

## RESPIRATORY STRUCTURE AND FUNCTION ASSEMBLY NEWSLETTER

EDITED BY WAYNE MITZNER, PhD, ASSEMBLY CHAIRMAN



**SPRING 2007** 

#### Officers of the Assembly on Respiratory Structure and Function

Assembly Chairman 2006-2008: Wayne Mitzner wmitzner@jhsph.edu

Planning Chairman 2006-2008: Jeffrey Fredberg jfredber@hsph.harvard.edu

Program Chairman 2006-2007: Andrew Halayko ahalayk@cc.umanitoba.ca

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### Message From the Assembly Chairman

Wayne Mitzner, PhD, Johns Hopkins Bloomberg School of Public Health

With spring already here, the Society is eagerly anticipanting the ATS International Conference, which will be held May 19-23 in San Francisco. The International Conference is always a terrific meeting, with a week of outstanding science and state-of-the-art clinical medicine. I urge you to browse the preliminary program at the ATS Meeting website for sessions of particular interest and plan to join us in San Francisco.

- The Assembly leadership
- has been hard at work during the run-up to the San Francisco meeting.
- Andrew Halayko, Eric Hoffman, and the RSF
- 4-5 Program Committee have programmed scientific sessions of special interest
- to RSF members. They have also identified travel
- 8-9 award recipients from
- among the most outstanding abstracts sub-
- <sup>1</sup> mitted by RSF students

and fellows. Under the leadership of Jeff Fredberg, the RSF Planning Committee has overseen selection of recipients for the ATS Ann Woolcock Memorial Award and the Joseph R. Rodarte Award for Scientific Distinction and has organized a great talk for our Assembly dinner in San Francisco. The RSF Nominating Committee, chaired by Ken Lutchen, has developed a slate of outstanding candidates for Assembly leadership that will be elected by RSF members at this year's membership meeting.

I also encourage you to get involved in RSF Assembly activities while in San Francisco. A great way to start is by attending our annual Membership meeting. The meeting will be held at the Hilton San Francisco, Imperial Ball Room A, on Monday, May 21st from 4:30-6:30pm. The agenda

will be kept as short as possible, and will include a quick run-down of ongoing activities and the election of new Assembly officials. Show up and vote and make your voice heard! Then join us immediately afterward for the Assembly Dinner to be held at the Grand Café located at 501 Geary at Taylor Street near San Francisco's renowned Union Square and theatre district. The Grand Café is a French-California brasserie with a 20th century Parisian atmosphere, featuring contemporary French cuisine influenced by earthy seasonal flavors and wonderful local ingredients. As always, this will be a memorable evening filled with good food and lively conversation among your fellow RSF members. In addition to presentation of our Rodarte, Woolcock, and travel awards, we are pleased to present

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### Message From the Assembly Chairman

(Continued from page 1)

Dr. John W. Severinghaus, who will speak on, "Discovery of oxygen and the hidden letter: passion, politics, priority, and plagiarism". This is a talk that has received rave reviews, and it is one you will not want to miss. Again this year, our RSF Assembly Dinner will be supported by a generous unrestricted donation from *Merck*.

The <u>Grand Cafe</u> is within walking distance from the Hilton San Francisco Hotel. Please note that this event can only accommodate 150 guests, and these tickets will go fast. Reserve your seat today by returning the form enclosed with this newsletter or by fax.

I look forward to seeing you there!

P.S. I hope you will check out the RSF website <u>Assembly News</u> for information throughout the year. On the website we also have included pictures from last year's RSF dinner at the Aubergine restaurant. As a challenge to RSF members, one of the pictures is of the "what's-wrong-with-this-picture?" kind often given to children.

See if you can find the error(s) – and email me (wmitzner@jhsph.edu) with your findings – winners get a round of drinks with me at a local pub after the dinner.

