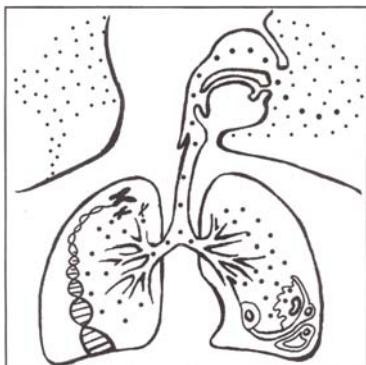


# Inhalation and Respiratory Specialty Section



**Society of Toxicology**

## INHALATION AND RESPIRATORY SPECIALTY SECTION (ISS) NEWSLETTER –SUMMER 2006

Dear ISS Member:

San Diego! What a wonderful place to hold a Scientific Meeting. The accommodations were great, as were the presentations and posters. In addition, the climate was perfect for a congenial and worthwhile experience.

Congratulations to our executives for finally getting our name change approved, and this new more appropriate name is proudly displayed on this newsletter.

As you recall John Whalen told us about the OECD Experts meeting that was held in Berlin, Germany last February. Although progress was made on the guidelines and a Technical Guidance Document 39 was prepared, the guidelines were not finalized. A follow-up meeting is being held in Washington, DC, November 7, 8 and 9, 2006. I have

been honored by the invitation to co-chair this meeting. Hopefully, we will be able to report more progress at our upcoming annual meeting. Chad Roy who participated in both the NAS meeting last year where attempts were made to integrate inhalation toxicologist in the chemical arena, and those in the biological arena, and who gave those of us who attend the Technical Committee meeting an overview of who to conduct inhalation toxicology of biological agents, has moved on from USAMRIID at Fort Detrick to the Academic world of University of North Carolina. His contact information is now:

Dr. Chad Roy  
Director Aerobiology  
Primate Center  
Tulane Univ Med School  
(985) 871-6417

I know you join me in thanking MaryJane Selgrade and prior executives for a job well done. We look forward to another successful and productive year with our new president and his executive.

*Harry Salem*

### President's Message:

### PRESIDENT'S 2006 FALL MESSAGE.

I don't have a lot to communicate in the New President's message. I think that MaryJane has passed the "gavel" of the Specialty Section presidency on to me with the Section in excellent functioning order. I will continue to call upon her for guidance as the year develops with myself, Deepak, and Lung-Chi at the helm. Over the prior two years of my

involvement (as VP-elect, and as VP) with the administration of the Section, I learned a great deal from MaryJane and am most grateful for her patience, and insight.

The biggest and newest news is that this past August, the SOT Council approved our petition for re-naming the Section, and thus the Section is now recognized as: ***Inhalation and Respiratory Specialty Section***. Many thanks are in order to the membership of our Section, the Section officers, and SOT communication personnel, all of whom assisted in developing and voting agreement for the new name.

Next in line of important news is that I trust you all made the Abstract deadline for the 46th Annual Meeting (deadline for abstract submission was *October 3*) and hopefully have gotten your students excited to present preliminary results of their research at the annual meeting to be held in Charlotte, NC from March 25 – 29, 2007 (<http://www.toxicology.org/ai/meet/am2007/index.asp>).

Finally, and of considerable importance, is that the membership should be thinking strongly about sending to Lung-Chi Chen (current VP-elect, chenl@env.med.nyu.edu) their nominations for consideration of our Specialty Section's Paper of the Year award. The deadline for these nominations is not until the end of the calendar year 2006, but now is the time to make formal nomination of a colleague's report, published during 2006, and worthy of being distinguished (guidelines for nominating a report are listed at the SOT web site, <http://www.toxicology.org/ISOT/SS/inhalation/Index.html>).

Thank you all, and I am looking forward to an interesting year of science and research in inhalation and respiratory toxicology, and helping with the administration of our Section. Please note in MaryJane's message to the membership, our interest to have nominations made to MaryJane for nominations of new officers to guide the Section in the future.

