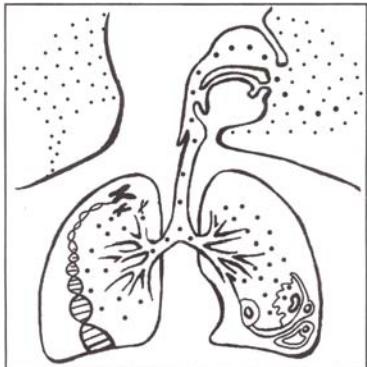


Inhalation and

Respiratory

Specialty Section



Society of Toxicology

INHALATION AND RESPIRATORY SPECIALTY SECTION (ISS) NEWSLETTER – FEBRUARY/MARCH 2007

Dear ISS Member:

Before we know it we'll be in Charlotte at the 46th Annual Meeting of SOT. The objective of this newsletter is to refresh your memory of what occurred at the meeting in San Diego last year and to instill enthusiasm for this year's meeting. This newsletter will contain our President's Message describing our participation in the Annual Meeting. Also included are the minutes of last year's Business, Executive, and Technical Committee Meetings. In this Newsletter, last year's president, MaryJane Selgrade, will announce the recent election results of our Specialty Section.

At the business meeting this year, Deepak Bhalla and Lung Chi Chen will announce the winner of the paper of the year, and the other award winners. At the technical Committee Meeting, being held on Wednesday morning, March 28,

from 7:00 AM to 8:30 AM in the VIP Suite 103 at the Charlotte Convention Center, John Whalan and I will bring you up to date on the status of the OECD Guidelines for Acute Inhalation Toxicity Testing. During 2007, the OECD hopes to finalize the guidelines for the up and down protocol, the fixed concentration protocol, and a traditional LC₅₀. The importance of these guidelines and how they will impact us will be explained. You are all welcome to join us at this meeting.

We look forward to seeing you in Charlotte, North Carolina, and hope you have a safe trip and a warm and rewarding experience at the meetings.

Harry Salem

President's Message:

PRESIDENT'S 2007 FEBRUARY/MARCH MESSAGE.

Greetings to all of the membership: as we move into this new calendar year it is always an exciting time proceeding next month's meeting of the National Society. As usual there will be much to do at the meeting in Charlotte in terms of net working, and getting the students revved-up over their research and presentations, as well as working the meeting ourselves for new ideas and collaborations.

Please try to attend the annual business meeting of our Specialty Section which will be held on **Monday evening (3/26)** and starting at 6:00 PM. The meeting will be held in the Convention Center and the room assignment will be posted in the final program. As usual

presentations will be made at our business meeting for peer reviewed research paper of 2006, best abstract submissions to the 2007 meeting by pre- and post-doctoral candidates doing research in respiratory and inhalation toxicology, and a career-achievement award.

As many of you have already registered for the 2007 meeting and are fully aware of several of the high quality symposia, workshops, and roundtable sessions for this year's meeting. Examples of several of these sessions for program managers and scientists with interest and expertise in Respiratory and Inhalation Toxicology are the following:

Symposia

- Air Pollution and Atherosclerosis: Impact of Inhaled Agents on Vascular Remodeling, Dyslipidemia, and Oxidative Stress.
- Cardiovascular Effects of Inhaled Ultra-Fine and Fine Particles in Human Volunteers.
- Emerging Technologies in Imaging for Toxicology.

Workshops

- Air Pollution, Oxidative Stress, and Neurodegeneration.
- Current Considerations in setting Exposures Guidance for Sensory and Respiratory Tract Irritation.
- Health Risks of Carbon Nanotubes: What Can We Learn from Mineral Fibers or Ultra-Fine Particulates.

Roundtables

- Can a Single Experimental Model Predict the Respiratory Sensitization Potential of Chemicals and Proteins?

As a final word it will be essential for the membership attending the annual meeting, that they devote time some meeting (and if have not done so already)

to begin to assemble ideas and thoughts on **programmatic sessions for the 2008** meeting. The annual meeting presents an excellent opportunity for talking directly with colleagues and experts in various fields of respiratory and inhalation toxicology, and is fertile ground for conceptualization of educational programs, symposia, workshops and so on.

See you in Charlotte,

W. Michael Foster

ELECTION RESULTS:

MaryJane Selgrade, our Past President, is pleased to announce that you have elected the following officers for 2007:

Vice President Elect	JeanClare Seagrave
Secretary	Allison Elder
Councilors:	Matt Campden Jeff Tepper

Congratulations to the winners and thanks to the 100 people of the 232 members who voted.

Old 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: Officers: 2005-2006

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
Past-President:

Officers: 2006-2007

President: Michael Foster
Vice President: Deepak Bhalla
Vice President elect: Lung Chi Chen
Secretary/Treasurer: Jake McDonald
Councilors:
Michelle Fanucchi
Jon Hotchkiss
Ilona Jaspers
Jim Wagner
Past-President: 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



Young Investigator (Plaque + Cash Award): 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):





National Health and Environmental
Effects Research Laboratory US
Environmental Protection Agency

*The Taylor & Francis Awards: Mary
Amdur Student Award:*



Outgoing Officers:

President (Plaque with Gavel):



Urmila Kodavanti, Ph.D.
Pulmonary Toxicology Branch
Experimental Toxicology Division



Jonathan Cienciwicki
(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 Immuno-

toxicology 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): 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-

	Numbers	%
Inhalation	42/81	51%
Respiratory	58/81	71%
*Inhalation + respiratory	29/81	36%

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:

¾ to discuss two draft alternative inhalation toxicity guidelines—TG 433 and TG 436—which are

August, 2006.

vascular	14/81	18%
*Inhalation not respiratory	13/81	16%
*Respiratory not inhalation	29/81	36%
Cardio	23/81	28%

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.]

- ¾ to discuss an updated TG 403 for traditional LC₅₀ studies,
- ¾ to resolve specific issues raised by member countries, and
- ¾ 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 µm 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