Mission Statement

The goal of the Occupational and Public Health Specialty Section (OPHSS) is to advance the integration of exposure, toxicological and epidemiological principles and research approaches in addressing occupational, environmentally-related and public health issues. The OPHSS seeks to achieve this goal by: (1) identifying and encouraging integrative research to further the understanding of the impact of exposure to chemicals, pollutants and pharmaceutical drugs on the general and susceptible populations, and, in turn, (2) better informing regulatory decisions and actions that impact both individual and population health, (3) identifying and promoting the continual development and application of emerging methods, tools, and models, and (4) sponsoring and supporting activities to attract the next generation of scientists to occupational and environmental public health.
MEET THE OPHSS OFFICERS:

Andrew Maier, Ph.D., CIH, DABT –Outgoing President

Dr. Maier has 18 years of professional work experience in the areas of environmental health, industrial hygiene, and toxicology. He is currently the Director for the non-profit organization Toxicology Excellence for Risk Assessment (TERA) where he leads efforts in developing occupational and environmental exposure guidelines. He completed his Ph.D. in toxicology from the University of Cincinnati, where he currently holds a position as an Adjunct Associate Professor. He earned a M.S. in Industrial Health from the University of Michigan and is Board certified in both toxicology and comprehensive industrial hygiene practice. Dr. Maier is active in communicating his findings to the broader scientific community through active participation in professional societies and through publication of his work. Recently his research efforts have focused on methods and approaches for using biological exposure and effect markers to reduce uncertainties in risk assessment and methodologies for deriving occupational exposure limits. He is past-chair of the American Industrial Hygiene Association Workplace Environmental Exposure Levels (WEEL) Committee and is also currently serving as a Toxicology Fellow with the National Institute for Occupational Safety and Health.

Jenny R. Roberts, Ph.D. –President

Dr. Jenny R. Roberts is a Research Biologist in the Health Effects Laboratory Division (HELD) at the National Institute for Occupational Safety and Health (NIOSH) in Morgantown, WV. She received her undergraduate degrees from Boston University in 1996, and was employed as a Research Assistant at the Harvard School of Public Health in the Department of Environmental Health before accepting her position at NIOSH. Dr. Roberts received her Ph.D. from the School of Medicine at West Virginia University in 2006, where she also currently holds an adjunct assistant professor appointment. Her area of expertise focuses on in vivo models to evaluate lung inflammation, injury, immunomodulation, and development of pulmonary disease that may occur after exposures to a
variety of different occupational particulates, including metals, fly ash, diesel, and welding fume. Currently, the majority of her research is centered on pulmonary responses to nanomaterials, and she has recently been appointed the critical area coordinator for the Nanotoxicology Research Center in NIOSH. Dr. Roberts also currently serves as a member of the editorial board of *Inhalation Toxicology*. She has been an active member of SOT since 2002, a member of the Allegheny-Erie Regional Chapter since 1999, and also holds membership in the Nanotoxicology and Inhalation and Respiratory Specialty Sections.

**Mary Ann Smith, Ph.D. – Vice President**

Dr. Smith is the Associate Dean for Student Affairs, The University of Texas School of Public Health in Houston where she is an academic and research advisor to students, serves on several University-wide committees, and lectures in several courses winning University Awards for Teaching in 2008 and 2010. She has supervised over 100 undergraduate, graduate, and professional students in multiple capacities during the students’ research activities at UT-Houston. She received her doctorate in Pharmacology/Toxicology from the University of Texas- Austin in 1984 (mentored by Dr. Daniel Acosta) and was a postdoctoral fellow at the National Cancer Institute and later at Smith, Kline, and French from 1984-1987. She joined the faculty of the University of New Mexico in 1987, and then landed at her current Institution in 1991. Dr. Smith has served on the Review Panels at the NCI, NIEHS, and the Center for Border Health Research Grants Program, and has been an invited reviewer for eight journals. She is author or co-author on over 25 publications including peer-reviewed articles, reports, and book chapters. She has been a Full Member of the SOT since 1996 and has served the SOT via the Undergraduate Education Committee, Subcommittee on Minority Issues, and election in 2011 to the Awards Committee.