*Michael Foster*

#### **Past President's Message:**

Thanks to all of you who took the time to vote on the name change. As Mike noted the request to change our name to the Inhalation and Respiratory Specialty Section (IRSS) and to make the associated changes in the bylaws was approved by Council at their August meeting. The results of the final specialty section membership vote for the name change were 82 yes and 7 no votes. As most of you will recall in March we carried out a survey of the membership to determine what they would like to see included in the Specialty section name. The results of that survey are shown in the Technical Committee Minutes.

I believe this two step process really helped us to understand the membership's desires with respect to the name change.

My last official duty is to assemble a nominating committee and come up with a slate of officers for 2007. If you would like to nominate someone for an office or volunteer yourself, please send me an e mail at [selgrade.maryjane@epa.gov](mailto:selgrade.maryjane@epa.gov). It has been my pleasure to serve the ISS and the many talented and diverse

scientists that make up our membership. I have no doubt that the IRSS will continue to grow and flourish under the very able leadership of Mike Foster, Deepak Bhalla, and Lung Chi Chen.

*MaryJane Selgrade*

**24<sup>th</sup> General Assembly Meeting and Reception, Inhalation Specialty Section (ISS), 2006 Society of Toxicology Annual Meeting, San Diego, CA**

**New Business:**

**TECHNICAL COMMITTEE MEETING  
Wednesday, March 8, 2006**

**Preview of the 2007 Program**

**ANNUAL REPORT: 2004-2005**

**June 30, 2005 to July 1, 2006**

**I. Officers/Committees:**

<b>Officers:</b>	<b><u>2005-2006</u></b>
President:	MaryJane Selgrade
Vice President:	Michael Foster
Vice President elect:	Deepak Bhalla
Secretary/Treasurer	Jake McDonald
Councilors	Urmila Kodavanti Lung Chi Chen Michelle Fanucchi Jon Hotchkiss Charles Plopper

<b>Past-President</b>	<b><u>2006-2007</u></b>
	Michael Foster
	Deepak Bhalla
	Lung Chi Chen
	Jake McDonald
	Michelle Fanucchi Jon Hotchkiss Ilona Jaspers Jim Wagner MaryJane Selgrade

**II. Activities**

**PROGRAM COMMITTEES:  
Programs at the 2006 National meeting in San Diego, CA:**

Primary Sponsor:

Predictive Power of Novel Technologies (Cell to “Omics”): Promises, Pitfalls and Potential Applications (Continuing Ed); Chairpersons: Srikanth Nadadur, PhD, US EPA and MaryJane Cunningham, PhD, Houston Advanced Res Center.

The Complexities of Air Pollution Regulation: The Need for an Integrated Research and Regulatory Perspective (Roundtable); Chairpersons: Sri Nadadur, PhD, US EPA and Dan Costa, DSc., US EPA.

Air Pollution: Vanguard Toxicological Approaches Considering Atmospheric Aging (Symposium). Chairpersons: Annette Rohr, PhD, EPRI and Ilona Jaspers, PhD, UNC-Chapel Hill.

The War on Ozone in the 3rd Millennium: Toxicology and Health Effects Update (Symposium); Chairpersons: Deepak Bhalla, PhD, Wayne State and W. Michael Foster, PhD, Duke.

Secondary Endorsements: Assessing Airway Injury and Remodeling Induced by inhaled Pollutants Using MRI, Microscopy, and Modeling (Continuing Ed). Primary Sponsor: Toxicology and Exploratory Pathology Specialty Section.

Risk Assessment Implications of Direct Nose-to-Brain Transport of Inhaled Xenobiotics (Symposium); Primary Sponsor: Toxicology and Exploratory Pathology Specialty Section.

Models and Mechanisms of Occupational/Environmental Asthma (Symposium); Primary Sponsor: Immunotoxicology Specialty Section.

The Role of MAP Kinases in Metal Toxicity (symposium). Primary Sponsor: Metals Specialty Section.

