEGORIES**

Those registering in these categories are NOT eligible to receive Continuing Medical Education credits.

- ☐ O Spouse/Partner/Guest** $150 $150 $150
- ☐ P Research Asst/Admin# $150 $150 $150

**Includes admission to the Exhibit Hall, special lectures and open receptions only. If you do not want to attend these events and wish to attend tours only, you do not need to pay this fee.**

**May not register for postgraduate courses, seminars or workshops.**

- ☐ Q Postgraduate Course – Fri or Sat Only Fees—See Part 5

An additional fee of $50.00 will be added to respective Postgraduate Course fees for Postgraduate Course only registrants.

### Hotel Reservation

Check here only if housing is not required

- ☐ local resident
- ☐ staying with friends/relatives
- ☐ staying at: ____________________________ (on request)

See page 157 for more detailed information. Please indicate your hotel choices below:

- Hotel choice based primarily on: ☐ rate    ☐ location    ☐ hotel

- ☐ 1st choice hotel name
- ☐ 2nd choice hotel name
- ☐ 3rd choice hotel name

- Room Type:
  - ☐ single (1 person/1 bed)
  - ☐ double (2 persons/1 bed)
  - ☐ twin (2 persons/2 beds)
  - ☐ triple (3 persons/2 beds)
  - ☐ quad (4 persons/2 beds)
  - ☐ 1 bedroom suite (on request)
  - ☐ 2 bedroom suite (on request)

**ARRIVAL DAY/DATE:** ___________  **DEPARTURE DAY/DATE:** ___________

Name(s) of person(s) sharing my room (other than spouse/partner/guest written in Part 1):

- Name(s) ____________________________________________

**Hotel Special Request (subject to availability):**

- ☐ Concierge Level
- ☐ Frequent Stay Program:
  - Name: ____________________________
  - ID Number: ______________________

Hotel rooms are limited. If none of your choices are available, please indicate your preference below:

- ☐ Do not assign me a room
- ☐ Assign me a room at any other hotel
- ☐ Assign me a room at a hotel with similar rate
- ☐ Assign me a room at hotel in similar location

In order to confirm your hotel room or suite reservation, you must include a credit card with an expiration date valid through June of 2011. A hotel reservation will not be made if a valid credit card is not supplied in Part 1.
A Postgraduate Courses. Course fees vary; see pages 18-50. If you are only attending a Postgraduate Course and do not plan to attend the Conference, please also check "Postgraduate Course" under Part 3 General Registration Fee. An additional fee of $50.00 will be charged.

Please indicate course(s) you wish to register for below:

Fri, May 13  □ PG1  □ PG2  □ PG3  □ PG4  □ PG5  □ PG6  □ PG7  □ PG8  □ PG9  □ PG10  □ PG11  □ PG12  □ PG13  □ PG14  □ PG15

SUB-TOTAL Postgraduate Courses $ 

B Sunrise Seminars. Fee: $65 each; 7:00 – 8:00 am. Indicate choices by SS number. See pages 78, 106 and 128.

Mon, May 16  1\textsuperscript{st} Choice SS  ______  2\textsuperscript{nd} Choice SS  ______  3\textsuperscript{rd} Choice SS ______
Tue, May 17  1\textsuperscript{st} Choice SS  ______  2\textsuperscript{nd} Choice SS  ______  3\textsuperscript{rd} Choice SS ______
Wed, May 18  1\textsuperscript{st} Choice SS  ______  2\textsuperscript{nd} Choice SS  ______  3\textsuperscript{rd} Choice SS ______

SUB-TOTAL Sunrise Seminars $ 

C Meet the Professor Seminars. Fee: $70 each; 12:00 – 1:00 pm. Indicate choices by MP number. See pages 65, 94 and 118.

Sun, May 15  1\textsuperscript{st} Choice MP  ______  2\textsuperscript{nd} Choice MP  ______  3\textsuperscript{rd} Choice MP ______
Mon, May 16  1\textsuperscript{st} Choice MP  ______  2\textsuperscript{nd} Choice MP  ______  3\textsuperscript{rd} Choice MP ______
Tue, May 17  1\textsuperscript{st} Choice MP  ______  2\textsuperscript{nd} Choice MP  ______  3\textsuperscript{rd} Choice MP ______

SUB-TOTAL Meet the Professor Seminars $ 

D Workshops. Fee: $75 each (Exception: WS1, see below); 11:30–1:00 pm. See pages 59, 88, 116 and 138.

Sun, May 15  □ WS1 ($95)  □ WS2
Mon, May 16  □ WS3  □ WS4
Tue, May 17  □ WS5  □ WS6
Wed, May 18  □ WS7  □ WS8

SUB-TOTAL Workshops $ 

E Thematic Seminar Series. See below for fees. See page 77.

□ TSS1  Mon, May 16, Tue, May 17; 7:00-8:00 am & 12:00-1:00 pm. Fee: $170
□ TSS2  Mon, May 16, Tue, May 17, Wed, May 18; 7:00-8:00 am. Fee $140
□ TSS3  Mon, May 16, Tue, May 17, Wed, May 18; 7:00-8:00 am. Fee $140

SUB-TOTAL Thematic Seminar Series $ 

TOTAL PART 5 FEES $
The ATS Would Like to Acknowledge Its 2010 Corporate Members

Thank you for your support

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