**Joel Bercu, Ph.D., MPH, DABT – Vice President-Elect**

Dr. Joel Bercu is currently employed at Amgen Inc. as an Environmental Health and Safety Senior Manager. He serves as an Occupational Toxicologist at Amgen and chairs the Hazard Evaluation Committee where the hazards of pharmaceuticals (i.e., Occupational Exposure Limits, Globally Harmonized System, Transportation, etc.)
are derived. Prior to Amgen, he worked at Eli Lilly as a Risk Assessment Toxicologist and has a total of 15 years public health / toxicology experience in pharmaceuticals. His mission while at these positions is to protect the safety of staff, patients, and the environment. He is a Diplomat of the American Board of Toxicology. He received his BS from Texas A&M University, MPH from University of Texas – Houston School of Public Health, and PhD from Indiana University. While at Amgen, he received the 3R Award at Amgen for his work in reducing animal testing, and the Operational Excellence Award for his work in developing a risk-based process for pharmaceuticals in multiproduct facilities. In addition, he was a finalist for the Indianapolis Best and Brightest Award in Health and Life Science, a member of Delta Omega Public Health and Golden Key Honor Societies, won the Distinguished Student Award for Biomedical Sciences at Texas A&M, an Eagle Scout and a proud father of two girls. He continues to publish and present at national meetings in the field of toxicology with a focus on public health and risk assessment.

Leslie A. Beyer, M.S., DABT – Secretary/Treasurer

Ms. Beyer is a senior toxicologist at Gradient, a consulting company in Cambridge, MA. She received her M.S. in Environmental Health Science, with a specialty in occupational health and safety from the Harvard School of Public Health, and is a Diplomate of the American Board of Toxicology. With over 25 years of experience, Ms. Beyer initially worked as an industrial hygienist, then began working more broadly in environmental health, and now works full-time in the field of toxicology. She evaluates the significance of occupational and residential exposures, conducts health risk assessments for cancer and non-cancer endpoints, and assesses health effects from exposure to chemicals in the environment (e.g., arsenic, dioxin, perchloroethylene, nitrogen dioxide, chromium). Her areas of expertise include environmental health, occupational health and safety, litigation support, and risk assessment. Her projects have covered a variety of topics, including evaluation of occupational and residential exposure to methyl tert butyl ether (MTBE), lead, and solvents; historical toxicology of chemicals (e.g., vinyl chloride, benzene, and lead); development of materials to comply with various safety data sheet (SDS) standards worldwide; and review and interpretation of toxicological and epidemiological literature and data. She is active in the AIHA, where she is currently chair of the toxicology committee, and she has participated in the paper-of-the-year award committee for the OPHSS.
Marie Bourgeois, Ph.D., MPH – Councilor

Dr. Marie Bourgeois is a Research Professor at the University Of South Florida College Of Public Health. Her research includes the effect of gender and other factors on the urinary expression of biomarkers of inflammation, renal failure, oxidative stress, and cardiac dysfunction, PARP inhibition on alcohol and cocaine induced hepatotoxicity in mice, and cocktail effects of PPCPs and pesticides in SW/DW. She received her Bachelor’s degree in Clinical Chemistry from USF and an MPH in Toxicology and Risk Assessment from the USF COPH. She received her Ph.D. in Toxicology and Risk Assessment from the Environmental and Occupational Health Department at USF COPH in 2010. Dr. Bourgeois has been an active member of SOT since 2006, a member and officer of SESOT and OPHSS since 2007 and also holds membership in the Risk Assessment Specialty Section. She is a member of the Resources Work Group for the Undergraduate Education Subcommittee and an active promoter of K12 science education outreach.