Thermoregulation and its Influence on Toxicity Assessment (Workshop). Primary Sponsor: Risk Assessment Specialty Section.

**Programs tentatively accepted for 2007 meeting in Charlotte, NC:**

**Primary Sponsor:**

Symposium: Cardiovascular effects of inhaled ultrafine and fine particles in human volunteers.

Symposium: Air Pollution and Atherosclerosis: Impact of Inhaled Agents on Vascular Remodeling, Dyslipidemia, and Oxidative Stress

Roundtable: Can a single experimental model predict the respiratory sensitization potential of chemicals and proteins?

Workshop: Health risks of carbon nanotubes: what can we learn from mineral fibers or ultrafine particulates?

**Secondary Endorsements:**

Workshop: Molds, Mycotoxins and Damp-Building Related Illnesses

Workshop: Current Considerations in Setting Exposure Guidance for Sensory and Respiratory Tract Irritation

**AWARDS COMMITTEE:**

The following awards were presented at the 2006 annual meeting:

*Paper of the Year (Plaque for first author and Certificates for co-authors):*

**Long-term Air Pollution Exposure and Acceleration of Atherosclerosis and Vascular Inflammation in an Animal Model**

Qinghua Sun; Aixia Wang; Ximei Jin; Alex Natanzon; Damon Duquaine; Robert D. Brook; Juan-Gilberto S. Aguinaldo; Zahi A. Fayad; Valentin Fuster; Morton Lippmann; Lung Chi Chen; Sanjay Rajagopalan *JAMA*. 2005;294: 3003-3010.

**Author Affiliations:** The Zena and Michael A. Wiener Cardiovascular Institute, Marie-Josée and Henry R. Kravis Center for Cardiovascular Health, Mount Sinai School of Medicine, New York, NY (Drs Sun, Natanzon, Aguinaldo, Fayad, Fuster, and Rajagopalan, and Ms Wang); Department of Environmental Medicine and Nelson Institute of Environmental Medicine, New York University School of Medicine, Tuxedo (Drs Lippmann and Chen, and Ms Jin); and Department of Internal Medicine, University of Michigan, Ann Arbor (Dr Brook and Mr Duquaine).

*Postdoctoral Award (Plaque + Cash Award):*



**Christie M. Sayes**  
DuPont Haskell Laboratory for Health and Environmental Sciences, Newark, Delaware  
(Presented by Dr. Deepak Bhalla)

*Student Award (Plaque + Cash Award):*



**Yu-Mee Kim**  
University of North Carolina, Chapel Hill, NC, USA

*Young Investigator (Plaque + Cash Award):*



**James Michael Antonini, Ph.D.**  
Toxicologist National Institute for Occupational Safety and Health Health Effects Laboratory Division 1095 Willowdale Road, Morgantown, WV 26505

*Career Achievement (Plaque):*



**Dr. Thomas W. Hesterberg, PhD, MBA**  
Director, Product Stewardship International Truck and Engine Corporation, Warrenville, IL  
(Presented by Dr. Roger McClellan)

**Outgoing Officers:**

*President (Plaque with Gavel):*



**MaryJane Selgrade, Ph.D.**

Chief, Immunotoxicology Branch  
US EPA (with Dr. Michael Foster)

*Councilors (Certificates):*



**Lung Chi Chen, Ph.D.**

New York University School of  
Medicine

and

**Urmila Kodavanti, Ph.D.**

Pulmonary Toxicology Branch  
Experimental Toxicology Division  
National Health and Environmental  
Effects Research Laboratory  
US Environmental Protection Agency

*The Taylor & Francis Awards:*



**Gillian S. Backus**



**Stephen A. Carey**

*Mary Amdur Student Award:*



Jonathan Cienciwicks  
(presented by Dr. Richard Schlesinger)

**MISCELLANEOUS:**

Appointment of Student Representative: Elizabeth Vancza was appointed as student representative for the Inhalation Specialty section for 2006/2007.