### **RSF Program Committee**

Chair: Andrew Halayko, PhD, University of Manitoba

The RSF Program Committee is extremely pleased to announce an outstanding research forum for the upcoming ATS International Conference in San Francisco. RSF was successful in having two Post Graduate Courses accepted by the ATS Education Committee in 2007. RSF also increased by two, the number of major symposia slots in comparison with 2006, for a total of 9 full symposia; four of these as joint session with

other assemblies. In addition, RSF will co-chair the "Scientific Breakthroughs of the Year" Symposium in 2007, and is co-sponsor of a Dr. David Bates Memorial Symposium. Total abstract submissions to the 2007 ATS Conference was 5642, an increase of 13% from 2006. Notably, in 2007 RSF Assembly abstract numbers increased by over 18%, having received 634 abstracts in comparison to 536 in 2006. This large increase

"leap-frogged" RSF from 4th to 3rd position in total abstract submissions among all ATS Assemblies! With these abstract submissions we procured 7 Mini-Symposia, presenting 56 abstracts, 8 Poster Discussion sessions, presenting 189 abstracts, and 19 Thematic Poster sessions. Overall, the RSF Assembly has done remarkably well and continues to be at the forefront of presentations at the International Conference. Many thanks are

given to the members of the Programming Committee, which was increased in size to 48 members to accommodate increased abstract submissions. Over the past 12 months, it has been a great pleasure and privilege to serve as Chair of the Program Committee. Best wishes and support to Dr. Eric Hoffman, as he assumes the chairmanship of the RSF Program Committee at the 2008 International Conference.

### **RSF Planning Committee**

Chair: Jeffrey Fredberg, PhD, Harvard University

During the academic year 2006-2007, the RSF Planning Committee is comprised of 16 members from Australia, Europe and North America. Committee members are charged with three specific responsibilities: selection of RSF Projects,

selection of RSF Awardees, and organization of our annual RSF Assembly Dinner. Projects: The planning committee evaluates unsolicited project proposals submitted by ATS mem-

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### **RSF Planning Committee**

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bers affiliated with RSF or other assemblies. Current RSF projects include: "ADVANCES IN SMALL ANIMAL IMAGING: APPLICATIONS TO LUNG PATHOPHYSI-OLOGY", chaired by Dr. Robert Brown; "LECTURE NOTES IN PULMONARY PHYSI-OLOGY", chaired by Dr. Charles Irvin; and "QUANTITATIVE AS-SESSMENT OF LUNG STRUCTURE", chaired by Drs. Connie Hsia and Dallas Hyde. These projects have been approved by the ATS Program Review subcommittee and are being supported by

the ATS. You can learn more about ATS projects and how to submit an application elsewhere in this newsletter or at the RSF Assembly business meeting at the International Conference.

Awards: The Planning Committee receives nominations for and then selects recipients of our two prestigious RSF Assembly awards. You can learn more about these awards and how to submit an award nomination on the RSF website.

The **Ann Woolcock Memorial Award** is pre-

sented to a young investigator for career accomplishments and future promise. This award is supported by an endowment established through the generosity of *GlaxoSmithKline* and the *Thoracic Society of Australia* and New Zealand. Last year the Ann Woolcock Memorial Award was presented to **Dr. Steven S. An** of Johns Hopkins University.

The Joseph R. Rodarte Award for Scientific Distinction is presented annually to an established investigator with recognized and distinguished scientific achievement in the area of respiratory structure and function. This award is made possible by a generous grant from *SensorMedics*, a subsidiary of *Viasys Healthcare*. Last year the Joseph R. Rodarte Award for Scientific Distinction was presented to **Dr**. **Wayne Mitzner**, also of Johns Hopkins University.

### Advances in Small Animal Imaging: Application to Lung Pathophysiology Robert Brown, MD, MPH

The initiative behind this proposed workshop titled "Advances in Small Animal Imaging: Application to Lung Pathophysiology" was to bring together leading research scientists from around the world who have developed cutting edge techniques in small animal imaging modalities, but who may not be conducting lung research, together with leading research scientists within the ATS community who have developed and utilized murine models of lung disease for a one day workshop. Such a wide-

spread collaboration could have significant impact for lung-related research, resulting in new methods of diagnosis and treatment of lung pathology.