David G. Farrer, M.S., Ph.D. – Councilor

David Farrer is a Public Health Toxicologist at the Oregon Health Authority (OHA). He received his doctorate in toxicology from the University of Rochester in 2006 and was a postdoctoral fellow at Oregon State University from 2006-2007. He studied the impacts of environmental toxicants on the immune system. In 2007, Dr. Farrer joined the OHA where he develops guidance, policy, legislative testimony, and public communications on a wide range of environmental toxicants and exposure pathways. Dr. Farrer has participated in the establishment of health-based guideline values for environmental toxicants in recreational and drinking water, ambient air, and fish tissue. He co-authored state guidance on incorporating infant risk from persistent organic pollutants in breast milk into risk assessment practice. Dr. Farrer serves on a state air toxics science advisory committee and a water quality pesticide management committee. Dr. Farrer has been a member of the SOT since 2003.
Melissa Badding, Ph.D. – Post-doctoral Fellow

Dr. Melissa Badding is an Associate Service Fellow in the Health Effects Laboratory Division at the National Institute for Occupational Safety and Health (NIOSH) in Morgantown, WV. She received her B.S. degree in Biotechnology from Rochester Institute of Technology in 2007 and both her M.S. and Ph.D. degrees in Toxicology from the University of Rochester in 2009 and 2012, respectively. Dr. Badding has been a member of SOT since 2010 and has presented her work each year at the national meeting. She is a member of the Allegheny-Erie Regional Chapter, the Occupational and Public Health and Inhalation and Respiratory Specialty Sections, and the Women in Toxicology Special Interest Group. Her research at NIOSH is focused on evaluating the toxicity of and cellular responses to various inhaled particles encountered in occupational settings. Specifically, these studies aim to determine the underlying molecular mechanisms behind particle-induced pulmonary disease.

Sonja Christensen – Student Representative

Sonja Christensen received her B.S. Degrees in Chemistry and Biology at Briar Cliff University in Sioux City, IA where she graduated summa cum laude with honors. She is currently working on her Masters in Environmental Toxicology as well as her Doctorate in Pharmacy at the College of Health Professions and Biomedical Sciences at the University of Montana in Missoula. Her research is centered on prenatal exposure to environmental tobacco smoke, and its epigenetic effects and subsequent expression of asthma associated genes. In addition to pursuing a professional and research degrees, Sonja participates actively in Toxicology Journal Club, Air and Waste Management Association, and the Graduate Student Association at the University of Montana. Sonja aspires to continue to do toxicological research and to bridge the gap between pharmaceutical professionals and research scientists.
WELCOME TO OUR NEWLY ELECTED OFFICERS!!!

Joel Bercu
(Amgen Inc.)

Leslie Beyer
(Gradient)

Marie Bourgeois
(University of South Florida College of Public Health)

Melissa Badding
(National Institute for Occupational Safety and Health (NIOSH) )

Vice President Elect
Secretary/Treasurer
Councilor
Postdoctoral Representative
Appointed in 2014

WE WOULD LIKE TO THANK OUR OUTGOING OFFICERS FOR THEIR SERVICE!

Rajendran Sellumuthu, Postdoctoral Representative
Katherine Kraft, Councilor
Marie Bourgeois, Secretary/Treasurer
Andrew Maier, President
As Executive Director, Toxicology in Merck’s Global Safety and the Environment group, Dr. Naumann provides leadership and technical guidance to the Company on a broad range of occupational, environmental and industrial toxicology issues. He chairs Merck’s Industrial Toxicology Advisory Committee, which sets formal health-based exposure standards to support worker protection and product quality. He is also certified by the American Board of Toxicology and has almost 30 years of experience as an industrial toxicologist in the pharmaceutical industry. Dr. Naumann’s publications have focused on improving the use of science in risk assessment. In addition, he serves on the ACGIH Chemical Substances TLV Committee and the NIOSH Hazardous Drug Alert Expert Panel, and is a Lecturer in NYU’s School of Medicine.

Dr. Naumann,

1. Tell us a little about your background. Where are you from originally? Where and in what did you receive your degrees?

I grew up in Suffern, NY and received a B.S. in Biology from the State University of New York at Albany. After college I landed a summer job at the NYU Institute in Environmental Medicine Institute in Tuxedo, NY, measuring the levels of cadmium and other heavy metals in Foundry Cove on the Hudson River, across from West Point. I also collected ambient air samples from the roof of the NYU Medical Center on 34th St. I’m really indebted to Ted Kneip and Bob Hazen for giving me this opportunity, which gave me a start in the field. The lab position, which provided a benefit of free tuition, led to an MS in Biology from NYU. I then moved into the aerosol and inhalation studies group under the mentorship of Richard Schlesinger and Mort Lippman and completed my Ph.D. in Environmental Health Sciences at NYU, specializing in inhalation toxicology. While still working full-time at the lab, I was able to leverage a grant we had from the Electric Power Research Institute to
support my doctoral thesis project which looked at the effects of sulfuric acid mist on early alveolar clearance in rabbits.