August 9/10, 2005: SOT Specialty Section (SS) Leadership Workshop, Chicago, IL.

- attended by ISS Vice President: Michael Foster
- workshop goals:
  - opportunity for SS officers to share experiences and network
  - opportunity for SS officers to learn more of the resources of SOT staff and Council
  - opportunity for SS officers to communicate Section needs and challenges
  - opportunity for SS officers to better understand the expectations from SOT staff
  - provide a clearer understanding of mechanics of SOT Program Committee's Ranking procedures for

assessing applications and setting agenda for Annual Meeting

ISS member, Maryjane Selgrade, who has dual membership in the Immunotoxicology Specialty Section was awarded distinguished Career Achievement Award of the Immunotoxicology Specialty Section at the 2006 Annual Meeting in San Diego

Tentative for August, 2006: SOT Specialty Section (SS) Leadership Workshop II

- planned ISS attendees for the 2006 Workshop to include: President: Michael Foster, and Vice President: Deepak Bhalla

Name Change: Following discussion at the ISS 2006 Business Meeting during the Annual SOT convention, later in March of 2006 the membership of the Section voted on potential name changes for the Section. The votes were submitted to, and tabulated by, the SOT Staff and the distribution of submitted votes was the following:

Results of March ballot (votes were counted at headquarters):

	Numbers	%
Inhalation	42/81	51%
Respiratory	58/81	71%
*Inhalation + respiratory	29/81	36%
vascular	14/81	18%
*Inhalation not respiratory	13/81	16%
*Respiratory not inhalation	29/81	36%
Cardio	23/81	28%

Subsequently, a ballot was circulated for the Section to be renamed as: **Inhalation and Respiratory Specialty Section (IRSS)**. The proposed name change was approved by a total of 82 yes votes; and there was a total of 7 no votes. This request by the Specialty Section for the name change is to be considered at the SOT council meeting scheduled for mid-August, 2006.

At this meeting John Whalen of EPA presented an overview of the OECD Acute Inhalation Guidelines, the Expert Meeting in Berlin, and the challenges faced by the US delegation. These include developing reasonable guidelines that will accurately place chemicals in the correct regulatory category using minimum number of animals without jeopardizing safety. Hopefully, an update on progress at the meeting being held in Washington, DC, Nov 7-9, 2006 will be presented at our upcoming annual meeting.

In addition, Chad Roy, formerly of USAMRIID, Fort Detrick provided us with methodology of conducting inhalation toxicology of biological agents, and the issues and challenges that must be considered.

#### **IRSS NEWSLETTER ITEMS OF INTEREST:**

##### **Report to the SOT IRSS on OECD Expert Consultation Meetings**

A three-day OECD Expert Consultation Meeting on Acute Inhalation Toxicity was held in Berlin, Germany on February 22-24, 2006. Participants represented France, Germany, Sweden, the Netherlands, the United Kingdom, the United States, PETA Europe, and

FRAME (Fund for the Replacement of Animals in Medical Experiments). The main goals of this meeting were:

- to discuss two draft alternative inhalation toxicity guidelines—TG 433 and TG 436—which are up/down protocols used for testing low to moderate toxicity test articles, [TG 433 uses “evident signs of clinical toxicity” as an endpoint rather than death. At each fixed concentration, sighting studies use a single female, and main studies use 5 females.  
TG 436 uses death as an endpoint. There are no sighting studies. Six animals (3/sex or 6 of the sensitive sex) are tested at each fixed concentration.]
- to discuss an updated TG 403 for traditional LC<sub>50</sub> studies,
- to resolve specific issues raised by member countries, and
- to discuss the drafting of an inhalation guidance document for acute inhalation toxicity studies (GD 39).

Resolved issues include the following:

1. The MMAD 1-4  $\mu\text{m}$  standard for particle size will be retained.
2. Gas concentrations will be expressed in units of “mg/L” (instead of “ppm”), and the limit concentration for gases will be 20 mg/L.
3. The limit concentration for liquid and solid aerosols will be lowered from 5 mg/L to 2 mg/L.
4. Testing in excess of the limit concentration will not be allowed unless there is a compelling reason to do so.
5. Individual or group housing may be used in recovery rooms.