The specific objective of this workshop were twofold. The first objective was to bring together the preeminent researchers in imaging technology with the preeminent researchers in small animal models of lung pathophysiology to address the issues in lung disease research that could most benefit from new applications of imaging technology, specifically, to facilitate small animal models of lung disease, and suggest future collaborations and experiments to further small animal models of lung disease research. From the feed back for all the participants, we feel this was a rousing success. The workshop took place at the 2006 ATS meeting in San Diego. The second goal was to publish, in the ATS journal, a workshop summary that is a state-ofthe-art compilation of the current high impact imaging technologies and

their potential applications to small animal research on lung disease. We will use summaries from each presenter and comments from all the participants at the workshop to develop the workshop summary. The workshop summary is in preparation.

### "Quantitative Assessment of Lung Structure"

Co-chairs: Connie Hsia, Dallas Hyde, Matthias Ochs and Ewald Weibel

The goal of this project is to develop practical guidelines and standards for the application of design-based stereological methods to morphometric analysis of normal and diseased lung structure including gas exchange tissue, conducting airways and blood vessels, with extension to the use of current and emerging non-invasive imaging technology. Because morphometric data are often considered the "gold standard" in evaluating the severity of disease or injury and the response to treatment, it is imperative that the quantitative methods be unbiased in order to allow meaningful interpretation of the results, and adhere to uniform standards in order to facilitate comparisons across different studies. Several journals in other specialties have already established uniform standards for the use of designbased (unbiased) stereological approaches in

their publications that involve structural assessment of the relevant organs. Given the additional complexities of the lung as a non-solid organ, such standards in respiratory biology would also be important and timely.

To achieve this goal, an international ad hoc committee has been formed consisting of members with broad expertise in structural assessment related to development,

growth, injury, repair, and remodeling of lung parenchyma and conducting structures. The committee will work to produce an official Joint ATS/ERS Document of Technology Review and Standards. It is hoped that these guidelines will improve the uniformity and validity of morphological quantification, thereby promoting the understanding of respiratory structure-function relationships in health and disease.

## Please Consider Submitting an Assembly/Committee Project Application for Funding in FY2008!

For your information, the FY2008 (January 1-December 31, 2008) project application forms for Assembly/Committee projects will be available on the ATS website (www.thoracic.org) on May 1, 2007. There will be a link to the project submission forms on the ATS homepage. Please consider submitting an application for an Assembly/Committee project. If you have an idea for a project application and you need assistance, please contact your Assembly Planning Committee chair Jeffrey Fredberg at jfredber@hsph.harvard.edu..

The timeline for the application and review process follows:

- ♦ May 2007: FY2008 forms are available
- ◆July 23, 2007: Assembly/Committee project applications are due to the ATS office. Late submissions will not be accepted.
- ◆ Early-mid August 2007: abridged versions of the proposals will be posted on the ATS site and emails will be sent to ATS Leadership, Assembly Planning Committee Chairs, Assembly Chairs, ATS Com-

mittee Chairs, appropriate ATS staff and the PRS committee, to notify them that the current, un-reviewed proposals are available. This will give everyone an opportunity to touch base with any of the applicants if they would like to get involved with a project before it goes to the PRS for review.

◆ August 1-17, 2007: Assembly Planning Committees will meet via conference call to review appropriate proposals. Any proposal that has indicated on the form that a specific

ATS committee may want to become involved will be sent to the ATS committee chair and to the appropriate staff member. Committees are encouraged to work with appropriate ATS staff and review any proposals and to send recommendations to the applicant and to the PRS.

◆September 4, 2007: Revised proposals and all reviews from Assemblies and Committees are due to ATS office. This includes any proposal that has revi-

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### Please Consider Submitting an Assembly/Committee Project Application for Funding in FY2008!

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- sions based on a review by an Assembly Planning Committee or an ATS Committee.
- ◆ Early October 2007: Program Review Sub-Committee (PRS) meeting
- ◆Early November 2007: Program & Budget Committee (P&B) meeting. Recommendations from the PRS will be provided to the P&B Committee. At the discretion of the P&B Committee, spe-
- cific projects will be added to the FY2007 budget as new items.
- ◆ December 2007: ATS Board reviews FY 2008 Budget

Please contact Monica Simeonova with any questions at tel: 212/315-8696 or email: msimeonova@thoracic.org.