2. What got you interested in your field of toxicology, and what led you to your career in industry?

The NYU lab in Sterling Forest had a wide range of disciplines, ranging from air/water pollution studies and inhalation research, to cancer research and radiological health. The cadmium work I did with Bob was interesting and gave me a chance to try out being a wildlife biologist (my original career plan), but the other areas of focus in the lab made me realize I needed to go beyond determining what the levels of these environmental contaminants were, and to study how these agents could affect us. I knew this was the only way to ensure that people were not being adversely affected by them – probably the first seed leading to a career in occupational toxicology and public health. When I was finishing up at NYU I considered several positions in inhalation toxicology and industrial toxicology and accepted a job in the safety and industrial hygiene department at Ciba-Geigy Pharmaceuticals Division (now part of Novartis). I was their first industrial toxicologist arriving at the same time OSHA was issuing their first Hazard Communication Standard. I set up their industrial toxicology program, wrote safety data sheets, set occupational exposure limits, started a reproductive hazards program, and tested intermediates. Three and a half years later I moved out to Chicago with a young family and did similar things at Abbott Laboratories for about 5 years. I learned a lot from Dave Conine and Larry Hecker during those formative years.

3. Tell us about your current activities that relate to occupational and public health?

I came to Merck about 21 years ago at the invitation of Ed Sargent and Dave Kirk, joining an already well-established program. I had visited them years earlier when I was at Ciba to see “how it was done”. I had responsibility for hazard communications and served as Secretary of the Industrial Toxicology Advisory Committee (ITAC) right from the start. Dave retired about 6 months after I arrived and gave me the first page of a paper he was writing on performance-based exposure control limits and asked me to finish it. This was published in AIHAI. We now refer to these as occupational exposure bands (or control bands) and the concept continues to work well serving early development groups. We set occupational exposure limits (OELs) at Phase IIb at ITAC, which I now chair. Of course we continue to write SDSs for Merck development compounds, active pharmaceutical ingredients,
products and process intermediates. In our spare time, we look for ways to improve how we set limits, and investigate new tools we can use such as application of the toxicological concern concept (TTC) to pharmaceutical operations and ways to adjust our exposure limits based on bioavailability considerations. The job also involves support for quality operations (extractables and leachables, atypical extraneous matter evaluations) and chemical notifications to support global shipments and external manufacturing. Of course, an important aspect is the investigation and implementation of alternative test methods. Science advocacy has always been an important function in our group, and we look for opportunities to “move-the-needle” where it looks like our involvement can lead to improvements in how health-based limits are established or used. A good example is the contribution we made on the International Society of Pharmaceutical Engineers (ISPE) Baseline Guide entitled “Risk-Based Manufacturing of Pharmaceutical Products (Risk-MaPP)”, especially in describing how acceptable daily exposure (ADE) values are derived. This has gained traction with the US and EU regulators.

4. Can you tell us a little about what has been one of the most exciting or rewarding projects you have worked on in your career?

While it is tempting to mention the efforts we have made to understand the scientific basis of uncertainty factors used to set OELs, or the advocacy work we have done in the product quality area, probably the most rewarding aspect of my career is the interaction I have had with people who have worked in our group over the years at Merck. Each of these individuals has gone on to do great things in our industry, and I hope I had some positive influence on their careers. I am thankful that we continue to have opportunities for professional interaction. I get to see them every year, either at SOT or the Occupational Toxicology Roundtable (OTR), which is an important benchmarking meeting and a means to converge our thinking on the best ways to contribute to occupational and public health.