6. A “C x t” protocol from the Netherlands will be included as a testing option in TG 403.
7. The number of animals to be tested at each concentration level needs further consideration by statisticians and modelers.
8. Nose-only chambers are preferred, but whole-body chambers may be used when there is a good reason for using them.
9. Measurements for chamber concentration and particle sizing will be performed hourly.
10. TG 403 must be used for testing corrosives unless there is a compelling reason for not testing.
11. Two types of equipment will be required for sampling aerosols (e.g. an impactor and a gravimetric filter)
12. When a TG 433 or TG 436 study classifies a test article as Toxicity Category 1, a TG 403 study must be performed to further characterize its potency and toxic nature.

There was general support for keeping and updating TG 403. In particular, it is needed for the testing of highly toxic and corrosive test articles. It is ideal for establishing Acute Exposure Guideline Levels (AEGLs) and Emergency Response Planning Guidelines (ERPGs). Its use is required by the US Department of Homeland Security, the US Department of Transportation, and the United Nations Committee of Experts on the Transport of Dangerous Goods. It is needed for dealing with accidental exposures in submarines and spacecraft where there is no possibility for evacuation. Finally, it is needed for European Union Emergency Planning and Land Use Planning.

A meeting of the Guideline Document Drafting Group (GDDG) was held in Berlin, Germany on July 11-12, 2006. The purpose of this meeting was to resolve outstanding issues regarding the Draft Guidance Document on Acute Inhalation Toxicity Testing (GD 39). Juergen Pauluhn is the lead on this project.

The next OECD Expert Consultation Meeting on Acute Inhalation Toxicity will be held in Washington, D.C. on November 7-9, 2006. GD 39 and TGs 403, 433, and 436 will be discussed along with TG 412, a draft guideline for repeated exposure studies.

John E. Whalan

## POSITION AVAILABLE:

The Toxicology Department of Alexza Pharmaceuticals, Inc. is recruiting for a toxicologist with inhalation training. The position description is provided below. Alexza is an exciting new company using thermally generated aerosols for systemic drug delivery.

### **Sr. Toxicologist/Toxicologist**

Alexza Pharmaceuticals, Inc. is a specialty pharmaceutical company located in Palo Alto, California. We are developing breakthrough therapies for the treatment of acute and intermittent medical conditions using a novel pulmonary delivery system. Alexza was founded by Dr. Alejandro Zaffaroni who is one of the most successful entrepreneurs in the biomedical industry with a long list of successful companies to his credit, including ALZA, Affymax and Affymetrix Corporations.

We have an exciting opportunity for a Sr. Toxicologist or Toxicologist. This person will join our Toxicology department and work closely with multi-disciplinary teams of scientists and engineers on the development of novel drug delivery technologies with the potential to revolutionize the treatment of several common diseases.

### **Responsibilities**

- Participate in multi-disciplinary product development teams
- Design efficient and scientific-based safety evaluation programs to support clinical development and product registration
- Coordinate and oversee contract research organization studies
- Summarize results for presentation to FDA and others outside of the company
- Generate / review regulatory documents for pre-IND packages, IND and NDA submissions and Investigators' brochures

### **Skills Required:**

- Ph.D., D.V.M. or equivalent degree in toxicology or related science, with experience in inhalation toxicology
- 2 – 8 years of pharmaceutical industry experience, with consideration given to inhalation toxicology experience in graduate or postdoctoral programs
- Experience in working with contract labs, desirable
- Excellent oral and written communication skills

For further information please contact Dr. Barbara Stewart (650) 687-6637, [bstewart@alexza.com](mailto:bstewart@alexza.com).

We offer competitive compensation and benefits including stock options, an exciting and collaborative work environment and excellent opportunity for career growth.

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