### The ATS Assembly On Respiratory Structure and Function ATS 2007 · San Francisco Sessions

Postgraduate Courses							
Friday, May 18							
PG12	Essential Respiratory Physiology During Mechanical Ventilation 8:00 am						
Saturday, May 19							
PG26	Clinical Applications Of Classical Physiology In Pulmonary Function Testing 8:00 am 4:00						
Scientific Symposia							
Sunday, May 20							
A5	Can We Treat Airway Remodeling?	8:15 am	11:00 am				
Monday, May 21							
B88	Biology Of Lung Remodeling In Chronic Obstructive Pulmonary Disease	1:30 pm	4:15 pm				
B89	Oscillation Mechanics Of The Respiratory System: Basic Research And Clinical Applications 1:30 pm						
Tuesday, May 22							
C6	Bronchial Angiogenesis And Pulmonary Vascular Homeostasis In Health And Disease	8:15 am	11:00 am				
C10	Just So Stories: Respiration Meets Evolution	8:15 am	11:00 am				
Wednes	sday, May 23						
D5	Functional Aspects Of Airway Innervation: Neural Plasticity In Airway Diseases	8:15 am	11:00 am				
Meet The Professor Seminars							
Sunday, May 20							
MP420	New Tools For Studying Gene Expression In The Lung	12:00 pm	1:00 pm				

## The ATS Assembly On Respiratory Structure and Function ATS 2007 · San Francisco Sessions

Meet '	The Professor Seminars							
Mond	ay, May 21							
MP520	Quantitative CT Imaging Of Lung Structure And Function	12:00 pm	1:00 pm					
Tuesd	ay, May 22							
MP619	Pharmacological Methods In Assessing Airway Remodeling And Function	12:00 pm	1:00 pm					
MP620	Comparative Pulmonary Physiology	12:00 pm	1:00 pm					
Sunris	Sunrise Seminars							
Monday, May 21								
SS119	Knowledge Translation From Research In Respiratory Acoustics To The Bedside	7:00 am	8:00 am					
SS120	Quantitative Imaging To Assess The Progression Of COPD	7:00 am	8:00 am					
Tuesd	ay, May 22							
SS220	Obstruction, Restriction Or Bad Quality Test?	7:00 am	8:00 am					
Wedn	esday, May 23							
SS320	Understanding The Physiological Causes Of Hypoxemia	7:00 am	8:00 am					
Minis	Symposia							
	<u>y, May 20</u>							
A97	Noninvasive Assessment Of And Guidance Through The Airway	1:30 pm	4:15 pm					
Mond	ay, May 21							
B16	Mechanisms Regulating Airway Smooth Muscle Phenotype And Function 8:15 a		11:00 am					
B94	New Therapeutic Targets For Respiratory Muscle Dysfunction	1:30 pm	4:15 pm					
<u>Tuesd</u>	<u>ay, May 22</u>							
C93	ALI/ARDS: Risks And Outcomes	1:30 pm	4:15 pm					
C94	Regulation Of Inflammatory Gene Expression In Airway Smooth Muscle	1:30 pm	4:15 pm					
Wedne	esday, May 23							
D16	Skeletal Muscle Dysfunction During Exercise Testing	8:15 am	11:00 am					
D17	Image And Model-Based Assessment Of Pulmonary V/Q Relationships: New Insights Into Pathophysiology Of The Lung	8:15 am	11:00 am					
Poster	Discussions							
Sunda	y, May 20							
A103	Respiratory System Mechanics In Human And Mouse	1:30 pm	4:15 pm					
A104	Airway Remodeling In Asthma: Mechanisms From Humans And Animal Models	1:30 pm	4:15 pm					
Monday, May 21								
B27	Imaging-Based Assessment Of And Guidance Through The Pulmonary Airways	8:15 am	11:00 am					
B104	Intracellular Signalling Pathways In Regulation Of Airway Smooth Muscle Contrac-	1:30 pm	4:15 pm					