5. What advice would you give to students who may be interested in entering the field of industrial toxicology today?

This is an exciting time for our field. There is no shortage of issues that require our expertise to ensure that specific hazards and risks are put into proper perspective. The toxicologists in our group don’t go through a day without someone calling or e-mailing for advice on how to handle a particular compound or situation. Not every call is from an expectant mother looking for some reassurance
about her workplace exposures, but most are equally rewarding because they allow us to apply our knowledge and best advice in a way that helps people stay safe. It is very satisfying to know that we are keeping the thousands of Merck employees safe, the very ones that develop or manufacture the Merck products that improve or save the lives of people taking them. Occupational toxicology and public health professionals can feel proud that they work in an area of their passion and know they are adding value to the world in the process. So my advice would be to go with your passion and strengths, seize opportunities, be flexible and find a place to make your contribution.

6. We always like to end on a personal note. Do you have any hobbies or personal interests you would like to share with us?

Well, we all know you can’t spend your whole day doing toxicology. When it’s time to unwind, after spending some quality time with family, I’ll pick up my Gibson 5-string banjo or Martin HD28 guitar and play a little bluegrass. It’s either that or trying to learn a few new tunes for an upcoming OTR meeting where I back-up the “Occupational Exposure Band” led by Bob Sussman, playing toxicology-based parodies of familiar classic tunes from the past. Last year we did “House of the Rising OTR”, “White Tablet” and “Ratqualung”. It required learning a few new chords and arpeggio, but that’s a good thing.

THANK YOU TO DR. NAUMANN FOR BEING A PART OF OUR MEMBER SPOTLIGHT!
A RECAP FROM OPHSS RECEPTION AT THE 2014 SOT ANNUAL MEETING

We had a great turnout for the luncheon with an estimated 70 members in attendance!

Thanks to Marti Lindsey, M.A., M.L.S., Director, Community Outreach and Education Program, Southwest Environmental Health Science Center, University of Arizona for giving us a dynamic and informative presentation on "Public Engagement – Communicating Toxicology Information." Her talk provided excellent examples of how to effectively communicate toxicology and other public health information to the public.

CONGRATULATIONS TO OUR AWARDEES!

Best Abstract by a Student:

Joshua D. Chandler was presented with the Best Abstract Award for the abstract entitled, “Nebulized Thiocyanate Attenuates Inflammation and Oxidative Stress in the Airway and Liver of ENaC Mice.” Joshua is mentored by Dr. Brian Day.

Best Manuscript by a Postdoctoral Fellow:

Michelle C. DeSimone, PhD received the Best Manuscript Award for her publication entitled, “Pleiotropic Effects of the Trichloroethylene-Associated P81S1 VHL Mutation on Metabolism, Apoptosis, and ATM-Mediated DNA Damage Response” in Journal of the National Cancer Institute, 105: 1355-1364, 2013. Michelle is mentored by David W. Threadgill, PhD.
Michelle and Jashua Receiving their Awards!

THE OPHSS 2013 PAPER OF THE YEAR:

Congrats to Dr. Lauren Zeise on the Paper of the Year Award!

Addressing Human Variability in Next-Generation Human Health Risk Assessments of Environmental Chemicals

*Environmental Health Perspectives* 2013, 121:23-31

Lauren Zeise\(^1\), Frederic Y. Bois, Weihsueh A. Chiu, Dale Hattis, Ivan Rusyn, Katheryn Z. Guyton

\(^1\)Office of Environmental Health Hazard Assessment, California Environmental Protection Agency, Oakland, California, USA
We greatly appreciate those who volunteered their time to serve on the 2013-2014 Paper of the Year (POY) award committee:

Katherine Kraft and David Farrer, Chairpersons
Allison Stock
Amarnath Mishra
Anne Chappelle*
Bill Luttrell
Ed Sargent
John G. Benitez*
Marie Bourgeois*

*Returning committee member from 2012-2013
248 papers reviewed with 9 finalists

Thank you to the members who have volunteered to serve on the 2014-2015 POY award committee:

Marie Bourgeois
David Farrer
Alex LeBeau
Bill Luttrell
John Benitez
Allison Stock
Janice Lee
Arlene Weiss
Amanda Persad
Sally Darney
Dan Arrieta
Vincent Garry
Mohd Hasni Jaafar
Alison Abritis
Reminder: OPHSS members are welcome to nominate a paper published in 2014 for the Paper of the Year Award. Nominees from our membership are automatically added to the final round for consideration. The publication does not have to be from an OPHSS member. If you would like to nominate a deserving publication, you can contact David Farrer (david.g.farrer@state.or.us) or Marie Bourgeois (mmbourge@mail.usf.edu) for more information.