## The ATS Assembly On Respiratory Structure and Function ATS 2007 · San Francisco Sessions

Poster	Discussions				
Monday, May 21					
B105	Modeling Structure Function Relationships: Alveolar Pathology	1:30 pm	4:15 pm		
Tuesd	ay, May 22	, 1			
C101	Muscle And Cardiopulmonary Physiology: Exercise Testing In Disease	1:30 pm	4:15 pm		
Wedn	esday, May 23				
D25	Acute Lung Injury: Mediators And Novel Therapeutics	8:15 am	11:00 am		
D102	Cellular Mechanisms Of Respiratory Muscle Dysfunction	1:30 pm	4:15 pm		
Them	atic Posters				
Sunda	y, May 20				
A53	Non-Invasive Assessment Of The Airways: Functional	8:15 am	4:15 pm		
A54	Airway Responsiveness Part 1: Animal Models	8:15 am	4:15 pm		
A55	Airway Remodeling: Functional Consequences	8:15 am	4:15 pm		
A56	Airway Pathology And Structure	8:15 am	4:15 pm		
Mond	ay, May 21				
B30	Cough And Dyspnea	8:15 am	4:15 pm		
B31	Pulmonary Acoustics	8:15 am	4:15 pm		
B32	Lymphangioleiomyomatosis (LAM)	8:15 am	4:15 pm		
B33	Control Of Airway Smooth Muscle Contraction: Cytoskeleton	8:15 am	4:15 pm		
B34	Airway Responsiveness Part 2: Human Physiology	8:15 am	4:15 pm		
Tuesd	ay, May 22				
C45	Regulating Functional Diversity In Airway Smooth Muscle	8:15 am	4:15 pm		
C46	Airway Innervation And Neural Control	8:15 am	4:15 pm		
C47	Quantitative Lung Imaging: Pathology Detection, Characterization And Outcomes Assessment	8:15 am	4:15 pm		
Wedn	esday, May 23				
D51	Aerosols: Physiology And Biology	8:15 am	4:15 pm		
D52	Gas Exchange And Emerging Imaging Technologies For Assessment Of V, Q, And V/Q	8:15 am	4:15 pm		
D53	Ventilator - Induced Lung Injury	8:15 am	4:15 pm		
D54	Acute Lung Injury: Predictors, Risks And Outcomes	8:15 am	4:15 pm		
D55	Acute Lung Injury: Genetics, Molecular And Cellular Mechanisms	8:15 am	4:15 pm		
D56	Respiratory Muscle Function In Health And Disease	8:15 am	4:15 pm		
D57	Exercise In Heath And Disease	8:15 am	4:15 pm		

### Patients to Speak At Eleven Designated ATS International Conference Symposia

The ATS Public Advisory Roundtable (ATS PAR) has selected patients to provide a patient perspective at eleven of the 2007 ATS International Conference Symposia. This concept has worked exceptionally well within the format of the PAR Symposia for the last five years and at an increasing number of sessions at the 2004, 2005 and 2006 International Conferences.

This is the fourth year that patient speakers will participate within the Assemblies' Symposia. The patients will make a five-minute presentation at the symposia to offer insight into their personal

journeys; to address their diagnosis, treatment, and how the disease has dramatically altered their lifestyles, family, career and relationships. They will share their insight into what patients would like physicians and researchers to know about physician/patient relationships; and the impor-

tance and relevance of the work in which investigators and researchers are engaged.

The symposia at which a patient-perspective will be presented are listed below:

ASSEMBLY	SESSION CODE	TITLE	DATE/TIME
NRSG	A7	Controversies in Pulmonary Rehabilitation	Sunday, May 20 8:15-11:00 am
PED	A85	State of the Art Update: Prevention and Management of Neonatal Chronic Lung Disease (Parent's Perspective on BPD)	Sunday, May 20 1:30-4:15 pm
MTPI	A86	New Tools and New Challenges: Interferon Gamma Release Assays in the Diagnosis of TB Infection and Disease	Sunday, May 20 8:15-11:00 am
AII	A87	Improving Outcomes after Human Lung Transplantation: Insights Gained Through Translational Proteomics, Genetics and Genomics Studies	Sunday, May 20 1:30-4:15 pm
ЕОН	A88	The Upper Airway and the Environment	Sunday, May 20 1:30-4:15 pm
RNS	A9	Vascular Homeostasis in Obstructive Sleep Apnea	Sunday, May 20 8:15-11:00 am
AII	B8	Challenging the Current Paradigm for Treating Asthma	Monday, May 21 8:15-11:00 am
PED	B9	Pathophysiology of OSAS in Children: New Questions, New Answers	Monday, May 21 8:15-11:00 am
CC	D4	Update on the Diagnosis and Treatment of Severe Sepsis	Wednesday, May 23 8:15-11:00 am
PED	D90	Current and Emerging Treatments For Cystic Fibrosis	Wednesday, May 23 1:30-4:15 pm
PC	PG9	Pulmonary Embolism Diagnosis and Treatment: State of the Art 2007	Friday, May 18 8:00-4:00 pm

### PAR Symposium

The ATS Public Advisory Roundtable (PAR) is pleased to announce the sixth ATS PAR Symposium to be presented at the ATS International Conference in San Francisco on Tuesday, May 22nd from 8:15-11:00 a.m. The topic will be "Pulmonary Hypertension – Basic, Translational and Clinical" chaired by Peter D. Wagner, M.D. and Judith Simpson, RN,

EdS. The program includes the following:

• Classification of Pulmo-(Continued on page 9)

### PAR Symposium

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nary Arterial Hypertension – D. B. Badesch,
M.D., Denver, CO

- Genetics of Pulmonary Arterial Hypertension – C. G. Elliott, MD, Salt Lake City, UT
- Pathogenesis of Pulmonary Arterial Hypertension – L. Rubin, M.D., San Diego, CA
- Fueled By Hope: Living with Pulmonary Hyper-

tension – C. S. Tillman Dick Baltimore, MD

- Current Therapies: Prostanoids, Endothelin Receptor Antagonist and Phosphodiesterase Inhibitors – R.J. Barst, MD, New York, NY
- Stem Cell Therapy D.J. Stewart, M.D., Toronto, Canada
- Future Therapies: Antiproliferatives and Oth-

ers – J.H. Newman, M.D., Nashville, TN

• Our Meghan's Fight to Breathe – C. Hicks, Gig Harbor, WA

The ATS PAR Annual Poster Session will be open from Sunday, May 20 until Tuesday, May 22, 2007 in the Exhibit Hall of the San Francisco Moscone Center. Public Interest Organizations (PIO's) concerned with lung and sleep disorders will present information about their organizations. A representative from each organization will be present at the poster session to provide additional information.



### ATS Public Advisory Roundtable's First Annual

### Breathing Better with the ATS Forum

May 19th, 2007, 1:00 p.m. – 4:00 p.m.
PARC 55 Hotel located at 55 Cyril Magnin St., San Francisco
RSVP by: March 30th, 2007 by emailing <u>par@thoracic.org</u> or call
Karen Belgiovine at (212) 315-8640

If you have any patients in the San Francisco area, please encourage them to attend. They will have an opportunity to hear from and network with other patients and experts in the pulmonary community.



# RESPIRATORY STRUCTURE AND FUNCTION ASSEMBLY MEMBERSHIP MEETING

MONDAY MAY 21<sup>ST</sup> 4:30PM-6:30PM HILTON SAN FRANCISCO IMPERIAL BALLROOM A

REFRESHMENTS WILL BE PROVIDED
THROUGH A GENEROUS GRANT FROM
GILEAD



# RESPIRATORY STRUCTURE AND FUNCTION ASSEMBLY MEMBERSHIP DINNER

PLEASE REMEMBER TO REGISTER FOR THE
RSF ASSEMBLY MEMBERSHIP DINNER
TO BE HELD ON MONDAY, MAY 21ST AT 6:30 PM,
IMMEDIATELY FOLLOWING THE ANNUAL RSF MEMBERSHIP MEETING

THE DINNER HAS BEEN MADE POSSIBLE BY A GENEROUS GRANT FROM MERCK & CO., INC.