SOME CANDID SHOTS FROM THE RECEPTION!

Thanks Again to Marti for Her Presentation at our Reception!

Thanks Andy for His Service as President!
Student Abstract and Post Doc Publication Awards for 2015

Call for volunteers to help Joel Bercu judge the poster abstracts and publications to award a student and post doc, respectively. Also note that the deadline for student s to submit abstracts for consideration is Monday December 22, 2014 and the deadline for post docs to submit a publication for consideration is January 16, 2015.
A REMINDER OF WHERE YOUR OPHSS MEMBERSHIP DOLLARS GO

Your $15 yearly membership fee means a lot to us. Your attendance at the Annual Meeting is also very important. Not only does your membership fee support the specialty section, but as a member of the specialty section, when you attend the SOT Annual Meeting, a portion of your Annual Meeting registration fee is contributed to our revenue.

The funds from your specialty section membership and annual meeting registration pay for the Best Abstract and Best Manuscript student awards (plaque and monetary award) which mean a lot to our student and postdoctoral members. These funds are also used for room set up for the OPHSS Reception (audio-visual equipment, microphones, flip charts, etc.) and the food and drink at the reception. Our OPHSS funds can also be used to sponsor webinars through SOT to keep you up-to-date on the latest research by award winners and members.

The OPHSS council thanks each and every one of its members for these contributions!

FUTURE CONFERENCES FOR 2014:

- **50th Congress of the European Societies of Toxicology** September 7-10, 2014
  Edinburgh, Scotland  Web site: www.euROTOX2014.com

- **The North American Congress of Clinical Toxicology (NACCT)** October 17-21, 2014
  New Orleans, LA  Website: www.clintonx.org

- **Society for Risk Analysis Annual Meeting 2014** December 7-10, 2014
  Denver, Colorado  Website: www.SRA.ORG/events/sra-2014-annual-meeting

- **The Eastern Unconventional Oil & Gas Symposium** November 5-7, 2014
  Lexington, Kentucky  Website: http://www.euogs.org/index.html
K12 OUTREACH AND YOU

Outreach is an integral part of community education. SOT supports members in their outreach efforts. I have found different ways to incorporate it into my classes and my local school system. I am looking for information on how you have reached out to your community. Please let me know what has worked for you, what challenges you have faced and whether you are interested in becoming more involved!

Marie Bourgeois
mbourgeo@health.usf.edu

News From Headquarters:

SOT CCT Meetings Eligible for Seed Money and Profit Sharing

Consider Organizing a Contemporary Concepts in Toxicology Meeting:
Contemporary Concepts in Toxicology (CCT) Meetings expand the opportunities and forums for members to engage in the exchange of ideas and information relevant to toxicology. CCT Meetings are one- to two-day focused, open registration, scientific meetings in contemporary and rapidly progressing areas of toxicological sciences. CCT Meetings also can be held as webinars.

If you think that your research area could be enhanced by collaboration with others or that public health and safety could be improved by disseminating your research findings more broadly, please consider organizing an SOT CCT Meeting. The CCT Conference Committee and the SOT Headquarters staff are prepared to help move your meeting forward.

The Society will underwrite all the liabilities of the CCT Meeting (up to the $25,000 in seed money) with the expectation that the meeting at least break even financially. Any profits from the meeting would be shared between SOT and the specialty section. For more information about CCT Meetings, please visit the SOT website.
Newsletter Submissions:

These newsletters are for you-the Member. We would like to send them quarterly, but we need your input to make it worthwhile. Please feel free to send in your comments, questions, ideas, articles, job openings, promotions or anything you want to share with Specialty Section members. Send them to Leslie Beyer (LBeyer@gradientcorp.com). This is your forum...take advantage of it!

Think green before you print!